

Immunology Seminar

On Tuesday February 6th 2018 at 15:15, Cecilia Hagert, PhD, will give a talk entitled:

Chronic active arthritis driven by macrophages without involvement of T cells

Abstract

To analyze and evaluate chronic arthritis independently from the adaptive immunity we developed a novel, chronic, innate driven anti-collagen antibody induced arthritis (CAIA) model. A four-monoclonal cocktail of anti-collagen type II antibodies initiates an active chronic arthritis, immune boosted twice by mannan (*Saccharomyces cerevisiae*) day five and sixty. Our model is corresponding to the human rheumatoid arthritis both in its relapsing nature of the chronic phase and the redness and inflamed paws caused by infiltrating cells. This relapsing disease is driven by the complement pathway and ROS deficient macrophages. It is a model independent of FcγRIII, B- and T-cells, indicating a role of the innate immune system as sole drivers of the chronic autoimmunity in this model. In fact, our data illustrates an essential role in macrophage produced ROS to protect against disease. On the other hand, the complement cascade seems to be part of driving the disease, initiated via classical and/or alternate pathway and not via the lectin pathway. Our result, pinpointing the macrophages and the complement cascade as important drivers of active chronic arthritis, is in contrast with current dogma that arthritis is primarily driven by autoantibodies and T cells. Instead, this novel model specifies a role for the adaptive immunity in the beginning of arthritis, but that it will have less importance in driving the chronicity of the disease. This could indicate a need for a changed approach when investigating new targets for medicine against arthritis.

Venue: Læsesalen, Bartholinbygningen (1241-211), Aarhus University

Date: 6th of February, 2018

Time: 15.15

Organizer: Assistant Professor Søren E. Degn, Department of Biomedicine, AU

Co-organized by the Danish Immunology Society

