

# Laboratory for Endocrine Disruptors and Signaling (ENDOS)

*endocrine disruptors, reproduction, cell signaling, granulosa cells, zebrafish development, vascular endothelial cells*

Laboratory research objectives are focused on deciphering mechanism of action of chemicals known as endocrine disruptors (ED), which are routinely found in our environment and which are known to interfere with hormone homeostasis. The emphasis is on detecting affected cellular events, signaling pathways, altered gene expression and epigenetic marks.

Main research topics include:

- Impact of ED on reproduction. Impact on reproduction is being assessed by investigating mechanism of ED action in human and rat ovarian steroidogenic granulosa cells and in human spermatozoa. Both signaling and different reproductive parameters are evaluated.
- Impact of ED on development. Impact on development is studied by exposing zebrafish embryos (*Danio rerio*) to ED and evaluating effects both while in embryonic stage and in adulthood, with the emphasis on gene expression, epigenetics and histology.
- Impact of ED on vascular endothelial cells, both in chronic and acute experimental set ups. Signaling and different cellular events are evaluated.



## SELECTED PROJECTS

**Title:** *Curricula development in the fields of reproductive biology/assisted reproductive technologies and regenerative medicine in Serbia (ART-REM), 586181-epp-1-2017-1-rs-eppka2-cbhe-jp*

**Type:** ERASMUS+ KA2 program - Cooperation for innovation and the exchange of good practices –Capacity Building in the field of Higher Education

**Duration:** 2017-2020

**Contact person:** Dr Nebojsa Andric

**Title:** *Endocrine disrupting compounds: reproductive, metabolic, developmental responses and mechanisms of action in selected model organisms and cell lines. Project No. 173037*

**Type:** Research grant, Ministry of Education, Science and Technological Development of Republic of Serbia

**Duration:** 2011-

**Contact person:** Dr Nebojsa Andric

**Title:** *Endocrine disruptors and reproductive health: effects and mechanisms of action on human granulosa cells and spermatozoa. Project No. 114-451-2573/2016-03 (2016-2019)*

**Type:** Research grant, Provincial Secretariat for Higher Education and Scientific Research

**Duration:** 2016–2019

**Contact person:** Dr Kristina Pogrmic-Majkic

## SELECTED EQUIPMENT

- MSC-Advantage™ Class II Biological Safety Cabinets, Thermo Scientific;
- Fluorimeter Fluoroscan Ascent Plate Reader, Thermo–Labsystems;
- MyECL, Thermo Scientific;
- BioSpec-nano, Shimadzu Biotech,
- Zebrafish Facility

## COLLABORATIONS

- Swiss Federal Institute of Aquatic Science and Technology, Switzerland
- Department of Physiology and Toxicology of Reproduction, Jagiellonian University, Kraków, Poland
- Faculty of Biology, University of Sofia, Bulgaria



## CONTACT PERSON

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