M U N I

Příloha č. 11_3 směrnice MU Habilitační řízení a řízení ke jmenování profesorem

POSUDEK OPONENTA HABILITAČNÍ PRÁCE

Masarykova univerzita	
Uchazeč	Mgr. Natália Martínková, Ph.D.
Habilitační práce	Modelling in phylogenetic framework
Oponent	Johan R. Michaux, PhD.
Pracoviště oponenta, instituce	Université de Liège, Life Sciences, Belgium

viz Příloha 11_3a

Dotazy oponenta k obhajobě habilitační práce (počet dotazů dle zvážení oponenta)

Dotazy nebyly vzneseny.

Závěr

Habilitační práce Natálie Martínkové „Modelling in phylogenetic framework" ***splňuje*** požadavky standardně kladené na habilitační práce v oboru Zoologie.

Brno dne

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podpis

Příloha č. 11_3a

UNIVERSITÉ de Liège

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Report concerning the habilitation thesis of Ms Natalia Martinkova

The habilitation thesis of Ms Martinkova is divided in two main chapters. The first one corresponds to a general introduction focusing on five main topics:
1. Testing hypotheses using phylogenetic inference from genetic data to evaluate taxon divergence and evolutionary history.
2. Molecular dating to model the time line of phylogenetic divergence at intra- and inter-specific levels.
3. Testing phylogenetic congruence in search of functional relationships between groups of taxa.
4. Predictive modelling of species traits in the context of genetic diversity.
5. Identifying biologically relevant information in data structure with detection of outliers.

The given information provides a good and clear review concerning these topics as well as the progress of science since the time of the publication of the papers of Ms Martinkova.
I particularly appreciated the pedagogic effort to explain such complex aspects in a clear way. These different topics correspond to the main goals of the thesis and they also include explanations concerning the 16 papers of Ms Marinkova, published in journals with an impact factor and one reviewed conference paper. These papers are mostly related to the topic of statistical modelling in zoology.

The second chapter corresponds to the authors contributions. In this chapter, a summary of the author contribution (in %) as well as of the mains research innovations, are given for the main 16 published papers of Ms Martinkova. This information gives a clear picture of the respective works of Ms Martinkova, as compared to her collaborators. This chapter also evidence the important network of collaborators that Ms Martinkova succeeded to develop for her researches. This aspect is essential for a good scientific work, particularly in the fields of evolutionary biology. It corresponds for me to a very positive aspect of the scientific career of Ms Martinkova.

These informations are followed by copies of the 16 main publications of this researcher. An important part of these articles was published in some of the best journals proposed in the fields

of evolutionary biology and statistical modelling in zoology (e.g. *Molecular Phylogenetics and Evolution, Proceedings of the Royal Society B-Biological Serie, Journal of Biogeography, Molecular Ecology, Systematic Biology, PLoS ONE, Scientific Reports, Bioinformatics*). Some other articles were published in more specialized journals with a lower impact factors such as *Folia Zoologica, Zoologica Scripta, Acta Chiropterologica, Chromosome Research, BBA Biomembranes.*
These publication evidence the important scientific production of this researcher as well as her high capacity to publish in good scientific journals with a high impact factor.
As they were accepted in such peer reviewed journals, they were judged and reviewed by other scientists and I don't have any doubts concerning the quality of these researches. Working too in this field of research, I had a great pleasure to discover again these papers. They enhanced and improved the development of these scientific topics in the European sciences.

To summarize my report, I conclude that Ms Natalia Martinkova is an excellent scientist, and this habilitation thesis evidenced the very good quality of her researches as well as the huge scientific network that she succeeded to develop these last years. Moreover, the clarity of the introduction evidenced a good pedagogic aspect of this researcher, that I particularly appreciate. Therefore, I give my strong support for her habilitation at the Masaryk University.

Johan Michaux, PhD