



Habilitation Thesis Reviewer's Report

Masaryk University	Faculty of Science
Faculty	Genomics and Proteomics
Procedure field	Jan Hošek, RNDr., Ph.D.
Applicant	University of Veterinary and Pharmaceutical Sciences, Faculty of Pharmacy, Department of Molecular Biology and Pharmaceutical Biotechnology
Applicant's home unit, institution	Regulation of the expression and activity of proteins involved in the inflammatory response by natural flavonoids
Habilitation thesis	Radim Vrzal, doc. Ing., Ph.D.
Reviewer	Palacky University, Faculty of Natural Sciences, Department of Cell Biology and Genetics
Reviewer's home unit, institution	

The presented Habilitation thesis of Jan Hošek is adequately structured with well-arranged basic information on anti-inflammatory activity of natural flavonoids. Brief introduction into to topic of inflammation and possible treatment with natural or naturally-derived compounds is supported by 17 publications of applicant as appendix. In the majority of publications (10 of 17) is the applicant either first or last author. This can be considered as the proof of applicant to be able to lead the research as well as research team. Moreover, many of these publications include foreign co-author and this suggests that applicant established a functional international collaboration within his research field.

Reviewer's questions for the habilitation thesis defense (number of questions up to the reviewer)

Q1 – At the end of the page 24 is claimed that prenylated flavonoids ameliorate the symptoms of colitis in laboratory animals. Could you provide the proof of prenylated vs. non-prenylated flavonoids having different biological activity either *in vitro* or *in vivo*?

Q2 – What were the blood concentrations of tested prenylated flavonoids in laboratory animals ? What is known about bioavailability of non-prenylated counterparts?

Q3 - Are there any studies using any of applicant's tested compounds in skin models of inflammation? After sun burns for example? If yes, what was the result?

Conclusion

The habilitation thesis entitled "Regulation of the expression and activity of proteins involved in the inflammatory response by natural flavonoids" by Jan Hošek *fulfils* requirements expected of a habilitation thesis in the field of Genomics and Proteomics.

In Brno on

18.1.20