

Universität Bonn • IZMB • 53115 Bonn

**Concerning: Letter of Recommendation for Associate Professor Dr. Tomáš Takáč**

Bonn, 24 January 2025

Dear Dean Assoc. Prof. Dr. Martin Kubala,

I am providing here my strongest recommendation for Associate Professor Dr. Tomáš Takáč for his promotion to the Full Professor of Biochemistry.

Dr. Takáč earned his Ph.D. in Plant Physiology in 2005 and began his academic career at the Institute of Botany and later at the Institute of Genetics and Biotechnology at the Slovak Academy of Sciences. At both institutions, his research focused on the role of antioxidant enzymes in plant abiotic stress response, and their roles in plant morphogenesis.

Dr. Takáč's career gained significant momentum during his two-year postdoctoral fellowship in Jozef Šamaj's laboratory at the University of Bonn. There, he co-developed an innovative approach that combined proteomics and fluorescent microscopy to study signaling pathways, the cytoskeleton, and vesicular trafficking. This groundbreaking work established a foundation for his future research endeavors.

Upon his return, Dr. Takáč helped to establish the Department of Cell Biology, which was later restructured into the Department of Biotechnology in 2022. The proteomic/microscopy approach has since directed his research towards superoxide dismutases, which remain the primary focus of his current studies. With his team, he discovered a nuclear localisation of FSD1 pointing to unexpected and novel functions of these unique antioxidant enzymes. This entirely changed the view on SODs, which were for long time recognised as a conservative ROS decomposing enzymes. His works clearly demonstrate that combining proteomics with modern gene modification techniques and advanced microscopy has substantial benefits in advancing the understanding the regulation of antioxidant machinery, and uncovering protein networks governing the plant oxidative stress response.

All these efforts resulted in 52 highly influential publications in WOS, many of them in high-impacted journals. He also regularly contributed to numerous international prestigious scientific conferences and presented the results on invited talks, also demonstrating his international recognition.

He serves as a reviewer for prestigious journals (e.g. Plant Physiology, New Phytologist) and as a reviewer of project proposals submitted to several grant agencies in Czech Republic and Slovakia. He participated in numerous research projects as a researcher and served as the principal investigator of a Czech Science Foundation (GAČR) Standard Project. This role allowed him to establish a team of enthusiastic young students and colleagues and to intensify investigations into superoxide dismutases (SODs) in plant biology.

Dr. Takáč has demonstrated significant dedication to education. He has mentored numerous Bachelor's and Master's students and successfully supervised two Ph.D. students through the completion of their degrees. His contributions to biochemistry are exemplary, demonstrating a strong record of innovative research, impactful discoveries, and leadership in his field.

I am highly recommending the promotion of Associate Professor Dr. Tomáš Takáč to the position of Full Professor.

Please let me know if you have further questions.

Sincerely yours,

František Baluška