

Masaryk University	
Faculty	Faculty of Medicine
Procedure field	Medical Chemistry and Biochemistry
Applicant	doc. Mgr. Tomáš Kašparovský, Ph.D.
Applicant's home unit, institution	Faculty of Science, Masaryk University
<u>Board members</u>	
Chair	prof. RNDr. Eva Táborská, CSc. <i>Faculty of Medicine, Masaryk University</i>
Members	prof. RNDr. Jitka Ulrichová, CSc. <i>Ústav lékařské chemie a biochemie UP Olomouc</i> prof. PharmDr. Petr Babula, Ph.D. <i>Faculty of Medicine, Masaryk University</i> prof. Ing. Miroslav Strnad, DrSc. <i>Laboratoř růstových regulátorů, UP v Olomouci & Ústav experimentální botaniky AV ČR</i> Assoc. Prof. Raimundo Gargallo, PhD. <i>Department of Chemical Engineering and Analytical Chemistry, University of Barcelona</i>

Evaluation of the applicant's scholarly/artistic qualifications

Presently Doc. Mgr. Tomáš Kašparovský, Ph.D. works as an associate professor at the Department of Biochemistry of the Faculty of Science, Masaryk University. In 2000 he graduated in Biochemistry at the Faculty of Science, Masaryk University. He completed his PhD study at the same institution in 2004 with the subject of the thesis „Elicitors of Phytopathogenic Fungi“. He began his career as an assistant and later as an assistant professor at the Department of Biochemistry. In 2016 he habilitated as an associate professor with the habilitation thesis „Phytoalexins and Phytoestrogens“.

In his present scientific activity doc. Kašparovský focuses on the topic of plant secondary metabolites influencing human health. He continues in his original work dealing with plant defence reaction within which these substances are produced. He focuses mainly on substances acting as phytoestrogens. He established a new Laboratory of Secondary Metabolites at the Department of Biochemistry dedicated to the development of new methods of detection of the monitored substances in different matrices. With these methods then the fate of plant secondary metabolites within subsequent metabolic changes is monitored. In his study of these processes he uses specially developed bioreactor for continual in-vitro experiments. By this method the dynamics of microbiom in ruminal fluid depending on added phytoestrogens is monitored as an animal model for determination of key bacteria changing phytoestrogens to equol. Subsequently also the process of fermentation in ripening milk products with the focus to phytoestrogens is monitored. Overall, this research aims towards production of the so-called functional food which should serve for prevention of civilization diseases. At present this topic belongs among the recent ones also with respect to citations of current articles. With his professional activity, doc. Kašparovský moves at the interface between plant biochemistry and nutrition biochemistry, the second direction falls into the field of medical biochemistry.

Till the date 15.2.2001, doc. Kašparovský is the author or co-author of 27 original scientific articles, 26 of them in journals with impact factor. In 12 of them doc. Kašparovský is the first or corresponding author. 10 of these publications are in journals with impact factor above median IF of the given category according to WOS. 12 articles from the total of 26 are published in journals belonging to the first quartile (Q1) of the given field. The total impact factor of articles is 66.094.

Doc. Kašparovský further published partial results of his research activity on 13 abroad and 18 domestic conferences. Response to scientific work of doc. Kašparovský includes 253 citations (without auto-citations) listed in the WOS database. Articles in which doc. Kašparovský is the first or correspondent author have been cited 198 times. The total H-index of doc. Kašparovský according to WOS is 10.

Doc. Kašparovský broadened his scientific overview at a number of short-term stays and cooperations with abroad workplaces (INRA Dijon, INRA Sophia-Antipolis, both in France). Doc. Kašparovský is a member of the Czech Society for Biochemistry and Molecular Biology, the Czech Society of Clinical Biochemistry, the Jan Marek Marci Spectroscopic Society, and the British Society for Experimental Biology.

Doc. Kašparovský participated in the solution of five research projects of the Grant Agency of the Czech Republic, once as the main solver. Once he took the role of the main solver in the first year of the project solution. Doc. Kašparovský is the chairman of the Scientific Board of the Faculty of Science, Masaryk University, and the member of scientific boards of Masaryk University, Central European Institute of Technology, Faculty of Sports and Studies and the member of scientific boards at three external faculties.

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

Evaluation of the applicant's pedagogical experience

Since 2003 doc. Kašparovský teaches at the Department of Biochemistry of the Faculty of Science, Masaryk University (since 2017 as an associate professor). He gives lectures, seminars and practical courses in several subjects of Bachelor's, Master's and Doctoral studies. His

lectures „Regulation of Metabolism“ and „Cellular Signalization“ are already for a long time offered to and visited by students of selected fields of the Faculty of Medicine. Within the subject „Diploma Thesis Seminar“, which he leads, the research results with biomedical topic are regularly presented, especially those in the medical programme Bioanalytics. Doc. Kašparovský also lectures the subject Biochemistry for the study programme Physiotherapy at the Faculty of Sports and Studies, Masaryk University.

He has supervised 48 Bachelor's and 30 Master's theses. He has been also supervisor of 3 PhD theses successfully defended, 3 more PhD studies being in progress. He is a member of 8 commissions for state final examinations from Biochemistry, in five of them he is the chairman.

He was the solver of five projects of the University Development Fund with university pedagogical topics and one project of the Operational Programme Education for Competitiveness. In three of these projects he was the main solver, in other three the co-solver. He is the author of five reviewed teaching texts and he participated in the preparation of three non-reviewed popularizing educational videos. Parts of the text of his habilitation thesis are cited on the electronic resources of the 1st Faculty of Medicine, Charles University (Wikiskripta).

It can be stated that doc. Kašparovský shows rich and versatile pedagogical activity in the field of Biochemistry at the Faculty of Science. He does not implement any direct teaching at the Faculty of Medicine, Masaryk University. In terms of content, many of his teaching activities are thematically intertwined with the field of Biomedicine, as mentioned above.

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

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

Doc. Kašparovský has many years of teaching and scientific research experience. In his research in recent years he has focused mainly on the topic of phytoestrogens and the so-called functional food. The connection of the monitoring of production of these hormonally active substances by plants with their subsequent change in farm animals and penetration into milk and fermented milk products made from it, with an effect on human metabolism, can be considered as the main direction of his research. Based on the number of citations from August to October 2020 his article „Isoflavones“ published in the journal *Molecules* in 2019 was included to 1 % of most cited articles in the field of Chemistry (data from Essential Science Indicators). It is assumed that he will continue to develop his scientific and pedagogical activities and will participate in the further development of the field.

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.

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 Faculty of Medicine of Masaryk University to **appoint the applicant professor** of Medical Chemistry and Biochemistry.

In Brno on 12.03.2021

prof. RNDr. Eva Táborská, CSc.

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