

Masarykova univerzita

Fakulta

Obor řízení

Uchazeč

Pracoviště uchazeče

Složení komise

Předseda

Členové

Přírodovědecká fakulta

Mikrobiologie

doc. Mgr. Monika Vítězová, Ph.D.

Přírodovědecká fakulta, Masarykova univerzita

prof. RNDr. Ivo Sedláček, CSc.

Přírodovědecká fakulta, Masarykova univerzita

prof. RNDr. Luděk Bláha, Ph.D.

Přírodovědecká fakulta, Masarykova univerzita

prof. RNDr. Helena Bujdaková, CSc.

Katedra mikrobiologie a virologie, PřF Univerzita Komenského v Bratislavě

prof. RNDr. Kateřina Malachová, CSc.

Katedra biologie a ekologie, PřF Ostravská univerzita

Prof. Christine Moissl-Eichinger, Dr. rer. nat.

Diagnostic and Research Center for Molecular Biomedicine, Medical University Graz, Rakousko

Hodnocení vědecké / umělecké kvalifikace uchazeče

Evaluation of the applicant's scholarly/artistic qualifications

Monika Vítězová's research focused on a lesser-known group of microorganisms, methanogenic archaea, and their great importance for the environment and industry, both in a positive way – a new generation of fuels - and in a negative way - the increased concentration of methane in the atmosphere. Her research results helped to identify and characterise methane-producing archaea from deep groundwater; she worked in veterinary microbiology on phyto-additives used in cattle nutrition, and finally, she contributed to the process of biomethanisation, which is the most important step for the biotechnology of the future. The complex studies included both laboratory and field trials and explained the functioning of methanogens in reducing greenhouse gas emissions.

In accordance with international standards in this field, Monika Vítězová's scientific results mainly include research publications in peer-reviewed journals listed in the Web of Science database. She is the author or co-author of 73 WoS publications. In the last five years, she has mainly published in highly reputable journals above the WoS median based on IF or AIS WoS (Scientific Reports, Microbial Cell, Environmental Technology & Innovation, Journal of Energy Storage, Journal of Advanced Research, BioEnergy Research, Processes, Cells, Antioxidants, Frontiers in Microbiology and others). She worked at the interface between basic research and applied science and co-authored several verified methodologies (the Final reports RWE, Innogy, etc.).

Her research findings are recognised by scientists around the world and have been cited more than 1000 times by other papers at WoS (excluding self-citations, h-index 23), clearly demonstrating the relevance and impact of her research.

Conclusion: The applicant's scholarly/artistic capabilities meet the requirements expected of applicants participating in a professor appointment procedure in the field of Microbiology.

Závěr: Vědecká / umělecká kvalifikace uchazeče **odpovídá** požadavkům standardně kladeným na uchazeče v rámci řízení na jmenování profesorem v oboru Mikrobiologie.

Hodnocení pedagogické způsobilosti uchazeče

Evaluation of the applicant's pedagogical experience

Monika Vítězová also has a complex teaching and supervision record, which includes 30 semesters of active teaching at MU (and previously 10 semesters at MENDELU, Brno).

At her home institution, the Faculty of Science MU, she was the main person (leader, guarantor) of 5 full-semester lectures focussing on Microbiology, Basic Microbiology, General Microbiology, Microbial ecology, and Biology of wastewater treatment, all of which were accompanied by exercises or practicals. Other semester lectures included Microbiological seminars and Virology seminars. Monika Vítězová also took part in a number of ad hoc lectures abroad, e.g. at Justus Liebig University Giessen, Germany (repeatedly as part of the Erasmus + programme), and at Kasetsart University, Department of Biotechnology, Thailand, Bangkok.

Monika Vítězová has also been active in supervising undergraduate and postgraduate students, including BSc theses (21 successfully defended), MSc theses (9 defended, one in progress), and PhD theses (2 defended). She is the chair of the Master's programme in

Microbiology at her home university (since 2015) and has worked as a member of doctoral committees at the Faculty of Science of Masaryk University in Brno and Mendel University in Brno.

