



BIOLOGY CENTRE CAS, v.v.i.

Entomology

address: Branišovská 1160/31, 370 05 České Budějovice
tel: +420 387 775 211
fax: +420 385 310 354

VAT: 60077344 | DIČ: CZ60077344

Acct. No.: 6063942/0800, Česká spořitelna, Č. Budějovice
www.entu.cas.cz | e-mail: entu@entu.cas.cz

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Evaluation Letter for Matěj Miláček

Matěj joined my lab in October 2019. That turned out to be the right time as we soon received a grant to study new chemical regulators of insect juvenile hormone signaling. One of the aims was to discover agonists of juvenile hormone receptors that would discriminate between different insect species. Agonists that are currently available and serve as insecticides affect a broad spectrum of non-target and beneficial species. Our goal is to obtain compounds for selective interference with development of target insects.

When candidate compounds from the high-throughput screen reached our lab, Matěj was keen to start working. His task was to find out (1) if the hits active in vitro also showed hormone-like activity in live insects and, (2) did any of them affect only some species and not others. This task entailed a lot of work. Matěj became familiar with rearing and development of linden bugs, flour beetles, and *Drosophila*. He tested and carefully documented agonist effects of selected compounds on metamorphosis at both morphology and gene-expression levels using RT-qPCR. His data indeed confirmed species-selective agonist effects of several lead compounds. In addition, Matěj cloned JH receptor genes from additional insect species and mastered ligand-binding assays with recombinant receptor proteins. In sum, Matěj has produced publication quality data, contributing a great deal our projects.

As a student, Matěj has been a pleasure to supervise. Naturally motivated, inquisitive, self-learning, hard-working, active, and largely independent. Here, I should also thank others in my team for teaching Matěj the lab skills. As a person, Matěj is easy going, friendly, and considerate. He smoothly merged the team and became our favorite buddy. I firmly believe that Matěj has earned his master's degree and I hope he will join our lab again to undertake his doctoral project.

With kind regards,

Prof. Marek Jindra, Ph.D.
Head of laboratory and supervisor