

EULAR study group on MHC-I-opathy

Aims of the study group

Major histocompatibility complex I (MHC-I) proteins are present on all body cells. They present peptide products of intracellular protein turnover on their antigen binding groove and trigger immune responses against pathogen-infected or tumor cells. Several inflammatory diseases, collectively proposed as “MHC-I-opathies”, are strongly associated with individual MHC-I alleles. HLA-B27 and axial spondyloarthritis and HLA-B51 with Behçet Syndrome are two well-known examples. Although initially discovered as distinguishable entities, many overlapping clinical and pathophysiological features exist between MHC-I-opathies. To improve treatment efficacy for patients a clear insight on an individual level of disease mechanism is necessary. We hypothesize we first have “to lump” the diseases together as Class-I associated diseases, and then look at individual/splitting mechanisms.

Strikingly, despite 50 years of research, the pathogenesis of MHC-I-opathies is still unknown. Since a long time 3 hypotheses exist, all with their pros and cons. Two of them are based on instability of the MHC-I alleles and the third centers around regular T cell activation as the starting point of the inflammatory response. Progress has been made as well: ERAP1 and ERAP2 have now been identified as players with epistatic interaction, giving evidence that peptide presentation is involved in the pathogenesis somehow.

The EULAR study group on MHC-I-opathy will unite experts in several disciplines of research and clinicians, diagnostics and treatment of patients with MHC-I-opathy to meet the challenges to unravel the disease mechanism. This EULAR study group will:

1. harmonize and improve research methods;
2. harmonize and improve terminology;
3. study mechanisms more collectively;
4. foster basic and translational knowledge exchange in an interdisciplinary fashion through meetings;
5. disseminate information to researchers and physicians outside the network via symposia during EULAR meetings.

To meet these objectives the Study Group on Class-I associated diseases will include a broad pan-European spectrum of participants, stemming from leading expert centers as well as highly interested rheumatologists from all over Europe. The EULAR study group will thus merge and synergize Europe’s clinical and scientific expertise.

The study group will be open for all interested physicians and researchers. Meetings will be connected to EULAR.

Study Group Leaders:

Dr. Franktien Turkstra, Rheumatologist, Reade Center Amsterdam
Dr. Ahmet Gul, Istanbul University

Founding members of the group:

Ahmet Gul, Dennis McGonagle, Elsa Viera-Sousa, Fabian Lötscher, Floor Kerstens, Franktien Turkstra, Gertjan Wolbink, Ina Kötter, John Bowes, Marleen van de Sande, Maxime Breban, Rik Lories, Russka Shumnalieva, Sofia Ramiro.
Patient partner: Kees Bosman.