Conclusion: The applicant's pedagogical capabilities meet the requirements expected of applicants participating in a professor appointment procedure in the field of Microbiology.

Závěr: Pedagogická způsobilost uchazeče **odpovídá** požadavkům standardně kladeným na uchazeče v rámci řízení na jmenování profesorem v oboru Mikrobiologie.

Hodnocení uchazeče jako význačné a uznávané vědecké / umělecké osobnosti v daném oboru

Evaluation of the applicant as a respected and recognized scholarly or artistic figure in a given field

Monika Vítězová received her doctorate from the Faculty of Science at Masaryk University in 2000 with a thesis on the factors influencing the electro-transformation of bacteria. After completing her doctorate, she spent 4 months abroad at the Martin Luther University Halle, Institute of Genetics, Halle, Germany. From 2000 to 2007, she worked as an assistant professor at the Department of Microbiology, Faculty of Science, Masaryk University. Then, from 2007 to 2015, she moved her research activities to Mendel University as an assistant and associate professor (habilitation 2014 at Mendel University, specialisation habilitation: Waste technology), and in 2015 she returned to the Faculty of Science of MU as head of the Department of Microbiology. She is a recognised and independent academic expert in the fields of anaerobic microbiology, methanogenic archaea, the archaeal community of the underground gas reservoir, anaerobic culture techniques in applied geomicrobiology and greenhouse gas emissions.

Through short-term stays over the last ten years, Monika Vítězová has built a broad network of international collaborators disseminating her research and expertise in Europe (Semmelweis University, Budapest, Hungary; University of Barcelona, Spain; University of Vienna, Austria; and others) and worldwide (University of Alberta, Renewable Resources Dept., Edmonton, Canada). Between 2015 and 2024, she was a member of the organising committees of several international conferences (Soil - the non-renewable environmental resource; Biomania).

Monika Vítězová has received several competitive scientific grants. She was the principal investigator of 2 grants, one from the Technology Agency Foundation (TAČR) and the second from the Ministry of Education, CZ. Currently, she is the principal investigator of the TAČR project (FW06010624) and a team member in the next project, Visegrad+. In addition, she has been involved as a principal investigator in many national development and strategy projects of contract research on the ecophysiology of methanogenic archaea. Many studies have been applied as utility models or prototypes (Prototype of a desulphurisation column; A Pilot Device for the desulphurisation of biogas). Her expertise and contributions to science and the scientific community have been recognised several times, e.g. by invitations to participate in committees (CO2 Czech Solution Group; Irish Research Council) and scientific and doctoral boards (Faculty of Science, Masaryk University, Brno; Mendel University in Brno).

Conclusion: The applicant is a respected and recognized scholarly figure in her field. The applicant has made a significant contribution to the development of her field. The applicant constitutes a leading figure in her field of scholarship or research.

Závěr: Uchazeč **je** význačnou a uznávanou vědeckou osobností v daném oboru. Významně se **zasluhuje** o profilování a rozvoj tohoto oboru. **Představuje** jednu z vůdčích osobností vědecké školy nebo výzkumného týmu v oboru.

Výsledek tajného hlasování komise

Hlasování se uskutečnilo: elektronicky

Počet členů komise		5
Počet odevzdaných hlasů		5
z toho	kladných	5
	záporných	0

Návrh komise

Na základě výsledku tajného hlasování následujícího po zhodnocení vědecké / umělecké kvalifikace, pedagogické způsobilosti a profilu uchazeče jako význačné a uznávané vědecké osobnosti předkládá komise Vědecké radě Přírodovědecké fakulty Masarykovy univerzity návrh **jmenovat uchazeče profesorem** v oboru Mikrobiologie.

V Brně dne 13.01.2025

prof. RNDr. Ivo Sedláček, CSc.