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**Supervisor evaluation of bachelor thesis of Miss Eva Záhorská:
Role of adipokinetic hormone Peram-CAH-II in insect reproduction**

The topic of the thesis is a part of our project(s) dealing with study of determination and function characterization of insect adipokinetic hormones. Those hormones control a lot of functions in insect body – one of them is a control of insect reproduction via inhibition of vitellogenin (Vg) synthesis. Insect reproduction is a complicated matter controlled by several hormones, and even Vg synthesis is controlled by several of them. Thus, the main topic of Eva's thesis was to monitor the inhibitory effect of Peram-CAH-II and allatostatin on Vg synthesis within first several critical days of adult female life of the firebug, *Pyrrhocoris apterus*. This is an important prerequisite for following study of possible interactions of those hormones in future.

The work on this topic supposed to manage several biochemical and physiological methods. Eva had to manage first of all manipulation with insects, selection of freshly ecdysed adult bugs from the breeding colony and separation of sexes, because just females were used for the experiments. Preparation of samples for electrophoretic analysis included taking the haemolymph out of the antenna and its following processing for itself separation on the polyacrylamide gels. The analysis involved also immunological identification of Vg using Western blotting and specific polyclonal Ab prepared several years ago in our laboratory. Eva has managed all those techniques excellently and I am sure she will be able to repeat them at any time in future.

Eva's thesis contains all common parts and is written comprehensively by very good English. Her main result shows that both the Peram-CAH-II and allatostatin significantly inhibit Vg synthesis in female fat body and reduce its content in haemolymph. It is interesting that inhibitory effectivity of both hormones seems to be similar, and that double hormonal treatment is effective only at the end of the observed period. Those are very interesting results that create a solid base for following investigation of the hormonal control of Vg synthesis in the firebug.

Conclusion: the bachelor thesis of Miss Eva Záhorská meets all planned aims and therefore I recommend it for a defence as one of the requirements of the bachelor title.

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Dalibor Kodrík
supervisor