Press release

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Basic information

Name: Mikkel Carstensen Email: micg@biomed.au.dk Phone: 30203480

Department of: Biomedicine

Main supervisor: associate professor Tove Christensen

Title of dissertation: "Investigations of subsets and activity of monocytes and B cells in Multiple Sclerosis"

Date for defence: 22.11.2019 at (time of day): 13.00 Place: William Scharff Søauditorium, bg. 1253-317, AU

Press release (Danish)

Undersøgelser af Monocytter og B celler hos patienter med multipel sklerose

Et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Mikkel Carstensen, der forsvarer det d. 22/11.
I sin tese undersøger Mikkel Carstensen vigtige immunologiske processer i udviklingen af den immun-betingede, neurologiske sygdom multipel sklerose (MS). Arbejdet er baseret på prøver fra patienter med begyndende eller fremskreden MS eller klinisk isoleret syndrom. Fokus er to typer af immunceller: dels monocytter, dels B celler. I blodet findes karakteristiske undergrupper af monocytter: klassiske, intermediære, og ikke-klassiske monocytter. B celler findes også i karakteristiske undergrupper. Disse undergrupper repræsenterer hver for sig forskellige stadier af aktivering og differentiering. Tesen belyser den rolle, som monocyt- og B celle undergrupper spiller hos patienter med MS; specielt undergruppernes indbyrdes fordeling og sammenhæng med niveauer af forskellige biomarkører for neurodegeneration, inflammation, og celleaktivering. Arbejdet viser, at monitorering af disse celle-undergrupper samt et udbygget biomarkørpanel sammen med de i klinikken etablerede metoder har større potentiale end de etablerede metoder alene. Disse fund er vigtige i videreudviklingen af MS analyser og biomarkører til brug i forbindelse med diagnostik og behandlingsmonitorering.

Pressemeddelelsen - afsluttes med: Forsvaret af ph.d.-projektet er offentligt og finder sted den 22/11 kl. 13 i William Scharff Søauditorium, bg. 1253-317, Aarhus University, 8000 Aarhus C. Titlen på projektet er ”Investigations of subsets and activity of monocytes and B cells in Multiple Sclerosis”. Yderligere oplysninger: Ph.d.-studerende Mikkel Carstensen, e-mail: micg@biomed.au.dk, tlf. 30203480

Bedømmelsesudvalg: Professor Loems Ziegler-Heitbrock, Monocytomics Research Herrsching, Tyskland; klinisk lektor Morten Blaabjerg, Neurologisk afd., Odense Universitetshospital; klinisk lektor Claus Johansen, Institut for Klinisk Medicin - Hud- og Kønssygdomme, Aarhus Universitetshospital (formand).

Press release (English)

Investigations of subsets and activity of monocytes and B cells in Multiple Sclerosis"

In his thesis, Mikkel Carstensen investigates key immunological processes in the development of the neurological, immune-mediated disease multiple sclerosis (MS). The work is based on samples from both patients with newly diagnosed MS, patients with progressed MS, or patients with clinically isolated syndrome. The focus is on two types of immune cells: monocytes and B cells. In peripheral blood, monocytes are present as characteristic sub-populations: classical, intermediate, and non-

classical monocytes. B cells are also present in characteristic sub-populations. These sub-populations represent different stages of activation and differentiation. The thesis analyses the roles of these sub-populations of immune cells in MS, particularly in relation to their relative predominance and in relation to levels of biomarkers of neurodegeneration, inflammation, and cell activation.
Interestingly, the results show that expanding the established methods in the clinic with monitoring of these cell subpopulations and an extended panel of biomarkers has potential for improved MS diagnostics and assessments of therapeutic effects.
The project was carried out by Mikkel Carstensen, who is defending her/his dissertation on 22/11.

The press release - ending with: The defence is public and takes place on 22/11 at 13:00 in William Scharff Søauditorium, bg. 1253-317, Aarhus University, 8000 Aarhus C. The title of the project is Investigations of subsets and activity of monocytes and B cells
in Multiple Sclerosis". For more information, please contact PhD student Mikkel Carstensen, email: micg@biomed.au.dk, Phone +45 3020 3480.

Assessment committee: Professor Loems Ziegler-Heitbrock, Monocytomics Research Herrsching, Germany; associate professor Morten Blaabjerg, Dept. of Neurology., Odense University Hospital; associate professor Claus Johansen, Dept. of Dermato-Venerology, Aarhus University Hospital (chairman)

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