Habilitation Board Decision on the Nomination for Appointment to Associate Professor

Masaryk University	
Faculty	Faculty of Science
Procedure field	Experimental animal biology
Applicant	Mgr. Karel Souček, Ph.D.
Applicant's home unit, institution	Faculty of Science, Masaryk University
Habilitation thesis	Plasticity of cell identity and its role in cancer progression
Board members	
Chair	prof. Mgr. Vítězslav Bryja, Ph.D. *Faculty of Science, Masaryk University*
Members	doc. Mgr. Roman Hrstka, Ph.D. *Faculty of Medicine, Masaryk University* prof. RNDr. Jan Brábek, Ph.D. *Department of Cell Biology, Faculty of Science, Charles University* prof. RNDr. Vladimír Kryštof, Ph.D. *Department of Experimental Biology, Faculty of Science, Palacký University Olomouc* Dr. Hind Medyouf *Institute for Tumor Biology and Experimental Therapy, Georg Speyer Haus, Germany*

Evaluation of the applicant's scholarly/artistic qualifications

Karel Souček began his scientific career in 2000; thus, the evaluated period covers 24 years. Immediately after completing his doctoral studies in 2003, he joined the Institute of Biophysics of the Czech Academy of Sciences, where he currently holds a primary position and leads his own research group. In addition, he is active in other scientific institutions, including ICRC-FNUSA in Brno and the Faculty of Science at Masaryk University. His research focuses on the mechanisms of cellular plasticity, tumour heterogeneity, and metastasis formation with the aim of improving cancer treatment outcomes. Throughout his scientific career, he has published 120 papers listed in the WoS, with 68% of them in Q1 or Q2 journals. His publication output continues to grow, averaging seven publications per year over the past nine years. At the time of application, he had achieved 2373 citations (excluding self-citations) and an h-index of 26. The works he contributes to are frequently cited in high-impact journals (75% of citations are in Q1 and Q2). Karel Souček collaborates not only with Czech institutions but also with numerous international institutions, such as the Medical University of Innsbruck (Austria), the University Hospital Erlangen (Germany), and the Karolinska Institute (Sweden). His international connections were also strengthened by several years of postdoctoral experience at the University of California (USA). The committee was impressed by the large number of prestigious grants (e.g., from GAČR, MŠMT, AZV) that Karel Souček obtained as a principal investigator or co-investigator. The committee wants to highlight several other achievements such as the Award of the Minister of Health of the CR for his contribution to the development of new small molecules anticancer compounds with synthetic lethal effect (2019). Karel Souček also regularly organizes international conferences within the Czech Society for Analytical Cytometry, of which he has been the chairman since 2019.

From the above, it is evident that Karel Souček is a mature scientist capable of formulating scientific hypotheses, effectively managing research teams and securing funding for scientific work. He successfully publishes results in international journals and translates these results into practical applications.

Conclusion: The applicant's scholarly/artistic capabilities meet the requirements expected of applicants participating in a habilitation procedure in the field of Experimental Animal Biology.

Conclusion: The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Experimental animal biology.

Evaluation of the applicant's pedagogical experience

The committee was impressed not only by the high quality and quantity of Souček's scientific results, but also by his teaching activities. Since 2006, he has been teaching several courses at Masaryk University in the form of lectures and practical exercises in the field of tumour and cellular biology. One of the most significant courses he teaches and guarantees is the course of Analytical Cytometry, including hands-on practical part. This is one of the most successful courses in the history of the department, which is usually oversubscribed, because of its high value and the transmission of practical skills that are highly valued by the future employers. So far, Karel Souček has supervised seven Ph.D. students who have successfully completed their Ph.D. studies (he currently supervises one more) and a large number of bachelor and master students. It is worth mentioning that several of his students have obtained prestigious academic positions in Europe and United States, which shows K. Souček's ability to lead and inspire the next generation in the field of cancer biology.

Conclusion: The applicant's pedagogical capabilities meet the requirements expected of applicants participating in a habilitation procedure in the field of Experimental Animal Biology.

Conclusion: The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Experimental animal biology.

Habilitation thesis evaluation

Karel Souček's habilitation thesis, titled "Plasticity of Cell Identity and Its Role in Cancer Progression," is based on 26 scientific contributions (19 scientific articles, 2 book chapters, and 5 reviews). These are valuable works published in international high-impact journals, with Karel Souček being the corresponding author in most of them. Their common theme is cellular plasticity and tumour heterogeneity. Overall, the thesis is clearly and concisely written, including the introductory chapters, the whole thesis is at an excellent level. The thesis has been evaluated by three independent reviewers that were generally positive and appreciated its quality. They raised several questions and points for discussion, which has been satisfactorily answered during the public presentation.

Conclusion: The applicant's habilitation thesis meets the requirements expected of habilitation theses in the field of Experimental Animal Biology.

Conclusion: The applicant's habilitation thesis **meets** the requirements expected of habilitation theses in the field of Experimental animal biology.

Habilitation Board Decision on the Nomination for Appointment to Associate 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 habilitation thesis, the board hereby submits a proposal to the Scientific Board of the Faculty of Science of Masaryk University to **appoint the applicant associate professor** of Experimental animal biology.

In Brno on 31.05.2024

prof. Mgr. Vítězslav Bryja, Ph.D. .....