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Jan Perner, Ph.D.

Laboratory of Molecular Biology of Ticks

Subject: Supervisor's evaluation of Sára Kropáčková Master Thesis

Sara joined the lab in 2016 for her Bc thesis, during which she mastered most of the experimental procedures of molecular biology that were established in the lab. For this reason, we thought it would be a missed opportunity not to challenge her talent and skills with a more complex task. This was: "Sterol biology in ticks", a topic that can entail only one experiment or can last for a lifetime. Sára accepted this challenge and embarked on describing the (chole)sterol requirements for tick physiology and description of individual processes cholesterol participates in.

As cholesterol is an integral part of the lipid fraction of blood serum, and, since ticks feed blood serum "normally", together with Petr Kopacek, we initially thought to feed ticks the delipidated serum through the *ex vivo* membrane feeding. This quite hopeful yet possibly naive attempt was faced with the lack of ticks' appetite to feed on such a „lean soup“. That was when we started to think we need to resort to using the tick cell line model to start to understand the interaction between cholesterol and tick cell functioning.

And that is where Sára Master thesis commences. Sára, very vividly, acquired skills necessary for cell culturing and analysis. Admittedly, very soon after, we realised we need to partner with someone knowledgeable in sterol biochemistry in order to produce some meaningful data. That is when Sara joined the Lab of Dr. Daniel Wunster at the University of Southern Denmark for her 6-month Erasmus placement. This collaboration has been essential for mentoring Sara (and us) in handling cholesterol and visualising it within cells.

I think Sara went an incredible path during her early research career and is only pity she leaves our boat now. Without a doubt, a combination of Sara's curiosity, analytical thinking and very often flawless executions was the only possible mix that would help us penetrate the field and start to appreciate the first understanding of cholesterol biology in ticks.

It has been a great pleasure to have Sara in the lab, she moved our understanding of various aspects of tick biology massively forward, and have no doubt she is a real-deal molecular biologist and have no doubt she will do further well in her professional career.

Wish her all the best,

Jan Perner, PhD

Head of the Lab

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