October 13-16, I attended the 3th International Conference on Regulatory T cells and Helper T Cell Subsets and Clinical Application in Human Diseases in Shanghai.

This is a rather new conference held every two years in China, which stands out due to its specific focus on Treg and T helper cell subset (T\textsubscript{FH}, Th17 and Th22) immunology in human disease. The main topics covered included development, function, mechanism of action, balance and homeostasis of Tregs and T helper cell subsets. Next to that, current clinical trials using Tregs for immune intervention in cancer, autoimmune disease, allergy and the induction of transplantation tolerance were discussed. Besides numerous talks from the leading scientist in the field, there was a platform for PhD students to present their work in a short talk or via poster presentations, as well as an afternoon symposium on journal editorial policies and process, in which questions could be addressed to the editors from Nature, Science, Immunity and others.

To give an impression; H.Cantor identified CD8\textsuperscript{+}Tregs that, among others, inhibits activation and expansion of T\textsubscript{FH}s via recognition of MHCII molecule Qa-1. The importance of this mechanism was underlined by a murine model in which the Qa-1 recognition was disrupted. This lead to dysregulation of T\textsubscript{FH} expansion, the appearance of tissue specific auto-antibodies and finally SLE and lethal glomerulonephritis. Furthermore, CD8\textsuperscript{+}Tregs were able to prevent or resolve the development of RA in a murine model with collagen induced RA. F Sallusto presented her well known work on Tcell subset identification in flow cytometry based on the expression of chemokine receptors. Memory Tcell subsets were sorted based on chemokine receptor expression and cultured in the presence of either pathogens or allergens, showing which subsets were involved. Q.Tang showed the first results of a clinical trial in which new onset Diabetes Mellitus Type 1 patients disease progression came to a halt after a single gift of autologous Tregs. Y.Liu underlined the importance of pDCs and their interaction with Tregs in viral infection and cancer. pDCs sense viral DNA and RNA, however, in cancer they are known to activate Tregs and induce tolerance. Liu showed a dual approach, in which pDCs were activated and loaded with tumour antigen in vitro and subsequently were injected in the lymph nodes of multiple myeloma patients. Next to that, they developed antibodies that target the pDC induced Tregs specifically, thereby blocking their suppressive function. The first approach was already tested in a phase 1 clinical trial and lead to stable disease in all MM patients. For the second approach they await permission to be tested clinically as well.

All in all, attending this conference was a great opportunity to be able to hear the leading scientist in this particular field, ranging from basic fundamental immunology to actual clinical trials. Hereby, I would like to thank the NVVI for the travel grant, which made it possible for me to visit.

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