

## Biennial report

### Study Groups

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#### **Title of the study group: gene and cell therapy study group**

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#### **Summary of last year's activities**

In 2017, the study group dedicated to gene and cell therapy (SGGCT) have organized scientific meetings, training program and participated to H2020 programs. Moreover, we have contributed to contact between EULAR and other scientific societies as ISCT (International society for cell therapy) or OARSI. C Jorgensen is member of task force of ISCT for musculoskeletal disease. The main aim of the SGGCT is to build an international network of excellence in stem cell therapy (mesenchymal stem cells, iPS) to develop novel immune therapy. The SGGCT is open for scientists or clinicians with special focus to translational clinical research. Through SGGCT it is expected to bring Europe a competitive advantage in the development of innovative therapeutic program but also help on regulatory issues.

**Concerning stem cells based therapy :** partners from Bologna, Nijmegen, Berlin, Montpellier and Galway have been collaborating through H2020 programs to establish new concepts of European regenerative medicine in rheumatology. We will integrate the leader European institutes on adult stem cell research, and benefit from knowledge of teams studying bone marrow and adipose Stem Cells as well as expertise in experimental arthritis an OA models. We have set up phase 2 trial in OA as well as in intervertebral disc disease unresponsive to previous medical treatments based on MSC.

**Translational research:** Clinical programs are ongoing in Europe stimulated by EU partners with strategy using cytokine vaccination, T regulatory cell therapy and dendritic cells (AuToDeCRA). Autologous stem cells therapy OA through intra-articular injections (ADIPOA2 trial) as well as new RESPINE program also supported by H2020 . ECELLFRANCE, a GMP platform for stem cells therapy according to European guidelines have been supported by French authorities, and is open for academic partners.

**Training:** The Study group meeting was held during the workshops prior to the openings lecture at the EWRR 2016 in York. The meeting was attended by approximately 25 scientists from different institutes. The aim of the study group is to have presentations with interactive discussions on stem cells or DC delivery and other aspect related to active immunotherapy brought-up by the scientist attending the 37rd European Workshop For Rheumatology Research in Athens March 2017. The following partner contributed :

- Panos Virginis Novel role of plasmacytoid dendritic cells in RA pathogenesis
- F Vandeloo : exosomes in experimental arthritis : a new biologic?
- Natacha Bessis Regulatory T cells expressing TNFR2 are highly suppressive and are increased on anti-TNF treatment.
- J Isaac : update on Autologous Tolerogenic Dendritic Cells for Rheumatoid and Inflammatory Arthritis (AuToDeCRA) – a phase 1 study

- C Jorgensen : success on H2020 project focusing on stem cell therapy in rheumatology in 2016
- David de Gorter : Therapeutic potential of SUMO-1 inhibition for the treatment of RA

The outline of the meeting was well appreciated with interactive discussions. Based on this meeting the mailing list of scientist interested in future meetings is increased and people discussed new collaborations.

### **Perspectives:**

The gene and cell therapy study group aims to have two interactive meetings a year, one connected to the EWRR, the second one at the Eular meeting . Moreover the study group for gene and cell therapy will initiate a website to show the different activities and partners <http://www.ecellfrance.com>.

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