

INSTITUTIONAL SEMINAR SERIES



Institute
of Experimental
Medicine, CAS

2nd June 2022 / 14:00

Bordó seminar room of the IEM

Dear colleagues, it's our pleasure to invite you to the seminar

Identification of novel candidate biomarkers in early colorectal adenoma transition

Ing. Anna Šišková

Department of the Molecular Biology of Cancer

Colorectal adenoma, a protuberance from the epithelium of the intestine, is a precursor of colorectal cancer, the third most common cancer worldwide. Since the molecular mechanisms behind the early transformation into an adenoma are not well understood, we aimed to identify novel candidate genes by whole transcriptomic sequencing (WTS) of a larger cohort of adenomas and their corresponding adjacent tissue. The analysis revealed more than 2,000 differentially expressed genes (DEGs) between the adenoma and the adjacent tissue. Functional consequences of the gene signature were analyzed by proliferation assay, immunohistochemistry and in vivo in the chorioallantoic membrane (CAM) assay.

As part of the Mobility Program, I travelled to Erlangen, Germany, to the Institute of Experimental Tumor Pathology in the laboratory of Professor Regine Schneider-Stock. I mainly learned to work with colorectal cancer cell lines during my internship. I learned exciting methods such as the chorioallantoic membrane assay (CAM), where chicken embryos served as an in vivo model. The collaboration with the German lab has definitely enriched me both professionally and in my personal approach to scientific activity.