

Individual Research Trainings

"DENDRIMERS & SMALL MOLECULE APPLICATIONS" 1st round:

May 22- June 10, 2017 Department of General Biophysics, University of Lodz, Poland (DGB/LU)

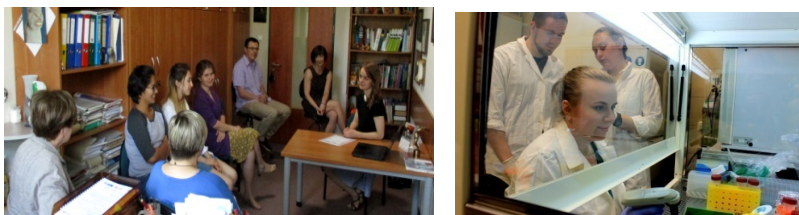
TRAINEES Researcher from Riga Stradins University, Latvia, Riga (RSU) Anita Berzina (3 weeks); Researcher from Kavetsky Institute of the Experimental Pathology, Oncology and Radiobiology, Kyiv, Ukraine (KIEPOR) Mgr. Borikun Tetiana, Ph.D. student (3 weeks)

COACHES Researchers from the DGB, University of Lodz.

AIMS

By the presentation of new technologies in the field of *in vitro* transfection teach Latvian and Ukrainian trainees the ways of analyzing the nanobiomolecules internalization parameters. Training consisted of tests *in vitro* in cell lines to define which nanoparticle-packed pVax-Luc and iRFP670 reporter plasmid complexes provide the best reporter expression in cell culture.

METHODS Complex formation. Cells transfection. Confocal Microscopy. Reporter protein expression



OVERALL RESULTS

During this part of the training (third) the trainees from Latvia (RSU) and Ukraine (KIEPOR) have learnt new *in vitro* methods aimed to conduct the transfection capacity of the selected nanoparticles to transfect different types of cells. Two cell line models were used in this study, N2a, mouse neuroblastoma and mHippoE-18, embryonic mouse hippocampal cell line. Moreover participants of training have studied the cell cytotoxicity methods like MTT test. On the base of results obtained the CBD dendrimer have been suggested as potential carrier for delivering anticancer gene material into the cancer cells. Training was followed by public seminar with the presence of Ph.D. and Master students of Lodz university and participants from Latvia, Ukraine, Poland, Kazakhstan, Russia, India, and Belarus. The training certificates were handed at the end of the training.