

## Individual Research Trainings “TUMOR CHALLENGE” 2nd round, April 23 – July 28, 2018 Riga Stradins University, Riga, Latvia

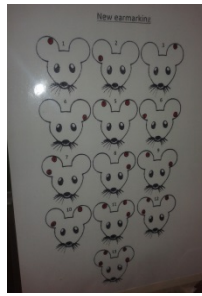
In this training, partner MTC/Karolinska Institutet, helped RSU team to perform locally a typical experiment on DNA-immunization of laboratory mice with plasmids encoding viral proteins, with subsequent challenge of immunized animals with tumor cells expressing these proteins. Training required >2 month preparations.



1. Stefan Petkov prepared tumor cells for transfer to RSU.



2. Mice were purchased, and accommodated at the animal facility of LBMC, Riga, by May 2018 equipped with bioluminescent imager Spectrum CT. Prior to experiment, mice were divided into groups, and labelled.

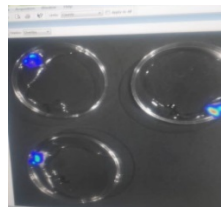


**TRAINEES** Researchers from Riga Stradins University, Riga (RSU) Dzeina Mezale, MD, PhD student; Ilze Fridrihzone, MD, PhD student; new trainee Alica Kurlanda, Bachelor student at the Latvian University.

3. Mice were DNA immunized with plasmid encoding antigen expressed by tumor cells by two injections done with one month interval. Control animals were left untreated. Immunizations were done during expert visits of S Petkov to RSU, Riga.

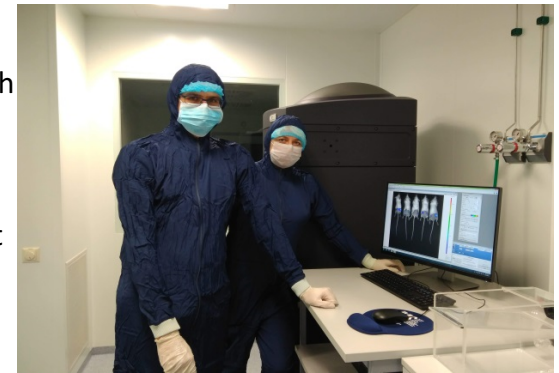
4. Actual tumor challenge started May 31, 2018. Tumor growth was followed every 2-3 days by in vivo imaging.

5. After 3 weeks, mice were sacrificed, tumors excised, imaged and subjected to immuno-histochemical evaluation.



6. Splenocytes were purified and frozen for further immune analysis

**COACHES** MSc Stefan Petkov (MTC/KI); Dr Ilya Gordeychuk (MTC/KI); Prof Ilze Strumfa (RSU)  
**Assisting in animal experiments:** Dr Dace Skrastina (RSU/LBMC, Riga); Dr Maxim Abakumov (Pirogov Medical University, Moscow)



Dr D Skrastina and MD Dzeina Mezale monitor tumor growth in mice

### OVERALL RESULTS

Trainees successfully practiced methods of DNA immunization; of experimental challenge of mice with tumor cells; methods of assessment of tumor growth; different approaches to quantification of metastases; and were trained in histological assessment of tumor tissues (Elements 1-3). Training of immune methods on frozen cells would follow in September-October 2018.

*With INNVOIMMUNE project of the Swedish Institute.*