

Open PhD position

Department of Physiology, Faculty of Science, Charles University

Group Leader: Prof. Jiří Neužil

SUCLG2 as a new tumor suppressor affecting mitochondrial metabolism

Project description:

Many family cancer syndromes are caused by inherited mutations in tumor suppressor genes. We have recently identified new germline variants in the SUCLG2 gene which are associated with a rare type of neuroendocrine tumors, pheochromocytoma and paraganglioma (PPGL). SUCLG2 is a subunit of a citric acid cycle enzyme, succinyl-CoA ligase (SUCL), which has not been previously linked to cancer development. The objective of this project is to describe the effect of SUCLG2 variants found in PPGL patients on the function of SUCL and to delineate the mechanisms by which these mutations promote tumorigenesis. Since we found that malfunction of SUCLG2 leads to suppressed activity of a well-known PPGL tumor suppressor, mitochondrial complex II, the functional link between SUCLG2 and complex II will be investigated. The project will lead to validation of SUCLG2 as a novel tumor suppressor with important consequences for genetic counselling.

Candidate profile:

We are seeking a highly motivated and enthusiastic PhD student eager to work on a clinically relevant research project. We expect the candidate to be proactive, reliable, organized, and able to work independently as well as part of a team. Experiences in cell culture techniques, molecular biology, imaging methods or metabolic profiling are of advantage.

The Team:

Our laboratory is established in the Institute of Biotechnology CAS (BIOCEV, Vestec near Prague), as well in the Department of Physiology of the Faculty of Science, Charles University (Prague). We perform top quality science linking basic and applied research in the field of cancer biology. The team publishes in high profile journals and succeeded in developing a novel anti-cancer drug followed by successful phase I clinical testing in the Czech Republic. We collaborate with a number of high quality laboratories all around the world.

We offer:

- Friendly team and top quality research
- Work on an interesting project funded by the Czech Science Foundation
- Above-standard salary
- The opportunity to learn state-of-the-art techniques

For more information contact:

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For further reading:

<https://pubmed.ncbi.nlm.nih.gov/34415331/>

<https://www.biocev.eu/cs/o-nas/aktuality/patogenni-variace-genu-suc1g2-zvysuje-riziko-vzniku-vzacnych-neuroendokrinnich-tumoru.292>

<https://cesky.radio.cz/cesti-vedci-pripravuji-druhou-fazi-testovani-leku-proti-rakovine-mitotam-8716165>

<https://pubmed.ncbi.nlm.nih.gov/30449682/>