Jasminka Štefulj: *curriculum vitae*

PERSONAL INFORMATION

Name and surname: Jasminka Štefulj
Data and place of birth: 1973, Croatia
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Google Scholar: *https://scholar.google.hr/citations?user=sOeKq7IAAAAJ&hl=en*
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CROSBI: *http://bib.irb.hr/lista-radova?autor=232860*
Career breaks: 03/2001-03/2002, 07/2003-07/2004, 03/2005-05/2006 (maternal leaves)

EDUCATION

2005: PhD in Biology, Faculty of Science, University of Zagreb, Croatia
2000: MSc in Molecular and Cell Biology, Faculty of Science, University of Zagreb, Croatia
1997: BSc in Medical Biochemistry, Faculty of Pharmacy and Biochemistry, University of Zagreb

CURRENT POSITIONS

[1]Division of Molecular Biology, Rudjer Boskovic Institute, Bijenicka cesta 54, HR-10000 Zagreb; position: research advisor, head of Laboratory of Neurochemistry and Molecular Neurobiology

[2]Division of Psychology, Catholic University of Croatia, Ilica 242, HR-10000 Zagreb, Croatia; position: associate professor

PREVIOUS EMPLOYMENTS

2011-2020: senior research associate, Ruđer Bošković Institute, Zagreb, Croatia
2008-2011: research associate, Ruđer Bošković Institute, Zagreb, Croatia
2012-2017: assistant professor, Catholic University of Croatia, Zagreb, Croatia
2006-2008: postdoctoral fellow, Medical University of Graz, Graz, Austria
1997-2006: research assistant, Ruđer Bošković Institute, Zagreb, Croatia

RESEARCH PROJECTS

Principal investigator

2018-2022: Influence of maternal metabolic state on placental and neonatal serotonin system: from DNA methylation to protein function (Croatian Science Fund)

2017-2018: Association between maternal emotional state in pregnancy and placental DNA methylation of serotonin-related genes (Catholic University of Croatia)

2016: Serotonin transporter gene regulation in the human placenta and establishment of a biobank for further research (Catholic University of Croatia)

2013-2014: Epigenetics of serotonin signaling: DNA methylation analyses of serotonin transporter, monoamine oxidase B and serotonin receptor 2A (German Academic Exchange Service & Croatian Ministry of Science), co-PI: P. Zill

2012-2013: Transport of serotonin across placenta: studies on primary endothelial cells of human placental barrier (Austrian Agency for International Mobility and Cooperation in Education, Science and Research & Croatian Ministry of Science), co-PI: U. Panzenboeck

2010-2014: Serotonergic neurotransmission: genes, proteins and behaviour (Croatian Ministry of Science)

Associate

2015-2019: Serotonergic modulation of obesity: cross-talk between regulatory molecules and pathways (Croatian Science Fund); **2012-2013**: Identification of gene pathways involved in serotonergic modulation of body weight (TANITA Healthy Weight Community Trust, Japan); **2010-2011**: The mechanism of cholesterol action in the pathogenesis of Alzheimer's disease (Croatian Ministry of Science); **2007-2010**: Serotonergic neurotransmission: genes, proteins and behaviour (Croatian Ministry of Science); **2006-2008**: Nuclear receptors as lipid sensors at the blood-brain barrier (Austrian Science Fund); **2007-2008**: Brainstorming of lipases (Austrian Genome Research Programme GEN-AU); **2002-2006**: Molecular patophysiology of serotonergic transmission (Croatian Ministry of Science); **1997-2001**: Neurochemistry of synaptic transmission (Croatian Ministry of Science)

MENTORING

2 PhD theses (1 in course)
- Petra Baković: Functional and molecular effects of high-fat diet in sublines of rats with altered serotonin homeostasis (23.7.2021., University of Zagreb, Faculty of Science)
- Maja Kesić: Neurochemical, molecular and behavioral response to pharmacological activation of serotonin system in rats with altered serotonin homeostasis (11.5.2016., University of Zagreb, Faculty of Science)

