Introduction of the defendant RNDr. Anna Skallová by the PhD. thesis supervisor Jan Kopecký

Anna Skalová came to our Department of Parasite Immunology from the Department of Parasitology, Faculty of Science, Charles University in Prague in the autumn 2005. She studied parasitology and the subject of her MSc. thesis was "Behavioral changes induced by latent toxoplasmosis". Coming to the Institute of Parasitology and the Faculty of Science of the University of South Bohemia she completely changed the aim of her research. Tick became the subject of her effort and immunology the discipline, which helped her to penetrate the intimate relationship between tick and its host. After discussions, she chose the impact of ticks saliva on the initiation of adaptive immune response, in which dendritic cells play the central role, as the subject of her PhD. thesis. She studied the effect of tick saliva on maturation, migration and function of dendritic cells, their interaction with tick-borne encephalitis virus and how the saliva influences this interaction. She clearly demonstrated that tick saliva inhibits maturation, migration and antigen presenting capacity of dendritic cells and are at least partly responsible for the polarization of immune response towards the Th2 subset. Major part of these studies Anna performed at the Institute of Integrative Biology, Swiss Federal Institute of Technology in Zurich. Anna chose this institute due to the experience with dendritic cells and methodological background to work with. Some of the methods used there she transferred successfully to our laboratory. The obtained results she summarized in the paper published in Journal of Immunology, being one of the best articles published by people from our Department. In this paper she clearly demonstrated that dendritic cells represent the principal target of tick saliva in terms of saliva effect on the development of immune response.

The second part of her thesis is devoted to another less investigated area, the interaction of dendritic cells with tick-borne encephalitis virus and the effect of tick saliva on this interaction. Dendritic cells represent an early target of TBEV infection and are major producers of IFN. Thus, interactions between dendritic cells, IFN responses, and the virus are likely to substantially influence the outcome of infection. Anna Skallova reported for the first time that tick saliva increases proportion of TBEV infected dendritic cells, the observation which can contribute to the understanding of the mechanism of tick saliva activated transmission of TBE virus. It remind me our deceased friend Dr. Milan Labuda, who described for the first time tick saliva activated transmission of this virus, but he never published the enhancing effect of tick saliva on the virus infection of any cells including dendritic cells. From this point of view I would consider the Anna´s work as substantial.

But it is not my job here to evaluate the defendant. I found Anna Skallová very independent, hard-working student, who was able to find a laboratory abroad to learn methodology necessary for her research and to carry out part of her experiments there. Anna Skallová is capable of creative thinking, designing experiments, carrying them out, interpreting the results and discussing them critically. Similarly critical was sometimes her attitude towards her supervisor. She was fully competent to write a scientific paper, to reflect the recommendations of referees etc.

In my opinion, she proved her ability to be an independent scientist.

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Doc. RNDr. Jan Kopecký, CSc.