

Press release

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Basic information

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Department of: Biomedicine

Main supervisor: Helle Prætorius Øhrwald

Title of dissertation: Purinergic signalling in the host response to pyelonephritis and urosepsis

Date for defence: 05.08.2021 at (time of day): 16.00 Place: 1115-151B

Press release (Danish)

ATP signalering påvirker kroppens respons på infektioner

I et nyt ph.d.-projekt fra Aarhus Universitet, Health, undersøges hvordan ATP signalering påvirker kroppens respons på indtrængende bakterier.

ATP er mest kendt som cellernes energimolekyle, men forskning har vist at det også er et vigtigt signaleringsmolekyle, blandt andet vigtig for aktivering af immunsystemet. Det er derfor interessant at undersøge, hvordan ATP signalering påvirker kroppens respons på E. coli som trænger ind i kroppen via urinvejene.

Projektet har undersøgt 3 specifikke ATP receptorers betydning for udviklingen af nyrebækkenbetændelse og blodforgiftning i forsøg på mus. Resultaterne viser at ATP signalering påvirker kroppens respons på infektionen og både er vigtigt for overlevelsen samt rekruttering af immunceller.

Projektet er gennemført af Mette Hykkelbjerg Christensen, der forsvare det d. 5/8-21

Forsvaret af ph.d.-projektet er offentligt og finder sted den 5/8-21 kl. 16 i lokale 1115-151B, Skou bygningen, Aarhus Universitet, Høegh-Guldbergsgade 10, Bygning 1115 (Skou), Aarhus. Titlen på projektet er "Purinergic signalling in the host response to pyelonephritis and urosepsis". Yderligere oplysninger: Ph.d.-studerende Mette Hykkelbjerg Christensen, e-mail: mgch@biomed.au.dk, tlf. 51891817.

Bedømmelsesudvalg:

Lektor Hanne B. Møller, MD PhD, Institut for Biomedicin, Aarhus Universitet

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Press release (English)

ATP signalling impact the host response to infections

A new ph.d.-project from Aarhus University, Health, investigates how ATP signalling influence the host response to invading bacteriae.

ATP is mostly known to be the energy molecule of the cells, however research has shown that it is an important signalling molecule as well, among other things important for activation of the immune

system. Therefore, it is interesting to investigate how ATP signalling affects the host response to invading *E. coli* entering through the urinary tract.

This project has investigated 3 specific ATP receptors significance for development of pyelonephritis and urosepsis in mice. The results shows that ATP signalling is important for the host reaction to the infection and both survival and recruitment of immune cells are affected.

The project was carried out by Mette Hykkelbjerg Christensen, who is defending her dissertation on 5/8-21.

The defence is public and takes place on 5/8-21 at 16 in room 1115-151B, Skou Building, Aarhus University, Høegh-Guldbergsgade 10, building 1115 (Skou), Aarhus. The title of the project is "Purinergic signalling in the host response to pyelonephritis and urosepsis". For more information, please contact PhD student Mette Hykkelbjerg Christensen, email: mgch@biomed.au.dk, Phone +45 51891817.

Assessment committee:

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