9 MSc/BSc theses
- Lucija Surić: Expression of the serotonin receptor type 2C gene in sublines of the Wistar-Zagreb 5HT rat (23.02.2018., University of Zagreb, Faculty of Science)
- Anita Stojanović: Association of gestational diabetes with serotonin transporter gene DNA methylation in placenta (29.6.2015., University of Zagreb, Faculty of Science)
- Maja Perić: Effects of synthetic liver X receptor (LXR) agonists on the amyloid precursor protein metabolism in Niemann Pick type C1 disease model cells (23.1.2012., University of Zagreb, Faculty of Science)
- Jelena Prodić: Serotonin transporter gene polymorphisms in patients with temporal lobe epilepsy (28.11.2011., University of Zagreb, Faculty of Science)
- Mirta Rešetar: Functional polymorphism of neuronal tryptophan hydroxylase gene in conditions with disturbed serotonergic transmission (15.11.2011., University of Zagreb, Faculty of Science)
- Jelena Živković: Effects of TO901317 on APP processing in a cellular model of Niemann Pick type c disease (27.5.2011., University of Zagreb, Faculty of Science)
- Marina Sikirić: Serotonin 5HT-2C receptor polymorphism in temporal lobe epilepsy patients (17.1.2011., University of Zagreb, Faculty of Pharmacy and Biochemistry)
- Ivan Papić: Serotonin receptor 1B (5-HT1B) gene polymorphism in patients with temporal lobe epilepsy (2.9.2010., University of Zagreb, Faculty of Pharmacy and Biochemistry)
- Valentina Kosovec: Association analysis of the monoamine oxidase A gene polymorphism and temporal lobe epilepsy (30.6.2010., University of Zagreb, Faculty of Pharmacy and Biochemistry)

TEACHING ACTIVITY

Course leader

Synapse: from Genes to Proteins (doctoral course, University of Zagreb, School of Medicine)
Biological Psychology I (graduate course, Catholic University of Croatia)
Epigenetics in Psychology (graduate course, Catholic University of Croatia)

Associate

Biological Psychology II (graduate course, Catholic University of Croatia)
2006-2008: Medical Genetics (graduate course, Medical University of Graz, Austria); 2000-2006: two graduate and two postgraduate courses (University of Zagreb, Croatia)

FELLOWSHIPS AND AWARDS

2010-2011: Visiting Scientists Program Fellowship, BankAustria
1998-1999: OeAD Fellowship, Austria
1995: Rector's Award, University of Zagreb, Croatia

MEMBERSHIPS

Croatian Society of Biochemistry and Molecular Biology
Croatian Genetic Society
Croatian Society for Neuroscience

PUBLICATIONS (*corresponding author/s)

1. Bakovic P$^{\infty}$, Kesic M$^{\infty}$, Peric M, Beceheli I, Horvaticek M, George M, Cicin-Sain L, Desoye G, Wadsack C, Panzenboeck U, **Stefulj J*** (2021) Differential serotonin uptake mechanisms at the human maternal–fetal interface. Int J Mol Sci 22, 7807. ($^{\infty}$equal contribution)

