BBB seminar (BMED380)

SCAN ME

Thursday, September 29, 14:30 at the BBB, Auditorium 4

The alarmin HMGB1, inflammation and arthritis – immunoprofiling and molecular studies

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Arthritis, chronic inflammatory joint disease, affects both children and adults. It is estimated that up to 30/100 000 children have arthritis. Major goals in arthritis management are to decrease the inflammatory activity, the pain hypersensitivity and joint destruction. Inflammatory and immune reactions are regarded as the cause and drivers of arthritis but the underlying mechanisms of the three disease hallmarks are not clarified.

Juvenile idiopathic arthritis (JIA), affecting children, and Rheumatoid arthritis (RA), affecting adults, share certain immunopathogenic mechanisms but there are also many differences. Hence, it is not possible to directly translate findings in RA to JIA and its seven subgroups. Validated biomarkers for prognostic and diagnostic purposes and for guiding personalized treatment are lacking.

High mobility group box protein 1 (HMGB1) is an alarmin, a protein normally residing inside cells performing homeostatic functions, can be released during cell stress and death. Extracellular alarmins allow the immune system to sense danger to the organism's survival. HMGB1 is indicated as a mediator of multiple inflammatory diseases and treatment targeting HMGB1 is beneficial in multiple disease models.

I will present our translational approach in defining immunopathogenic mechanisms dysregulated in JIA. A special focus will be on our longstanding investigation of HMGB1's inflammatory features and role in arthritis.

Chairperson: Silke Appel <silke.appel@uib.no>, Department of Clinical Science