

Seminarium Studium Doktoranckiego NCBJ
Thursday, 30 January, 9:00
Sala 404 w NCBJ, Pasteura 7

Speaker:
Joanna Reszcyńska (Studium Doktoranckie NCBJ)

Title:
Dose-response to low dose of ionizing radiation – from a DNA lesion to a cancer growth

Abstract:

Understanding the consequences of exposure to low dose ionizing radiation is an important public health concern. It has become clear that cellular responses can be very different at low compared to high radiation doses. Important biological mechanisms may play key role in dose-response at low doses, which has been described by many deterministic and stochastic models, that try to implement current radiobiological knowledge to experimental data. In this talk, I will discuss post-irradiation cellular processes. I will present general analytic model of healthy human cells response to ionizing radiation. Special emphasis will be dedicated on the new approach of capturing the key dynamics—formation of the tumour, that can be well described by Gompertz function. Also, regarding evaluation of the model results, I will present implementation of Maximum Entropy Method in epidemiological data analysis, which brings some new insights to low dose radiation effects evaluation.