2. Kesic M∞, Bakovic P∞, Stojkovic R, **Stefulj J***, Cicin-Sain L* (2021) Metabolic disturbances in rat sublines with constitutionally altered serotonin homeostasis. Int J Mol Sci 22, 5400. (∞equal contribution)
3. Hranilovic D, Stefulj J, Zill P (2021) Editorial: Developmental abnormalities of serotonin homeostasis in behavioral and metabolic disorders: from epigenetic mechanisms to protein function. Front Neurosci 15, 659356.
4. Kesic M, Bakovic P, Horvaticek M, Proust BLJ, **Stefulj J**, Cicin-Sain L (2020) Constitutionally High Serotonin Tone Favors Obesity: Study on Rat Sublines With Altered Serotonin Homeostasis. Front Neurosci 14, 219.
5. Zandl-Lang M, Fanaee-Danesh E, Sun Y, Albrecher NM, Gali CC, Cancar I, Kober A, Tam-Amersdorfer C, Stracke A, Storck SM, Saeed A, **Stefulj J**, Pietrzik CU, Wilson MR, Björkhem I, Panzenboeck U (2018) Regulatory effects of simvastatin and apoJ on APP processing and amyloid-β clearance in blood-brain barrier endothelial cells. Biochim Biophys Acta Mol Cell Biol Lipids 1863, 40-60.
6. Blazevic S∞, Horvaticek M∞, Kesic M∞, Zill P, Hranilovic D, Ivanisevic M, Desoye G, **Stefulj J*** (2017) Epigenetic adaptation of the placental serotonin transporter gene (SLC6A4) to gestational diabetes mellitus. PLoS One 12, e0179934. (∞equal contribution)
7. Hranilovic D, Blazevic S, **Stefulj J***, Zill P (2016) DNA methylation analysis of HTR2A regulatory region in leukocytes of autistic subjects. Autism Res 9, 204-209.
8. Manavalan APC, Kober A, Metso J, Lang I, Becker T, Hasslitzer K, Zandl M, Fanaee-Danesh E, Pippal JB, Sachdev V, Kratky D, **Stefulj J**, Jauhiainen M, Panzenboeck U (2014) Phospholipid transfer protein is expressed in cerebrovascular endothelial cells and involved in high density lipoprotein biogenesis and remodeling at the blood-brain barrier. J Biol Chem 289, 4683-4698.
9. Rak S, De Zan T, **Stefulj J**, Kosović M, Gamulin O, Osmak M (2014) FTIR spectroscopy reveals lipid droplets in drug resistant laryngeal carcinoma cells through detection of increased ester vibrational bands intensity. Analyst 139, 3407-3415.
10. Nikolac Perkovic M, Nedic Erjavec G, **Stefulj J**, Muck-Seler D, Pivac N, Kocijan Hercigonja D, Hranilovic D, Curkovic M, Dodig-Curkovic K (2014) Association between the polymorphisms of the selected genes encoding dopaminergic system with ADHD and autism. Psychiatry Res 215, 260-261.
11. Cupic B, **Stefulj J**, Zapletal E, Matosic A, Bordukalo-Niksic T, Cicin-Sain L, Gabrilovac J (2013) Opioid system genes in alcoholism: a case-control study in Croatian population. Neuropeptides 47, 315-319.
12. **Stefulj J***, Panzenboeck U, Hof P, Simic G (2013) Pathogenesis, modulation, and therapy of Alzheimer's disease: a perspective on roles of liver-X receptors. Transl Neurosci 4, 349-356.
13. **Stefulj J***, Peric M, Malnar M, Kosicek M, Schweinzer C, Zivkovic J, Scholler M, Panzenboeck U, Hecimovic S* (2013) Pharmacological activation of LXRs decreases amyloid-β levels in Niemann-Pick type C model cells. Curr Pharm Biotechnol 14, 582-593.
14. Bordukalo-Niksic T, **Stefulj J**, Matosic A, Mokrovic G, Cicin-Sain L (2012). Combination of polymorphic variants in serotonin transporter and monoamine oxidase-A genes may influence the risk for early-onset alcoholism. Psychiatry Res 200, 1041-1043.
15. **Stefulj J***, Mokrovic G, Hranilovic D, Bordukalo-Niksic T, Bakula M, Kubat M, Jernej B (2011) Functional promoter polymorphism of the neuronal isoform of tryptophan hydroxylase (TPH2) in suicide. Psychiatry Res 186, 446-447.
16. Jokic M, Brcic-Kostic K, **Stefulj J**, Catela Ivkovic T, Loncar B, Gamulin M, Kapitanovic S (2011) Association of MTHFR, MTR, MTRR, RFC1 and DHFR gene polymorphisms with susceptibility to sporadic colon cancer. DNA Cell Biol 30, 771**-**776.
17. **Stefulj J**, Bordukalo-Niksic T, Hecimovic H, Demarin V, Jernej B (2010) Epilepsy and serotonin (5HT): Variations of 5HT-related genes in temporal lobe epilepsy. Neurosci Lett 478, 29-31.
18. Bordukalo-Niksic T, Mokrovic G, **Stefulj J**, Zivin M, Jernej B, Cicin-Sain L (2010) 5HT-1A receptors and anxiety-like behaviours: studies in rats with constitutionally upregulated/downregulated serotonin transporter. Behav Brain Res 213, 238-245.

