

INSTITUTE OF BIOLOGY AND IMMUNOLOGY OF REPRODUCTION "Acad. K. Bratanov" (IBIR) was established in 1938 and has over 70 years of basic and applied scientific research experience in the fields of Reproductive Biology and Immunology, in both animals and humans.

Main goals set by the IBIR scientists are:

- contribute to improving reproductive health and overcoming the infertility in human as well as the demographic decline in the country and Europe wide
- contribute to raising fecundity and fertility of agriculturally significant farm animals, increasing natural food resources and improving the quality of life.

The main objective of the Institute is its transformation into a **Modern European Centre in Biology and Immunology of Reproduction in both humans and animals.**

Reason for the implementation of this objective gives the funds donated under two major Projects during 2009:

- ***"Building a Research Center to study problems in reproductive health"*** worth **BGN 800 000**, financed by the National Science Fund at Ministry of Education, Youth and Science.
- ***"Increasing research capacity of the Bulgarian Institute of Biology and Immunology of Reproduction"***, financed under 7th Framework Programme of the European Union, worth three million leva, having IBIR - BAS as sole beneficiary of the funding.

Partners without financing, are **8 leading research institutions** in total, from around France, Italy, Netherlands, UK, Austria and Germany.

Four research laboratories were equipped with modern research equipment funded by these projects, thus providing opportunities for research investigation of a modern scientific level.

1. **"Laboratory for cell culture, physical and chemical analysis", equipped with the following instruments:**

- **Fluoro cytometer** *purchased under the project "Development of scientific infrastructure*



- **Computerized sperm analyzer** *purchased under the project "Development of scientific infrastructure*



- **Quantitative Realtime PCR** *purchased under the project "Development of scientific infrastructure*



- **High-performance liquid chromatography (HPLC)**, purchased under project "Development of scientific infrastructure"



- **Inverted microscope**, purchased under the project "Development of scientific infrastructure"



- **CO₂ incubator**, purchased under the project "Development of scientific infrastructure"
- **laminar flow cabinet** purchased under the project "Development of scientific infrastructure"



2. **“Laboratory for in vitro fertilization and embryo transfer”, equipped with the following instruments:**

- **laminar flow cabinet** with built-in stereo microscopes *purchased under the project ReProForce*



- **CO₂ incubators** *purchased under project ReProForce*



- **Inverted fluorescence microscope,** *purchased under the project ReProForce*
- **Micromanipulation system,** *purchased under the project ReProForce*



- **Centrifuge** *purchased under the project ReProForce*



- **Workstation for cell technology** *purchased under the project ReProForce*



- **Microtome Cryostat** *purchased under the project ReProForce*



3. **“Laboratory for proteomic analysis”, equipped with the following instruments:**

- *System for proteomic analysis, purchased under the project "Development of scientific infrastructure*
- System for vertical polyacryl amid gel electrophoresis (**PAGE**) and simultaneous detection of multiple fluorescent dyes 2D Differential in Gel Electrophoresis (**2D DIGE**) scanner – “GE ETHAN DIGE” as well as software for analysis of 2D fluorescent stained gels, *purchased under the project ReProForce*



4. **“Laboratory for confocal fluorescent and bright light microscopy”, equipped with the following instruments:**

- **Confocal fluorescent microscope**, *purchased with funding by National Science Fund*



- **System for microscopy imaging**, *purchased under project "Development of scientific infrastructure"*
- **Microscope add-in attachment for Reflected Light Fluorescence Microscopy**, *purchased under the project ReProForce*



Additional equipment purchased with funds under the project ReProForce:

- Low and Ultra-Low Temperature Laboratory Freezers able to support -80° C and -120° C
- Thermostats
- Ultrasonic homogenizer for tissues and cells
- Spectrophotometer. System with detection filters providing detection of fluorescence, luminescence and light absorption.

LABORATORY FOR CELL CULTURING, PHYSICAL AND CHEMICAL ANALYSIS



LABORATORY FOR IN VITRO FERTILIZATION AND EMBRYO TRANSFER



LABORATORY FOR PROTEOMIC ANALYSIS



LABORATORY FOR CONFOCAL FLUORESCENT AND BRIGHT LIGHT MICROSCOPY

