

Master thesis of Bc. Pavla Šnebergerová: the supervisor's evaluation

Pavla joined the laboratory of Petr Kopáček about two years ago; that time I was just finishing my doctoral studies. Despite very intensive *Babesia* research in our laboratory, we have been still missing the markers/antibodies which would enable us to distinguish different developmental stages that this parasite employs during its complicated life cycle. Together with Petr (head of the lab) and Veronika (co-supervisor) we agreed to ask Pavla to focus on potential markers of *Babesia* specific – particularly invasive – stages. Although this has represented quite complicated task, Pavla has shown great interest in this topic and she immediately started with her project.

For the given research we selected AMA-1, a protein that is generally assumed as one of the markers of apicomplexan invasive stages. However, it turned out that AMA-1 was not a best choice when looking for universal markers of *Babesia* invasive stages. As apparent from results of Pavla, the AMA-1 protein seems not to be expressed on kinetes, the intra-tick invasive stages. Yet, this observation suggests something completely new in *Babesia* field: the intra-tick stages might employ a different mechanism of host cells invasion compared to the merozoites, invasive stages in blood cells of vertebrate host. This result I consider as highly valuable and I believe it is worth for further investigation.

From early beginning of Pavla's bench work it was clear that she is a very talented and enthusiastic student. In very short time Pavla handled quite a wide spectrum of laboratory techniques including the work with laboratory animals. In addition, despite the complications and negative results that occurred during her work, Pavla has shown persistence and the capability of methodology troubleshooting. When Pavla was writing her thesis, I was very positively surprised by her deep literature research as well as writing skills, and her ability to clearly and factually describe the scientific problematics. Therefore, I am glad that after certain hesitation Pavla has decided to develop her career as a doctoral student in laboratory of dr. Petr Kopáček. She will continue with research dedicated to *Babesia* together with me and Dan Sojka, and I am looking forward to our future collaboration. Not only because of her research skills but also (and I believe that I am not speaking only for myself) because she has become our friend.

In summary, as a supervisor I was satisfied with Pavla's scientific work and I believe that her master thesis fulfills all the criteria requested by Faculty of Science, University of South Bohemia in České Budějovice.

In České Budějovice, May 20, 2019.


Marie Jalovecka (supervisor)