This year's EAACI Immunology Winter School was organized by Edward Knol and Carsten Schmidt-Weber from the Immunology Section of the EAACI. The meeting was held in Davos, Switzerland, the place where the Winter School meeting was founded by the current EAACI president-elect Cezmi Akdis. With the generous support from the EAACI Executive Committee this meeting is targeting at young doctoral and postdoctoral scientists who are active in allergy and clinical immunology research. A total of 70 participants from 16 countries and from 4 continents were selected based on the quality of their submitted abstracts. Twenty six abstracts were presented as oral presentations in 5 oral sessions grouped in Skin immune response, Allergen structure and immune responses, Modulation of DC functions by external stimuli, T helper cell responses in allergy and pulmonary immune responses.
In addition, two poster sessions with dessert, beer and wine enabled the participants to actively discuss their data with the keynote lecturers, EAACI Immunology board members and with each other. After the welcome reception and before each session there was a keynote lecture. In the first keynote talk, Adrian Hayday, London U.K. gave an excellent presentation titled “The epimmunome: how epithelium instructs immunity”. In this talk Adrian addressed how not only dendritic cells are important in the response to stress or antigens from the external milieu, but focussed on epithelial cells, such as keratinocytes, as well as the ?? T lymphocytes. Not only for the responses to cancer cells and viruses, but also to allergens these cells are determining the developing immune response. The second keynote lecture was given by the Dean of King’s College School of Medicine in London, U.K., Professor Robert Lechler. He discussed on the mechanisms that are underlying immune tolerance from the point of view of transplant medicine. This was interestingly extended to other immune reactions in which a deranged tolerance response might lead to disease.

The keynote lecture given by Prof. Andre Gessner, head of the Institute for Microbiology and Hygiene at the University in Regensburg, Germany, introduced the participants to novel signalling pathways of the IL-4 receptor. Andre presented novel and unpublished data. His talk was very well structured and led the audience through the jungle of signalling pathways in a very comprehensive and educative manner. Theo Geijtenbeek from Amsterdam, the Netherlands described the so-called C-type lectin receptors. These receptors bind specific sugar structures and this binding results in specific signalling in for instance DC’s which will lead to a shaping of the adaptive immune response. Importantly many allergens, such as Der p 1, Ara h 1. and Can f 1 contain these C-type lectins. Vijay Kuchroo, Professor at Harvard Medical School, Boston, USA presented the keynote lecture on the topic of novel T cell subsets. The concept of T cell differentiation was revisited and highlighted the new Th17 and Th9 subset with special focus on the transcription factors. Particularly novel was the aspect of podoplanin (gp39) expression of Th17 cells. Using podoplanin knock-outs it was demonstrated that Th17 cells failed to form tissue follicles as it was discussed to be essential for tissue based IgM class switching. Tolerance in the gut system and its implications for food allergy was discussed by Per Brandtzaeg from Oslo. The mechanisms that dampen immune responses to commensal microbiota and food allergens are tightly regulated. Unfortunately, it is still difficult to dissect the mistakes in the immunoregulatory network that leads to food allergy.

Allergy and asthma-related immunological concepts were discussed in a
warm scientific environment providing the young scientists a direct interaction with well-known excellent researchers in the field - let it be on the ski slopes, during lunch or dinner or in the evenings at the poster session. The meeting was a great success as clearly indicated by the evaluation by the participants. On a 5-point scale the meeting was rated an average of 4.4. A typical remark on the evaluation form was “The best meeting for young scientists in allergy” Planning for the next EAACI Winter School is already on the way and we anticipate to announce the program and the new and inspiring location before the Summer break.

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