

HABILITATION THESIS REVIEWER'S REPORT

Masaryk University

Applicant

Mgr. Karel Souček, Ph.D.

Habilitation thesis

Plasticity of cell identity and its role in cancer progression

Reviewer

Wolfgang Mikulits, Prof. PhD

Reviewer's home unit, institution

Center for Cancer Research, Medical University of Vienna

Dr. Souček has uncovered novel oncogenic factors that essentially contribute to cancer progression and metastasis. He has made important contributions in deciphering the biological complexity of cell signalling in cell-to-cell communication and changes in cancer cell plasticity. With his clearly written habilitation thesis, Dr. Souček demonstrates that he has successfully broken new scientific ground and has mastered the scientific aspects of the habilitation subject.

Dr. Souček has authored 140 publications in highly-ranked scientific journals which emphasizes his outstanding scientific achievements. Importantly, his scientific work was supported by a multitude of peer-reviewed grants which underlines his scientific competitiveness.

Together, this thesis is excellent in terms of scientific commitment and research performance.

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

MET - as the reversal of EMT – is considered to be essentially required for metastatic colonization. In addition to its importance in the modulation of osteoclast differentiation, is there a role of GDF-15 in the EMT-MET cycle?

Can stages of partial/hybrid EMT and complete EMT clearly defined in prostate cancer?

TGF- β is a major inducer of EMT and cancer progression in different cancer entities. Yet, therapeutic intervention with TGF- β largely failed in clinical trials. How to overcome weakness of current anti-TGF- β strategies?

Conclusion

The habilitation thesis entitled "Plasticity of cell identity and its role in cancer progression" by Karel Souček **fulfils** requirements expected of a habilitation thesis in the field of Experimental Animal Biology.

Date: 27.05.2024

Signature: