



## BIOLOGY CENTRE ASCR

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

IBAN – CZ22 0710 0000 0000 0552 7231 | SWIFT CODE – CNBACZPP | VAT No.: CZ60077344

phone: +420 387 771 111 (telephone exchange) | www.bc.cas.cz | e-mail: bc@bc.cas.cz

### Supervisor's evaluation of Nora Müller

Nora Müller started in the lab in March 2018, a later start than usual as she had ended a prior stint in a lab that did not meet her expectations. Normally, this would be bad news for a Biological Chemistry student to start a project so late considering the limited time they usually have to devote to lab work. I was thus skeptical when she initially approached me to join the lab. However, these doubts were instantly erased at our initial interview, where she relentlessly grilled me on the details of an article I co-authored with my colleague Corinna Benz. She showed genuine interest and asked me many excellent and difficult questions.

I asked her to continue on a project dealing with two proteins we serendipitously came across studying the mitochondrial MICOS complex, a trypanosomatid-specific kinesin we call KifX and its interaction partner TbPH1. This project was suspended when the student in charge had to suddenly leave the lab. At that point, the project did not have any real research line -we had no reasonable working hypothesis to address the function of these two proteins.

And to make matters worse for Nora, I am not an expert on cytoskeleton, let alone motors that run along microtubules.

Nevertheless, she was up to the task. She approached the project as she did our interview: relentlessly. Nora worked very hard on the bench. She also worked hard in the “library”, reading papers incessantly to gain the knowledge needed for tackling the question of what these proteins could be doing. She optimized methods that I had no experience with, such as visualizing phosphorylated-tyrosines by Western blot (now I know this is no trivial task) and performing various cytoskeletal isolations. Her data can be characterized as beautiful: clean, reproducible, convincing and sometimes even leading to breakthroughs.

Nora is not only talented with her hands but also with her mind. I really enjoyed our weekly lab meetings where we were really brainstorming. It takes at least two to brainstorm and I came to approach our meetings as those between colleagues more than the typical student and advisor affairs. Thanks to her independence and curiosity, she often educated me about the cytoskeleton and unfamiliar methodologies, so that we could together design experiments.

Nora is one of the most naturally scientifically gifted students I have supervised in over a decade. I can already state that even in this very early stage of her career, she has the hands, mind and heart to make it in the very competitive field of science.

While she was still not able to unequivocally verify or invalidate the hypothesis that TbPH1 may interact with proteins with phosphorylated-tyrosines, perhaps as cargo, thanks to her efforts we are on better footing as we now know KifX and TbPH1 are enriched within the mysterious and kinetoplastid-specific cytoskeletal element: the microtubule quartet. Knowing this allows us to now have a concrete and directed research line to follow.

Thus, with great enthusiasm, I endorse Nora for the Bachelors of Science title from the Faculty of Science at the University of South Bohemia. Without hesitation, I recommend to the commission that she receive the “Excellent” grade 1. This is not just for her excellent work during her bachelor’s project, but in recognition of her great promise as a scientist in the future.

Sincerely,



Doc. Hassan Hashimi, Ph.D.  
České Budějovice  
29 January, 2020