



# BIOLOGICKÉ CENTRUM AV ČR, v. v. i.

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### ŠKOLITELSKÝ POSUDEK BAKALÁŘSKÉ PRÁCE

**Autor práce:** Bc. Veronika Běhálková

**Název práce:** Elucidating the subunit composition of tRNA-guanine transglycosylase in *Trypanosoma brucei*

**Jméno oponenta:** RNDr. Zdeněk Paris, Ph.D.

I must admit that Veronika showed a great courage, since she has been one the first student, who began working in the newly established Laboratory of RNA Biology of Parasitic Protists, which was rather virtual at that time.

Three years ago, we just newly identified two paralogues of the human tRNA guanine transglycosylase (TGT) in the genome of our model organism *T. brucei* and it seemed that both proteins may be responsible for the formation of the „mysterious“ tRNA modification called queuosine. However, our RNAi data were inconclusive because it was not completely clear whether both proteins are really needed to form Q-tRNA and whether these two TGT proteins function as a heterodimeric complex like in other eucaryotes. To answer this question Veronika's task was to perform a complementation of the *S. pombe* TGT mutant with the *T. brucei* proteins overexpressed individually or simultaneously.

The aim of her thesis was challenging, especially when you consider that nobody in our laboratory has ever worked with *S. pombe* experimental system before. With no previous experience, Veronika oriented herself very quickly in the laboratory and soon she mastered various techniques of molecular biology and biochemistry.

Veronika successfully finished all the experiments, which were planned for her project. Nevertheless, probably due to the difficult nature of these two proteins we were not able to see any rescue of the Q-tRNA modification. However, based on the plethora of experimental methods she used, along with critical thinking she applied during her bachelor studies, Veronika has most certainly acquired all the essential skills needed to continue her future scientific career. And so I am really happy that Veronika has already decided to continue working in my lab as a master student.

Overall, I was really glad that Veronika worked in my laboratory and in my opinion she fulfilled all the requirements needed to obtain bachelor's degree.

In České Budějovice, 25.5.2017

RNDr. Zdeněk Paris, Ph.D.