

Expression of interest for research cooperation

Description of institution

Interested institution:	<u>Institute of Biotechnology, University of Rzeszów</u>
Department carrying out the proposed research	<u>Department of Genetics</u>
Address and webpage	address: Pigońia 1a, 35-310 Rzeszów, Poland http://www.ur.edu.pl/wydzialy/pozawydzialowy-instytut-biotechnologii
Contact person (name, e-mail address, phone)	Maciej Wnuk PhD, DSc, Head of Department, e-mail: mwnuk@ur.edu.pl

Research offer

Brief description of the department (key research facilities, infrastructure, equipment)

(up to 1000 characters)

Modern equipment used in molecular biology, biochemistry and genetics is available in following laboratories:

The mammalian cell culture laboratory with laminar flow cabinets Thermo Fisher Scientific and Alpina, cell incubators Thermo Fisher Scientific with the regulation of oxygen tension, inverted fluorescence microscope Olympus BX71, centrifuge Thermo Fisher Scientific, electroporation system, Cell Analyzer MUSE Merck Millipore.

The molecular biology laboratory with real-time PCR, centrifuge Thermo Fisher Scientific, protein electrophoresis equipment (Biorad), including SDS-PAGE as well as 2D-electrophoresis, gel imager PharoSXF (Biorad), 16 capillary sequencer Applied Biosystem, DNA, RNA electrophoresis equipment, fluorescence and chemiluminescence gel imaging system G:BOX Syngene, thermocyclers MasterCycler Eppendorf, real-time PCR StepOne Applied Biosystem, real-time PCR LightCycler®480 (Roche), Nanodrop, multifunctional (absorbance/fluorescence/luminescence) microplate reader (TECAN).

The microscopy laboratory with fluorescence microscope Olympus BX61 and CellF and metasystem software dedicated to analysis of mFISH and Telo-FISH, CGH.

The microbiological laboratory with laminar flow cabinets Thermo Fisher Scientific, incubator Thermo Fisher Scientific, New Brunswick Bioflo110 Reactor, centrifuge Thermo Fisher Scientific, incubators, CHEF system BIORAD, etc.

Scientific area

<input type="checkbox"/> Chemistry	<input type="checkbox"/> Social Sciences and Humanities
<input type="checkbox"/> Economic Sciences	<input type="checkbox"/> Information Science and Engineering
<input type="checkbox"/> Environment and Geosciences	<input type="checkbox"/> Life Sciences
<input type="checkbox"/> Mathematics	<input type="checkbox"/> Physics

Research field

(up to 500 characters)

Applications of new methods to study the yeast chromosomes
Genetic analyses of economically important microorganisms
Pharmacokinetics, biocompatibility and bioavailability of biomaterials
Molecular regulation of cellular senescence
Molecular mechanisms of chromosomal instability

The proposed research/project description

(up to 1000 characters)

Pathophysiological changes induced in the human body from stress.
Changes of cell differentiation and microenvironment leading to aging and pathogenesis of human disease.
Pathogenic mechanisms of skin diseases.
Economically important microorganisms.

Additional information (key Persons and Expertise; additional trainings, research programme, other)

(up to 1000 characters)

Contact person: Maciej Wnuk PhD, DSc, Head of Department, Pigońia 1a, 35-310 Rzeszów, Poland e-mail: mwnuk@ur.edu.pl