

The aim of our project is identification of genes which support growth and progression of renal cancer, in particular its most type, called clear cell renal cell carcinoma (ccRCC). Each year ccRCC is diagnosed in about 5,000 Polish patients, while about 2,600 die of the disease.

Our project will be focused on genes involved in the regulation of nucleoli, small substructures of the nucleus, which contribute to the synthesis of rRNA (ribosomal RNA). We hypothesize that the changes in nucleolar genes influence tumor growth and metastasis. We hope that the blockade of the actions of these genes will lead to inhibition of tumor progression. In our project we will utilize ccRCC tumor tissue samples from patients, the cell lines cultured in the laboratory, as well as mouse model of ccRCC. We hope that the results of our project will lead to development of novel therapeutic strategies and molecular markers of ccRCC progression.