IMG

Institute of Molecular Genetics
of the Czech Academy of Sciences

Regular Wednesday IMG seminar

Josef Novák, Ph.D.

Laboratory of Genome Integrity

"Switch of ADP/ATP translocase isoforms in cellular senescence and malignancy"

Four isoforms of human ATD/ADP translocators (ANTs) have poorly understood functional differences. Due to their high sequence similarity, antibody-based detection of these proteins is challenging. We, therefore, developed a sensitive proteomic method for detecting ATD/ADP translocator isoforms and their relative ratio. Using this technique, we observed a switch of ANT isoforms during senescence establishment associated with changes in cellular energy metabolism. The switch of ANT protein isoforms was not correlated with the change of ANT transcripts. Similarly, we found a non-correlation of ANT transcripts with corresponding proteins in patients' glioblastoma and lung cancer samples. We concluded that protein levels of ANT isoforms are regulated on multiple levels and are tightly linked to mitochondria biogenesis.

The seminar will be held

on Wednesday 19th June 2024 at 15:00

in the Milan Hašek Auditorium at IMG

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)