

Masaryk University	
Faculty	Faculty of Science
Procedure field	Molecular Biology and Genetics
Applicant	Mgr. Lukáš Čajánek, PhD
Applicant's home unit, institution	Faculty of Medicine, Masaryk University
Habilitation thesis	Molecular Control of Primary Cilium by Distal Appendages and Associated Proteins
<u>Board members</u>	
Chair	prof. Mgr. Petr Beneš, Ph.D. <i>Faculty of Science, Masaryk University</i>
Members	prof. RNDr. Marcela Buchtová, Ph.D. <i>Faculty of Science, Masaryk University</i> doc. Mgr. Marek Eliáš, Ph.D. <i>Ostravská univerzita v Ostravě</i> prof. RNDr. Jan Černý, Ph.D. <i>PřF UK Praha</i> Prof. Lotte Bang Pedersen <i>University of Copenhagen</i>

Evaluation of the applicant's scholarly/artistic qualifications

Dr. Čajánek earned his Master's degree in Molecular Biology from the Faculty of Science, Masaryk University, and completed his PhD with prof. Ernest Arenas in Medical Science at the Karolinska Institute, Sweden, in 2011. After finishing his doctoral studies, he spent five months as a postdoctoral researcher at the Department of Medical Biochemistry and Biophysics at the Karolinska Institute. He then continued his postdoctoral training at the Biozentrum, University of Basel, spending 42 months as a FEBS fellow in the laboratory of prof. Erich A. Nigg. After returning to Masaryk University in 2015, he joined the Department of Histology and Embryology, Faculty of Medicine, as a SoMoPro fellow and, since 2017, he has been employed as an Assistant Professor and Group Leader.

His research is focused primarily on the structure, dynamics, regulation, and function of primary cilia and centrosomes, as well as the mechanisms of their deregulation in ciliopathies. Dr. Čajánek has established a strong publication record, with 34 papers indexed in the Web of Science, including 29 original research articles and 17 publications where he is first or corresponding author. His work has been cited more than 1500 times. In addition, he co-authored a chapter in the Elsevier volume *Recent Advances in iPSC Technology* (2021).

Throughout his career, he has been successful in obtaining competitive funding. He has been the principal investigator for five projects supported by the Czech Science Foundation, Swiss National Science Foundation (SNSF) and FEBS. Dr. Čajánek is actively involved in the scientific community. He has participated in organizing several national and international conferences focused on cilia research, including the Czech Cilia Meetings, Cilia

Interconnect 2022, and the Cilia 2024 Conference. His international recognition in the field is underscored by the FEBS Distinguished Young Investigator Award, which he received in 2015.

Given his long-term scientific productivity, robust international experience, strong publication and funding record, and clear research focus with demonstrated impact, Dr. Čajánek's scientific activity is considered excellent by the habilitation board.

Conclusion: The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Molecular Biology and Genetics.

Evaluation of the applicant's pedagogical experience

Dr. Čajánek began his teaching career at the Faculty of Science, Masaryk University, in 2016, serving as a supervisor of bachelor's, master's, and doctoral students. By the time of writing this evaluation, he had successfully supervised four bachelor's theses, one master's thesis, and two doctoral dissertations, and he is currently supervising two additional master's and one PhD students. His long-term engagement in supervision at all academic levels reflects his sustained commitment to mentoring young researchers.

Since 2023, he has also been involved in teaching the full-semester course Bi7005 „Cellular Regulation“, where he delivers four lectures as part of the teaching team. In 2022–2023, he contributed to the practical course Bi5611c Special Methods in Animal Physiology, and since 2022 he has regularly delivered a lecture in the course Bi1033 Introduction to the Specialization in Experimental Animal Biology and Immunology.

Overall, Dr. Čajánek has developed a steadily growing teaching portfolio that combines student supervision, participation in specialized courses, and contributions to full-semester lecture-based teaching. His pedagogical activities demonstrate an engagement in both classroom teaching and individual mentorship, supporting the education and professional development of students across multiple levels, while leaving a room for further strengthening his classroom teaching profile in the future.

Conclusion: The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Molecular Biology and Genetics.

Habilitation thesis evaluation

Habilitation thesis represents a high-quality and comprehensive summary of the author's long-term research in the field of cilia biology, placed within the context of current knowledge. It is based on an extensive body of publications, including 11 original research articles, 1 methodological paper, and 3 review articles, demonstrating the author's systematic and sustained scientific contribution. The thesis is well written, logically organized, and clearly presented. Its major strengths lie in the combination of a long-term research focus and deep mechanistic insight. The author also critically reflects the current limitations of the field. The thesis was assessed independently by three reviewers – prof. Alex Dammermann from Max Perutz Labs, University of Vienna; Dr. Aniruddha Mitra from the Institute of Biotechnology of Czech Academy of Sciences; and Dr. Jan Mašek from Faculty of Science, Charles University.

All reviewers expressed the view that, based on the submitted thesis, publication record and demonstrated expertise, the author is a mature and highly competent researcher with strong potential to continue making significant contributions to the field.

During his lecture, the candidate demonstrated not only a deep understanding of the topic but also strong pedagogical skills and the ability to communicate complex concepts in a coherent and accessible manner. He responded to numerous questions raised by the

opponents and members of the committee concerning his work, and his answers were convincing, comprehensive, and well-founded. This clearly demonstrated his excellent knowledge of the field but also his ability to address more general, interdisciplinary questions.

Conclusion: The applicant's habilitation thesis **meets** the requirements expected of habilitation theses in the field of Molecular Biology and Genetics.

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 Molecular Biology and Genetics.

In Brno on 20.05.2026

prof. Mgr. Petr Beneš, Ph.D.