




# Maja Kesić

## • SENIOR EXPERT ASSISTANT •

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### INFO

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### ABOUT ME

I am a senior professional associate with 13 years' experience in the field in neuroscience. During my degree and working I have developed strong research skills, from designing to conducting experiments, especially in animal model techniques, studies of gene expression and regulation, genotyping and translational research. I continuously participate in the professional development of younger associates, and I transfer the acquired knowledge and experience to younger associates.

Most of my experience has been within a team environment where communication plays a key role. I am able to organize and manage my own work as well as to demonstrate leadership when required. My academic skills have given me the ability to communicate effectively on paper as well as through presentation. I am highly motivated to learn new techniques and skills and apply the already acquired knowledge in any work environment.

### SKILLS

Croatian



English



Microsoft Office™ tools



GraphPad Prism



Javno dostupne baze podataka



### WORK EXPERIENCE

#### 2023 - present: Senior Expert Assistant

Ruđer Bošković Institute, Laboratory for Neurochemistry And Molecular Neurobiology, Zagreb, Croatia

- Research in neuroscience, particularly serotonin associated diseases

#### 2014 - 2023: Expert Assistant

Ruđer Bošković Institute, Laboratory for Neurochemistry And Molecular Neurobiology, Zagreb, Croatia

- Research in neuroscience, particularly serotonin associated diseases

#### 2010 - 2014: Research Assistant

Ruđer Bošković Institute, Laboratory for Neurochemistry And Molecular Neurobiology, Zagreb, Croatia

- Research in neuroscience, particularly serotonin associated diseases

## EDUCATION

### **2010 - 2016 PhD in Molecular Biology**

University of Zagreb, Faculty of Science, Croatia

- Doctoral thesis: Neurochemical, molecular and behavioral response to pharmacological activation of serotonin system in rats with altered serotonin homeostasis

### **2006 - 2009 Master of Science in Molecular Biology**

University of Zagreb, Faculty of Science, Croatia

- Graduation thesis: DNA integrity in broad bean leaf and root cells as an indicator of thallium(I) acetate genotoxicity

### **2002 - 2009 Master of Education in Biology and Chemistry**

University of Zagreb, Faculty of Science, Croatia

- Graduation thesis: DNA integrity in broad bean leaf and root cells as an indicator of thallium(I) acetate genotoxicity

## TRAINING

### **2017 Annual Flow Cytometry Course 2018: From First Principles to Polychromatic Applications**

Children's Hospital Srebrnjak, Department for Translational Medicine, Croatia

### **2012 Laboratory Animal Science Course, 80 hours, FELASA cat. C equivalent**

University of Zagreb, Faculty of Science, Croatia

### **2012 Supplementary Training on the Application of Ionizing Radiation Protection Measures**

Ruđer Bošković Institute, Zagreb, Croatia

### **2010 Methodological Courses in Biology and Medicine: DNA and RNA**

Ruđer Bošković Institute, Zagreb, Croatia

## SCIENTIFIC VISITS TO FOREIGN INSTITUTIONS

**2013:** Institute of Pathophysiology and Immunology, Medical University of Graz, Graz, Austria (3 months)

**2012:** Institute of Pathophysiology and Immunology, Medical University of Graz, Graz, Austria (3 weeks)

## PUBLICATIONS

- co-author of 9 original scientific papers, of which I am first or share first author on 6
- co-author of 27 congress announcements

## JOB - RELATED SKILLS

### **Biochemical/molecular techniques:**

- RNA and DNA isolation, reverse transcription, PCR, RT qPCR
- Agarose and SDS-PAGE gel electrophoresis
- protein isolation; Enzyme-Linked Immunosorbent Assay (ELISA); Western blot
- radionuclide method (saturation kinetics of membrane 5HT transporters in platelets and receptor binding in synaptosome)

