VACTRAIN
TWINNING ON DNA-BASED CANCER VACCINES
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TWINNING ON DNA-BASED CANCER VACCINES

Karolinska Institutet

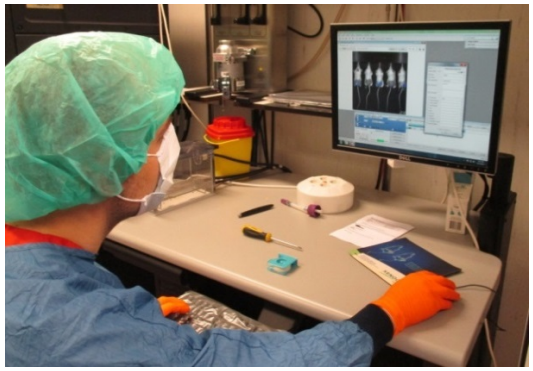
Individual Research Trainings

"DENDRIMERS & SMALL MOLECULE APPLICATIONS" 2nd round:

June 10 – July 9, 2017 MTC/Karolinska Institutet, Stockholm, Sweden

TRAINEES Researcher from Riga Stradins University, Latvia, Riga (RSU) Anita Berzina (M.Sc. Student, 4 weeks);
From INNVOIMMUNE project: Dr Maxim Abakumov, Pirogov Medical Research University, Moscow; Philip Podshwadt, Master student (Ulm University)

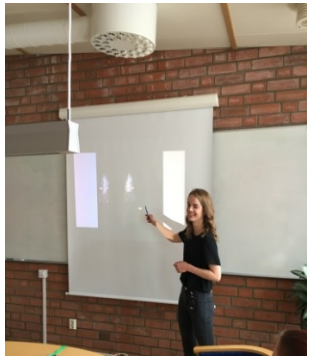
COACHES
Lodz University – Maksim Ionov, lector;
Karolinska Institutet – Stefan Petkov, research assistant; Ilya Gordeychuk, PostDoc.

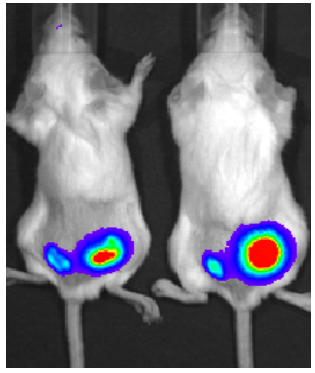


AIMS
By the presentation of new technologies in the field of *in vitro* transfection teach Latvian and Ukrainian trainees the ways of analyzing the nanobiomolecules internalization parameters. Training consisted of tests *in vitro* in cell lines to define which nanoparticle-packed pVax-Luc and iRFP670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

METHODS
Methods of introduction of plasmid DNA into mice. Monitoring efficacy of reporter expression in vivo. Luminescence imaging and quantification.

OVERALL RESULTS
Dendrimers are noncytotoxic and can be used for DNA introduction into cells *in vivo* and *in vitro*. The transfection efficacy is lower than the transfection by lipofection or electroporation. Increase of transfection efficacy requires further optimization of DNA-dendrimer formulations. Data will be presented by Anita Berzina and Maksim Ionov on the international conference "Vaccines & Vaccination" in Moscow www.onlineregru/VAC&VAC2017 .





Together with INNVOIMMUNE project of the Swedish Institute.