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## Posudek školitele k disertační práci Jana Ryneše

Jan Ryneš (Honza for short) joined my laboratory in 2005. By defending today, on the absolute deadline allowed for completion of Ph.D. studies, he has made an unbeatable record in length of time anyone had ever spent in my lab. I must explain what took so long.

Initially, I engaged Honza in a difficult project that was supposed to link the function of a coactivator protein MBF1 in oxidative stress with longevity using *Drosophila* genetics. Two years later I had to admit that this was a bad idea, and apologize for wasting Honza's time.

However, the new directions we took were no easier. In one branch of his project, Honza was to characterize a candidate receptor for the insect juvenile hormone, the bHLH-PAS protein Met. His goal was to demonstrate function of Met as a transcriptional regulator in response to juvenile hormone and to uncover interactions of Met with partner proteins. He succeeded in the latter part by showing that Met interacts with two partners, with one of them in a JH-dependent manner. Although we got partially scooped by two papers published in PNAS and JBC in 2011, we could still utilize Honza's data in a PNAS paper later the same year. The second branch of Honza's work produced a recent paper in MCB, showing that a bZIP transcription factor Atf3 in *Drosophila* integrates the function of two similar human genes by simultaneously regulating metabolic and immune responses. This work was extremely demanding, involving methods from Illumina RNA sequencing and bioinformatics to analyses of fat metabolism, gut microbiota, and immune response, all using genetics in the *Drosophila* model. The project clearly exceeded the capacity of my lab, and was only made possible thanks to collaboration with Dr. Mirka Uhlirova at the University of Cologne, where Honza spent several months.

In the course of his Ph.D. work, Honza covered an impressive range of molecular genetics and biochemistry. As a student, he has definitely proven capable of independent conception and execution of scientific work. He showed considerable endurance in pursuit of his research. During the seven years of hardship, Honza never lost temper and was always positive and easy to work with. Sometimes I was not sure whether he was so resistant to bad news and negative results, or rather so passive and uninvolved. Definitely, he should become more alert and aggressive if he wants to succeed as an independent scientist.

In my opinion, Honza has earned his Ph.D. in the hard way, but he definitely deserves it. I believe that if he becomes more pro-active and assertive in taking decisions for himself, he will be ready to commence a promising career. I thank him for his effort and wish him all the best.

  
Marek Jindra

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