Name: **Preclinical research in oncology / Badania przedkliniczne w onkologii**
Lecture language: **English**
Semester: **summer 2022**
ECTS credits: 1
Responsible teacher: **Adrian Podkowa; PhD**

Module summary
Preclinical studies, including in vitro studies with cell line models and in vivo studies with animal models, comprise an important part of cancer research enabling elucidating cancer molecular mechanisms and discovery of novel therapeutic targets. This module briefly summarizes in vitro and puts more emphasis on in vivo methods used in preclinical studies. The continuous scientific progress in technologies followed by an increased understanding of cancer biology will allow the development of more sophisticated preclinical disease models more accurately recapitulating human cancer. In turn, the improved models will increase the success rates of future clinical trials.
Module content
Lectures (5h) scheduled for **25th February 2022 in one block followed by an exam**!:
1. Drug development: translating basic research into clinical practice
2. Pharmacokinetics and pharmacodynamics: main concepts and clinical applications
3. Mouse and rat strains in preclinical oncology studies
4. Advanced preclinical models in oncology: syngeneic models, CDX and PDX models, humanized mice models for immunooncology (reconstituted human immune system, stool transplantation),

Additional information
Teaching methods and techniques:

- Online lectures: The topics presented in the lecture are shown in the form of a multimedia (PowerPoint) presentation

Conditions and ways of passing classes, including rules for making up credits, as well as conditions for taking exams:

To pass the subject a positive grade must be obtained from a test on the entirety of the theoretical material.

Participation rules in classes:
– Registration is compulsory, please send an email confirming your willingness to attend at the following address (justyna.nargiello@pib-nio.pl)

– Attendance is mandatory: Yes

– Participation rules in classes: Students that take part in the classes will learn subsequent topics according to the syllabus of the class. Students should systematically ask questions. Recording of the lecture can only be done with the approval of the lecturer.

The method and procedure for making up for overdue work resulting from a student's absence from classes:

Not applicable – this is a one-day course of lectures

Prerequisites and additional requirements:
Without requirements

Recommended literature and teaching resources:

Figg WD, McLeod HL (red). *Handbook of Anticancer Pharmacokinetics and Pharmacodynamics (available through PIB-NIO intranet and library)*
Rogge M. *Preclinical Drug Development*.
Chao H. *Evaluation of Drug Candidates for Preclinical Development (available through PIB-NIO intranet and library)*
Mell LK, Tran PT, Yu JB, Zhang Q (red). *Principles of Clinical Cancer Research*

Additional information:
None