

## Department of Biochemistry University of Colorado at Boulder

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## To whom it may concern:

It is a pleasure to give Dr. Milan Urban my strongest possible recommendation for promotion to full professor – he is an outstanding organic chemist. I knew Milan when he was a post-doc in my lab between September 2006 and November 2009. Prior to that he had been a post-doc in Dr. Michal Hocek's lab in the Academy of Sciences of the Czech Republic, and was highly recommended by Dr. Hocek. This letter will focus on my direct interactions with Milan when he was in my lab versus his more recent work as a Professor at Palacky University.

Milan came to my lab with a strong background in synthetic chemistry, but relatively little background in enzymology. He rapidly became extremely adept at designing, performing and analyzing enzyme studies. His projects involved synthesizing and testing a series of novel nucleotide analogues to elucidate how DNA primase (both the human and herpes simplex virus-1 enzymes) choose whether or not to polymerize a NTP. His work demonstrated that these enzymes appear to use a unique mechanism for incorporation, namely that they require the formation of Watson-Crick hydrogen bonds but the bonds do not have to be correct. Both the synthetic portion of the project and the enzyme studies required Milan to develop novel approaches and solve significant issues. This was particularly true for the primase studies due to the unusual nature of the enzyme – they are relatively slow enzymes, and they initiate RNA synthesis on single-stranded DNA but not necessarily at just one site. Thus, Milan had to develop novel assays to overcome this issue. Additionally, he was very scientifically aggressive, always willing to test new ideas and approaches to solve problems. The results of these projects were published in a pair of studies in *Biochemistry*.

Milan is also a marvelous team player, and was always more than willing to help out other students with their projects. This included synthesizing a large number of nucleotide analogues to help other students with their projects, even though this cut into the time he had available for his own project. While some of the syntheses were straight forward, some were not and required him to develop novel synthetic procedures and purification methods. As Milan became more proficient at enzymology, he also helped a number of students with developing appropriate enzyme assays for studying different nucleotide analogues. These efforts led to his being a coauthor on a large number of additional papers.

Personally, Milan was wonderful to have in the lab. He was a great team player and was very effective at sharing his knowledge. Even though English is not his native tongue, he was an extremely clear speaker and his presentations were always very clear.

Based on his intelligence, scientific knowledge, ability to solve unusual and difficult problems, creativity and his ability to be a team player and lead a project, I give Milan my strongest possible support for promotion to Full Professor. Based on these qualities and what I saw when he was in my lab, I am as certain as one can be that he will continue to make important scientific discoveries. If you have any additional questions, please do not hesitate to contact me.

Sincerely,

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