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Re: Dr. Mikoláš, recommendation by PhD supervisor

To Whom It May Concern:

Dr. Mikoláš is submitting the thesis: "Improving the diagnosis of first-episode schizophrenia from magnetic resonance imaging using machine learning." The thesis is based on 4 peer-reviewed publications. Dr. Mikoláš is the first author on 2 of these and one of the co-authors on the others. The impact factor of these publications ranges between 2.6-7.6, which is sufficient. Dr. Mikoláš has also published 4 additional papers in peer-reviewed journals with impact factor, which are not a part of this dissertation. Therefore, the formal requirements for PhD thesis in terms of publications are met.

Importantly, Dr. Mikoláš contributed significantly to all aspects of these studies. He participated in the design and data collection. For the first-author manuscripts, he also performed the data processing and statistical analyses under my supervision. In addition, he wrote the first-author papers, which were extensively reviewed by international experts in the field. Dr. Mikoláš was then able to satisfactorily respond to the reviewer comments and have the manuscripts accepted and published.

Pavol is motivated, curious, contributes his own ideas and is capable of quickly mastering new analytical tools, such as fMRI data analysis, machine learning. His writing is very concise and clear. As I have been based in Canada for most of his thesis, he has clearly demonstrated his ability to work independently.

Machine learning analyses of brain imaging data are currently on the cutting edge of neuropsychiatric research. As such, Dr. Mikoláš`s work is original and timely. The manuscripts have been well received, with cca 50 citations based on Google Scholar.  In addition, Dr. Mikoláš received several awards for this work, including: 2016 Publikační cena České společnosti pro klinickou neurofyziologii ČLS JEP, 2015 3rd place in the postgraduate section of the Studentská vědecká konference, 3. lékařská fakulta UK, as well as 2015 main award in the lecture section at 2015 Neuropsychiatrické fórum, Praha.

All in all, Dr. Mikoláš has documented a sufficient level of knowledge, skills, expertise, methodological rigor and productivity. I have no hesitation in recommending Dr. Mikoláš for graduation.

Thank you. Yours sincerely,

Tomas Hajek