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Supervisor evaluation of bachelor thesis of Miss Michaela Beňová:

Effect of adipokinetic hormone on activity of digestive enzymes in *Drosophila melanogaster*

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 number of metabolic processes in insect body – one of them is a control of insect digestion. Therefore the main aim of the Michaela's thesis was to monitor the effect of *Drosophila* AKH (Drome-AKH) on gut enzyme activities in several *Drosophila* lines with deficiency in production of AKH. Due to similarities of mechanisms of AKH and adenosine, also lines with non-functional adenosine receptor were used to try to find some putative relationship between those two factors. Results of those basic monitoring experiments will be employed for subsequent studies in future.

The work on this topic supposed to manage several biochemical and physiological methods. Michaela had to manage first of all manipulation with *Drosophila* larvae and adults and their preparation for experiments, application of the AKH hormone and biochemical determination of activity of several digestive enzymes. Michaela has managed all those techniques excellently and I am sure she will be able to repeat them at any time in future.

Michaela's thesis contains all common parts and is written comprehensively by very good English. Her main results show that at least some gut digestive enzymes in *Drosophila* are controlled by AKH. On the other hand the effect of adenosine, if any, is just minor or unclear. Some of those results are a part of MS dealing with AKH role in control of insect digestive processes that was sent for publication in *Physiological Entomology* journal.

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

České Budějovice, 4th September 2017

Dalibor Kodrík
supervisor