



BIOLOGY CENTRE CAS

Institute of Parasitology

address: Branišovská 1160/31, 370 05 České Budějovice, Czech Republic

IBAN – CZ24 0800 0000 0000 0606 3942 | SWIFT CODE – GIBACZPX | VAT No.: CZ60077344

phone: +420 387 775 403 | fax: +420 385 310 388 | www.paru.cas.cz | e-mail: paru@paru.cas.cz

Supervisors statement

To whom it may concern:

I know **Bc. Helmut Stanzl** for over four years when he has been working directly under my supervision, first as a bachelor student and later as a student of the master program.

I must admit that Helmut showed great courage since he was the first student, who began working in the newly established Laboratory of RNA Biology of Parasitic Protists, which was rather virtual at that time.

The goal of Helmut's bachelor project was to evaluate the role of the "mysterious" tRNA modification called queuosine in the bloodstream stage of the important human and animal parasite *Trypanosoma brucei*. This was achieved by the generation of gene knock-out of one of the subunits of the tRNA guanine transglycosylase, the protein responsible for the formation of Q-tRNA in eukaryotes.

The aim of his thesis was challenging, especially when you consider very little time, which is given to students of this program to finish their projects. With no previous experience, Helmut oriented himself very quickly in the laboratory, and soon he mastered various techniques of molecular biology and biochemistry.

Helmut finished all experiments, which were planned for his project, and the generated knock-out cell line has been currently used further to study the role of Q-tRNA modification in the mammalian host of *T. brucei* with very promising results. After successfully defending his bachelor's thesis, Helmut decided to stay in the lab and continue as a master student, however, with a completely different topic of work.

Thanks to the newly established collaboration with Dr. Filip Husník, Helmut's new aim of the master thesis was to study RNA metabolism in bacterial endosymbionts of important plant parasites *Planococcus citri*.

This unique biological system allows us to respond to fundamental questions such as the emergence of a eukaryotic cell. In this project, Helmut not only made use of the experience gained during the bachelor studies but also extended the portfolio of advanced molecular biological methods such as protein overexpression and purification, antibody preparation, immunolocalization by confocal and electron microscopy. The preliminary results of his project so far look very promising, and we believe that they will be published within a few months in a journal with a high impact factor.

In addition to being a hardworking student, Helmut can work independently as well as is an excellent team worker. He is enthusiastic with outstanding work ethics. Given his dedication to research work and based on my personal experience with him, I can confidently affirm that Helmut has demonstrated great potential to become a successful scientist.

In conclusion, I am happy to have Helmut in my lab, and in my opinion, he fulfilled all the requirements needed to obtain a master degree.

In České Budějovice 27.1.2020

RNDr. Zdeněk Paris, Ph.D.

Laboratory of RNA Biology of Protists

Institute of Parasitology, Biology Centre CAS