

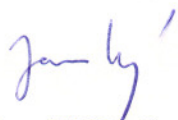
Introduction of the defendant RNDr. Kateřina Černá by the Ph.D. thesis supervisor Jan Kopecký

Kateřina Kýčková married Černá came to our Department of Parasite Immunology as a student of MSc. study programme. The subject of her MSc. thesis was “Interactions between *Borrelia* spirochetes and phagocytic cells and the effect of tick saliva on this interaction”. This subject she developed to the main aim of her Ph.D. thesis, analysis of tick saliva activated transmission of *Borrelia* spirochetes. As it is commonly accepted that tick saliva-mediated enhancement of spirochetes proliferation and spreading in the host is caused by the immunomodulatory effects of tick saliva, Kateřina focused on the saliva effect on immune mechanisms operating against early phase of *Borrelia* infection. These mechanisms are represented by phagocytosis and killing of spirochetes by professional phagocytes and complement activated by the alternative pathway. She clearly demonstrated that both mechanisms are inhibited by tick saliva as are proinflammatory cytokines produced by phagocytic cells. The second main part of her thesis was more detailed analysis of the effect of tick saliva on the proliferation and spreading of spirochetes in the murine host. As *Borrelia* spirochetes do not produce colonies on solid media, their content in mouse organs must be quantified by RealTime PCR. The results, obtained together with another Ph.D. student Helena Horká, represent the most comprehensive study published so far. These two fundamental papers are supplemented in the Ph.D. thesis with two methodological papers dealing with the use of immersion method for efficient and reproducible infection of *Ixodes ricinus* larvae with *Borrelia* genospecies. During her stay at the University of Liege (Alain Vanderplasschen laboratory) she learnt the method of production of recombinant proteins in mammalian cells, which she successfully introduced into our laboratory.

I found Kateřina very responsible, hard working student with sufficient amount of laboratory skill. She was capable of creative thinking, designing experiments, carrying them out, interpreting the results and discussing them critically. She was fully competent to write a scientific paper, to reflect on the recommendations of referees etc.

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

In České Budějovice 21. 4. 2009



Doc. RNDr. Jan Kopecký, CSc.