

Masaryk University	
Faculty	Faculty of Medicine
Procedure field	Neuroscience
Applicant	MUDr. Alena Damborská, Ph.D.
Applicant's home unit, institution	Faculty of Medicine, Masaryk University
Habilitation thesis	Electrophysiological correlates of both resting-state mental activity and higher brain functions in humans (Methods of scalp and intracerebral electroencephalography)
<u>Board members</u>	
Chair	prof. MUDr. Marie Nováková, Ph.D. <i>Faculty of Medicine, Masaryk University</i>
Members	Prof. Viktor Jirsa, Ph.D. <i>Institut de Neurosciences des Systemes, Aix-Marseille Université, Faculté de Médecine, Marseille, France</i> doc. Ing. Jana Kolářová, Ph.D. <i>Ústav biomedicínského inženýrství, Fakulta elektrotechniky a komunikačních technologií, VUT Brno</i> MUDr. Igor Riečanský, Ph.D. <i>Oddělení behaviorální neurovědy, Ústav normální a patologické fyziologie, Centrum experimentální medicíny SAV, Bratislava</i> doc. MUDr. Vladimír Riljak, Ph.D. <i>Fyziologický ústav 1. LF UK Praha</i>

Evaluation of the applicant's scholarly/artistic qualifications

Alena Damborská, MD, PhD, graduated at the Faculty of Medicine of Masaryk University in Brno, Czech Republic (study program General Medicine) in 1997. After the graduation, she started her career at the Department of Pathology (University Hospital Brno). In 1999 she moved to the Department of Physiology, Faculty of Medicine, Masaryk University in Brno, where she worked at the positions of Assistant till 2012 and Assistant Professor since 2012 to 2015. During her stay at the Department of Physiology she successfully defended her doctoral thesis "Event-related potentials registered intracerebrally during visual oddball task in human" (2012, doctoral board Normal and pathological physiology, supervisor Prof. Kukleta). In 2015, Dr. Damborská shifted from preclinical department to clinical work and research – she is currently working at the position of Assistant Professor at the Department of Psychiatry, Faculty of Medicine, Masaryk University, where she is also a psychiatrist in training. Concurrently she is working as a researcher and Senior Staff Scientist in Multi-modal and functional Neuroimaging Research Group (Central European Institute of Technology, Masaryk University).

Dr. Damborská published up-to-now in total 24 papers, 16 of them as the first or corresponding author. Out of these papers, 12 were published in impacted journals (cumulative IF 42,7). She is listed either as the first or the corresponding author in 9 of these publications (8 of them are in journals with IF above the median of WoS category). The international impact of her research work is reflected by 139 citations in total (111 in WoS) and H-index 5. Dr. Damborská was principal investigator of a project financed from Horizon 2020 (Marie Skłodowska-Curie grant, 2017-2019) and a work package leader in a national grant supported by Grant Agency of the Czech Ministry of Health. All papers and grant projects of dr. Damborská are related to neuroscience topics.

From abovementioned, it can be concluded that Dr. Damborská is experienced researcher with evidenced international impact in the field of Neuroscience.

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

Evaluation of the applicant's pedagogical experience

Alena Damborská, MD, Ph.D., started her teaching activity in 1999 as an Assistant at the Department of Physiology, Faculty of Medicine, Masaryk, where she taught in study programmes General Medicine and Dentistry both practices and seminars, in Czech and in English (course Physiology). Since 2008 she was also teaching course Neuroscience at the Physiology department. Since 2021 she is teaching Psychiatry both in Czech and in English programme General Medicine. She is a co-author of 4 textbooks (various editions of Physiology Practices).

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

Habilitation thesis evaluation

The habilitation thesis "Electrophysiological correlates of both resting-state mental activity and higher brain functions in humans (Methods of scalp and intracerebral electroencephalography)" is written as a collection of 14 previously published papers (12 original papers and 2 reviews) with commentary in a very good English. Dr. Damborská investigated in her work spatio-temporal characteristics of event-related

electrophysiological activity with the aim to contribute to the knowledge of neuronal substrate of non-motor and movement-related cognitive functions. She also explored the large-scale brain network dynamics during the resting state, thus focusing on the identification of abnormalities in affective disorders. All papers included in the habilitation thesis of dr. Damborská rely on the highly-advanced analysis of neurophysiological data, which is a skill not often found in a clinically trained psychiatrist. Research activities of dr. Damborská show a clear scope around disorders of higher-order cognitive, executive, and affective functions. She presents in her thesis an impressive range of data acquisition and analysis techniques that are well-chosen, well-understood, well-applied and well-published.

The habilitation thesis was reviewed by three respected experts in the field of Neuroscience. All reviewers agreed that the habilitation thesis of Dr. Damborská presents new knowledge in the field of electroencephalography and has a very good scientific potential. The opponents also highly evaluated concise and precise formal and language level of the habilitation thesis. Based on all the three reviews, the presented habilitation thesis meets the standard requirements for habilitation theses in the field of Neuroscience at the Faculty of Medicine, Masaryk University.

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

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 Medicine of Masaryk University to **appoint the applicant associate professor** of Neuroscience.

In Brno on 16.08.2023

prof. MUDr. Marie Nováková, Ph.D.

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