19. Hecimovic H, **Stefulj J**, Cicin-Sain L, Demarin V, Jernej B (2010) Association of serotonin transporter promoter (5-HTTLPR) and intron 2 (VNTR-2) polymorphisms with treatment response in temporal lobe epilepsy. Epilepsy Res 91, 35**-**38.
20. **Stefulj J***, Bordukalo-Niksic T (2010) Neuronal tryptophan hydroxylase (TPH2) in suicidal behaviour. Transl Neurosci 1, 207-213.
21. **Stefulj J**$^{\infty}$, Panzenboeck U$^{\infty}$, Becker T, Hirschmugl B, Schweinzer C, Lang I, Marsche G, Sadjak A, Lang U, Desoye G, Wadsack C (2009) Human endothelial cells of the placental barrier efficiently deliver cholesterol to the fetal circulation via ABCA1 and ABCG1. Circ Res 104, 600-608. ($^{\infty}$equal contribution)
22. Mokrovic G, Matosic A, Hranilovic D, **Stefulj J**, Novokmet M, Oreskovic D, Balija M, Marusic S, Cicin-Sain L (2008) Alcohol dependence and polymorphisms of serotonin-related genes: association studies. Coll Antropol 32 Suppl 1, 127-131.
23. Calayir E, Becker TM, Kratzer A, Ebner B, Panzenboeck U, **Stefulj J**, Kostner GM (2008) LXR-agonists regulate ApoM expression differentially in liver and intestine. Curr Pharm Biotechno 9, 516-521.
24. **Stefulj J**, Kubat M, Balija M, Jernej B (2006) TPH gene polymorphism and ageing: indication of combined effect on the predisposition to violent suicide. Am J Med Genet B Neuropsychiatr Genet 141B, 139-141.
25. **Stefulj J**, Kubat M, Balija M, Skavic J, Jernej B (2005) Variability of the tryptophan hydroxylase gene: study in victims of violent suicide. Psychiatry Res 134, 67-73.
26. Filic V, Vladic A, **Stefulj J**, Cicin-Sain L, Balija M, Sucic Z, Jernej B (2005) Monoamine oxidases A and B Gene polymorphisms in migraine patients. J Neurol Sci 228, 149-153.
27. **Stefulj J**, Buttner A, Skavic J, Zill P, Balija M, Eisenmenger W, Bondy B, Jernej B (2004) Serotonin 1B (5HT-1B) receptor polymorphism (G861C) in suicide victims: association studies in German and Slavic population. Am J Med Genet B Neuropsychiatr Genet 127B, 48-50.
28. **Stefulj J**, Büttner A, Kubat M, Zill P, Balija M, Eisenmenger W, Bondy B, Jernej B (2004) 5HT-2C receptor polymorphism in suicide victims: association studies in German and Slavic populations. Eur Arch Psychiatry Clin Neurosci 254, 224-227.
29. Hranilovic D, **Stefulj J**, Schwab S, Borrmann-Hassenbach M, Albus M, Jernej B, Wildenauer D (2004) Serotonin transporter promoter and intron 2 polymorphisms: relationship between allelic variants and gene expression. Biol Psychiatry 55, 1090-1094.
30. Jernej B, **Stefulj J**, Hranilovic D, Balija M, Skavic J, Kubat M (2004) Intronic polymorphism of tryptophan hydroxylase and serotonin transporter: indication for combined effect in predisposition to suicide. J Neural Transm (Vienna) 111, 733-738.
31. Hranilovic D, **Stefulj J**, Furac I, Kubat M, Balija M, Jernej B (2003) Serotonin transporter gene promoter (5-HTTLPR) and intron 2 (VNTR) polymorphisms in suicide victims of Croatian origin. Biol Psychiatry 54, 884-889.
32. **Stefulj J**, Jakopec S, Osmak M, Jernej B (2002-03) Serotonin and apoptosis: studies on rat lymphocytes. Neuroimmunomodulation 10, 132-133.
33. **Stefulj J**, Hoertner M, Meenakshi G, Schauenstein K, Rinner I, Woelfler A, Semmler J, Liebmann PM (2001) Gene expression of the key enzymes of melatonin synthesis in extrapineal tissues of the rat. J Pineal Res 30, 243-247.
34. **Stefulj J**, Cicin-Sain L, Schauenstein K, Jernej B (2001) Serotonin and immune response: effect of the amine on in vitro proliferation of rat lymphocytes. Neuroimmunomodulation 9, 103-108.
35. **Stefulj J**, Jernej B, Cicin-Sain L, Rinner I, Schauenstein K (2000) mRNA expression of serotonin receptors in cells of the immune tissues of the rat. Brain Behav Immun 14, 219-224.