### **In vivo techniques and functional measurements on laboratory animals (mice and rats):**

- behavioral tests for measuring: motor behavior (wire hanging test, grip test), locomotion and anxiety (open field test, elevated plus maze test, hole board test), depression (forced swim test, passive avoidance test, sucrose preference test), pain (Hargreaves plantar test), memory and learning (Morris water maze, novel object recognition test)
- behavioral tests for measuring: motor behavior (wire hanging test, grip test), locomotion and anxiety (open field test, elevated plus maze test, hole board test), depression (forced swim test, passive avoidance test, sucrose preference test), pain (Hargreaves plantar test), memory and learning (Morris water maze, novel object recognition test)
- metabolic tests (glucose tolerance test, GTT, insulin tolerance test, ITT); monitoring food/water intake; animal models in alcohol research
- blood withdrawing from the jugular and tail vein
- isolation of the brain regions (hippocampus, hypothalamus, striatum, different parts of the cerebral cortex, other regions as needed)
- cerebrospinal fluid withdrawing
- sampling of various other tissues (white and brown adipose tissue, intestinal mucosa, liver, pancreas, placenta, other as needed)
- sampling of human placenta tissue
- human cord blood withdrawing

## TEACHING ACTIVITY

**2016-present:** education of junior associates and internship students in practical laboratory work, co-mentoring of graduate students

**2014-present:** training of junior associates in analysis specific for using radioisotopes

**2012-2020:** Biological Psychology 1, BSc study in Psychology, Croatian Catholic University (Participation in Seminars and Laboratory Exercises)

**2011-2013:** Animal models in biological psychiatry, doctoral study in Neuroscience, Medical Faculty in Zagreb (Participation in Laboratory Exercises)

## RESEARCH PROJECTS

**2018 - present: Associate at the project "Influence of maternal metabolic state on placental and neonatal serotonin system: from DNA methylation to protein function"** (PI J. Štefulj, NZZ HrZZ)

**2015 - 2020: Associate at the project "Serotonergic modulation of obesity: the interdependence of regulatory molecules and pathways"** (PI L. Čičin-Šain, NZZ HrZZ)

**2017 - 2018: Associate at the project "The relationship between the mother's emotional state during pregnancy and placental DNA methylation of genes involved in the regulation of serotonin signaling"** (Catholic University of Croatia; PI: J. Štefulj)

**2016: Associate at the project "Serotonin transporter gene regulation in human placenta and establishment of a biobank for further research"** (Catholic University of Croatia; PI: J. Štefulj)

**2013 - 2014: Associate at the project "Epigenetics of serotonin signalling: DNA methylation analyses of serotonin transporter, monoamine oxidase B and serotonin receptor 2A"** (PIs J. Štefulj, P. Zill, mobility grant funded by the Ministry of Science, Education and Sport of Croatia and the German Academic Exchange Service)

**2012 - 2013: Associate at the project "Transport of maternal serotonin across human placenta: studies on primary endothelial cells of human placental barrier"** (PIs J. Štefulj, U. Panzenboeck, mobility grant funded by the Ministry of Science, Education and Sport of Croatia and Austrian Agency for International Mobility and Cooperation in Education, Science and Research)

**2012 - 2013: Associate at the project "Identification of gene pathways involved in serotonergic modulation of body weight"** (TANITA Healthy Weight Community Trust, Japan)

**2010 - 2013: Associate at the project "Serotonergic neurotransmission: genes, proteins and behavior"** (PI: the late prof. B. Jernej, from 2010 PI J. Štefulj, Ministry of Science, Education and Sport of the Republic of Croatia)

## AWARDS FOR PARTICIPATION AT SCIENTIFIC CONFERENCES

**2012:** 18th Scientific Symposium of the Austrian Pharmacological Society, Graz, Austria

**2011:** SiNAPSA Neuroscience Conference '11, Central European FENS Featured Regional Meeting, Ljubljana, Slovenia

## REFERENCES

Dr. sc. Lipa Čičin-Šain, Division of molecular biology, Ruđer Bošković Institute, Zagreb ([Lipa.Cicin.Sain@irb.hr](mailto:Lipa.Cicin.Sain@irb.hr), +385 1 456 1045).

Dr. sc. Jasminka Štefulj, Division of molecular biology, Ruđer Bošković Institute, Zagreb ([stefulj@irb.hr](mailto:stefulj@irb.hr), +385 1 457 1350).