

Gene and cell therapy study group, presented by C Jorgensen MD, PhD

The results of the GCTSG are regularly presented during the EULAR annual meeting at the ESCIR session by the coordinator C Jorgensen.

Gene and cell therapy study group is a network of teams disseminated in Europe, developing innovative strategies in the field of rheumatology. These active groups meet annually at EWRR and at the EULAR Congress. The objective is to favor interactions, student exchange, synergy, collaborative work and this in a friendly environment. The contribution of the study group in the field of gene therapy includes development of non viral vectors and rAAV to express genes in the target organs.

Major topics of the investigations in the last 2 years (2007-2008) included:

- Vectors: At the Toulouse EWRR meeting, we discussed AAV validation in various models of arthritis including AA, CIA and Monkey models. This project has lead to submission to FP7 call.
- Non viral vectors as cationic liposome "Lipoplex" have been developed in order to express siRNA for in vivo delivery. In parallel, cytokine vaccination using kenoids induces in vivo antibody response with natural anti TNFa antibodies.
- Targets: New targets have been suggested, including proteins identified through genetic studies: TAK1, TNFAIP3, TRAF, Synoviolin. Some of preliminary results were presented, using siRNA or inhibitors expressed through viral vectors.
- Cell therapy in arthritis: Different strategies have discussed including iDC vaccination in CIA, Tregs CD25/FoxP3 for immunotherapy or autologous MSC injections in arthritic models. The field of cartilage repair through chondrocyte of engineered MSC has been presented at the last meeting.

Within these discussions, in 2007-8 several project applying EU programs have been submitted. For example, Autocure, Euroreg, Eurotraps, Immunobone, GT4IMID, Eurosalamander, Adipoa, have been possible through these interactive study group meeting.

We are open to new teams and informal presentation at our next study group meeting, to be held the 26 February 2009, 14h, in Warsaw, Poland.