

Masaryk University	
Faculty	Faculty of Science
Procedure field	Biomolecular Chemistry and Structural Biology
Applicant	doc. RNDr. Radka Svobodová, Ph.D.
Applicant's home unit, institution	Faculty of Science, Masaryk University
<u>Board members</u>	
Chair	prof. Mgr. Lukáš Žídek, Ph.D. <i>CEITEC, Masaryk University</i>
Members	prof. RNDr. Luděk Matyska, CSc. <i>Faculty of Informatics, Masaryk University</i> prof. RNDr. Ivana Kutá-Smatanová, Ph.D. <i>University of South Bohemia in České Budějovice</i> prof. Ing. Vojtěch Spiwok, Ph.D. <i>Department of Biochemistry and Microbiology, UCT Prague</i> Univ.-Prof. Mag. Dr. Thomas Rattei <i>Department of Theoretical Chemistry, Faculty of Chemistry, University of Vienna, Austria</i>

Evaluation of the applicant's scholarly/artistic qualifications

R. Svobodová has two master's degrees, the first in biochemistry (2000) at the Faculty of Science of Masaryk University (MU) and the second in computer science (2003) at the Faculty of Informatics of MU. The motivation for obtaining these two master's degrees was her focus on theoretical chemistry of biomacromolecules and bioinformatics, which at that time could not be studied within one study program. Afterwards, R. Svobodová received a small doctorate (RNDr.) in physical chemistry (2006) at the Faculty of Science of MU, broadening her insight into theoretical chemistry. Subsequently, she obtained a Ph.D degree in a newly accredited field of biomolecular chemistry (2007) at the same faculty. Ten years later, she became Associate Professor at the Faculty of Science of MU in the field of biomolecular chemistry (2017).

R. Svobodová's professional experience includes working both in industry and in academia. She first spent several years (2001-2009) at Siemens in technical positions (software developer, researcher) and in managerial positions (project, team and later section leader). She then moved to Masaryk University, specifically to NCBR and CEITEC, where she started as an assistant professor (2009-2017) and became an Associate Professor in 2017. Since 2021, she has been the head of the Structural Bioinformatics research group at NCBR and since 2022 also the head of the BioData core facility at CEITEC.

She participated in two long-term fellowships abroad (Royal College of Surgeons in Ireland in 2004; Conway Institute of University College of Dublin in Ireland and Royal College of Surgeons in Ireland in 2010) and also in multiple shorter stays (EMBL-EBI in the UK; Rutgers

- The State University of New Jersey in the USA; Technical University of Denmark in Denmark).

Her research focuses on structural bioinformatics, specifically on the validation, characterization and analysis of biomacromolecular structures and on the detection of channels and pores in biomacromolecules. R. Svobodová also performs research in the field of chemoinformatics, e.g. approaches for calculation of partial atomic charges and QSPR (quantitative structure-property relationship) models. In addition, she is also active in the development of bioinformatics software tools and databases.

R. Svobodová has published more than fifty scientific publications (53 original scientific articles in WoS, 1 article in proceedings, 1 book chapter) and 20 software tools. Her papers have received over 3500 citations (in WoS, without self-citations) and her H-index is 24 (in WoS). R. Svobodová has been responsible for the implementation of large infrastructure grants – specifically the MU node of the ELIXIR CZ project (Czech National Infrastructure for Biological Data), funded by the MEYS (2023-2026 and 2020-2022), and the MU part of the ELIXIR-CONVERGE project, funded by H2020 (2020-2022).

R. Svobodová is very active in the bioinformatics research community. She is the head of the ELIXIR CZ node at Masaryk University (since 2015), a representative for the Czech Republic in the ELIXIR Tools platform (since 2015) and a member of the ELIXIR 3D-BioInfo community (since 2020). From 2020, she is a member of the PDBe-KB consortium (Protein Data Bank Europe – Knowledge Base consortium). Since 2023, she is the Vice-Chair of the Bio/Health/Food working group within the EOSC CZ initiative (European Open Science Cloud CZ initiative). R. Svobodová has received award during her studies (Dean's Award), her students have been awarded several times (Dean's Awards, Poster Awards) and in winter 2024 she received the MUNI Scientist Award.

Conclusion: The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a professor appointment procedure in the field of Biomolecular Chemistry and Structural Biology.

Evaluation of the applicant's pedagogical experience

R. Svobodová is an experienced university teacher. She teaches at the Faculty of Science and the Faculty of Informatics of MU. Her focus is structural bioinformatics and chemoinformatics (e.g. courses Structural bioinformatics in practice, Introduction to chemoinformatics, Chemoinformatics, Advanced chemoinformatics, and in the past Computational chemistry). She also teaches mathematics for life scientists

(e.g., Introduction to mathematics, Optimization) and in the past has provided IT-related courses (Software development process of scientific software, Project management of research projects). She has co-authored a textbook and two book chapters in structural bioinformatics, three internationally cited articles on software development best practices, and several software manuals and YouTube tutorials. She is actively involved in MU events aimed at popularizing science and study. She has spoken many times at Researcher's nights, MU open days, seminars for undergraduate students, etc.

R. Svobodová is an experienced mentor and internationally known young researchers have worked under her guidance. She has led 39 successfully defended master's and 41 bachelor's theses. She supervised six and consulted another seven successfully defended PhD theses. Her students have won several awards including Dean's thesis awards, poster awards, JIC (South Moravian Innovation Institute) PhD Talent award and vice-rector's doctoral student award. R. Svobodová also serves as a member of doctoral study boards (Biomolecular chemistry at the Faculty of Science, MU; Physical chemistry at the Faculty of Science, Palacký University, Olomouc) and has participated in doctoral thesis defenses at several universities (MU, Palacký University, Brno University of Technology, Mendel University, University of Chemistry and Technology Prague) and received the MU Vice-Rector's Award for Supervisors.

Conclusion: The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a professor appointment procedure in the field of Biomolecular Chemistry and Structural Biology.

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

Based on the documents submitted by Radka Svobodová, four letters of recommendation, publication records, and the public lecture, the Evaluation Board states that Radka Svobodová is a mature scientist who has a very good international reputation in the scientific community in the field of structural biology and biomolecular chemistry. Her publication output in high-quality scientific journals received significant citations and her pedagogical activity is excellent. Radka Svobodová meets the requirements as a Professor in the field of Biomolecular Chemistry and Structural Biology.

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

Evaluation Board Decision on the Nomination for Appointment to Professor

Secret vote results

Voting took place: electronically

Number of board members		5
Number of votes cast		5
of which	in favour	5
	against	0

Board decision

Based on the outcome of the secret vote and following an evaluation of the applicant's scholarly or artistic qualifications, pedagogical experience and role as a respected and recognized scholarly or artistic figure, the board hereby submits a proposal to the Scientific Board of the Faculty of Science of Masaryk University to **appoint the applicant professor** of Biomolecular Chemistry and Structural Biology.

In Brno on 30.01.2025

prof. Mgr. Lukáš Žídek, Ph.D.