

Instrumentation

Associated Tissue Bank is equipped with high-tech devices that were purchased from the funds received from the Structural Funds projects from EÚ: POKIMP (ITMS 26220220032), NEUREG (ITMS 26220120063) a MEDIPARK (ITMS 26220220185).

From the financial resources of the project NEUREG was built unique Laboratory of cell and tissue cultures equipped with latest technologies that allow in vitro manipulation with cells and tissues without the risk of contamination and fulfil European criteria for “good laboratory practice”. Laboratory of cell and tissue culture consist of clean rooms of class B, equipped with flow cabinets of class A.

Cytometric laboratory 7.03

BD FACSCalibur™ flow cytometer – it is equipped with two lasers, 4 channels, which allow the analysis of many cellular parameters on the basis of deflection of the laser beam. Methods are based on labeling the cells with a fluorescent dye, which is conjugated to a monoclonal antibody, allows determination of the surface and cytoplasmic markers on the test cells and the percentage / concentration of positive cells.



POST PCR laboratory 7.04

Photo-documentary system (Quantum ST 4-3000, Vilber Lourmat) – it is a system designed to collect image data of fluorescently labeled gels. It provides high accuracy and resolution, in view of the results of quantification.



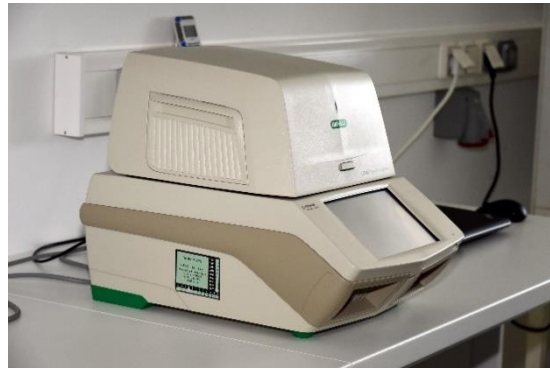
Analytical laboratory 7.09

CentriVap Benchtop Vacuum Concentrator (Labconco) – it is designed to rapidly concentrate multiple small samples using centrifugal force, vacuum and heat. As many as 132 samples may be processed at once. Sample sizes range from a few microliters up to 25 milliliters.



PCR laboratory 7.01

CFX96 Touch™ Real-Time PCR Detection System – this six-channel system combines advanced optical technology with precise thermal control to deliver sensitive, reliable detection. Quickly set up runs and monitor amplification traces in real time on the integrated LCD touch screen. With up to five-target detection, unsurpassed thermal cycler performance, unrivaled stand-alone functionality, and powerful yet easy-to-use software, the CFX96 Touch System is designed to advance your qPCR.



Cultivation laboratory 7.02

xCELLigence RTCA SP Instrument – monitors cellular events in real time without the incorporation of labels by measuring electrical impedance across interdigitated microelectrodes integrated on the bottom of its special tissue culture plates. The impedance measurement improves on conventional endpoint assays and provides quantitative information about the biological status of the cells, including cell number, adhesion, viability, and morphology.



Laboratory for multiplex analysis 7.08

Bio-Plex® MAGPIX™ Multiplex Reader – it is a compact, robust system for magnetic bead–based immunoassays. This multiplex reader is capable of reading assays designed on magnetic xMAP (MagPlex) beads, compatible with Bio-Plex Pro™ magnetic assays. You can get more data by reading up to 50 analytes per sample, it is simple and convenient ELISA-like workflow.

Bio-Plex® 200 Systems Multiplex Reader – it is a suspension array system which offers protein and nucleic acid researchers a reliable multiplex assay solution that permits analysis of up to 100 biomolecules in a single sample. Reader combines 2 lasers, high-throughput fluidics, and real-time digital signal processing to distinguish up to 100 different color-coded bead sets, each representing a different assay



Imaging technology room 7.29

Cytell Cell Imaging System – captures cellular and sub-cellular images in a benchtop unit equipped with on-board data analysis and visualization tools. It streamlines and simplifies routine assays, such as cell cycle and cell viability assays, to save you time and help your research progress more rapidly.

Microscopes: Inverted fluorescence microscope (Nikon, Ti-S),

Inverted fluorescence microscope (DMI3000 B, Leica),

Inverted fluorescence microscope (DM IL LED, Leica),

Inverted microscope (DM IL LED, Leica),

Light microscope (DM 4000 B, Leica),

Light microscope (DM 750, Leica)



Chemical laboratory 7.05

Microplate reader with washer (TriStar LB 941 Multimode Microplate Reader, Berthold Technologies)



Clean room service area 7.06

Controlled Rate Freezer (Nicool Freezal, Air Liquide) – it is designed to freeze all kinds of sensitive biological samples via liquid nitrogen, it is applied for cryotubes and bags.

Liquid nitrogen storage system (Espace 151, Air Liquide)



Freezer (MDF-U33V, Sanyo)



Washroom - preparation room 7.27

Laboratory autoclave (Laboklav 25, SHP)



Washroom 7.26



Sterilizer (SNE 200, Memmert)

Clean room

Laminar flow boxes (MB 120, Labox)

CO₂ incubators (CB, Binder)

and others.

