

## **BILJANA BUFAN**

### **Employment Information:**

- 2020 Associate Professor, Department of Microbiology and Immunology, University of Belgrade - Faculty of Pharmacy
- 2015 Assistant Professor, Department of Microbiology and Immunology, University of Belgrade - Faculty of Pharmacy
- 2007 Teaching Assistant, Department of Microbiology and Immunology, University of Belgrade - Faculty of Pharmacy
- 2004 Associate, Institute for Microbiology and Immunology, University of Belgrade - Faculty of Pharmacy
- 2003-2004 Research assistant. Institute for medical research, Military Medical Academy, Belgrade
- 2002-2003 MD internship, Military Medical Academy, Belgrade

### **Education:**

- 2014 PhD thesis: „Influence of aging on phenotypic and functional characteristics of dendritic cells from different rat strains” University of Belgrade - Faculty of Pharmacy
- 2007 MSc thesis: “Modulation of differentiation of monocyte-derived human dendritic cells using aspirin and nitric oxide derivative of aspirin”, University of Belgrade – Faculty of Medicine
- 2011 Medical specialisation in Immunology, University of Belgrade – Faculty of Medicine
- 2018 Specialist in pharmacy University of Belgrade - Faculty of Pharmacy (specialist academic studies – Biological medicines)
- 2002 MD, University of Belgrade – Faculty of Medicine

### **Training:**

- Training in “*In vitro* assays for assessment of innate inflammatory responses to adjuvants” at „*In vivo* models“ unit of the Scientific Service „Immune Response“ at Sciensano, Brussels, Belgium within Short - term scientific mission (STSM) of COST action ENOVA CA16231.
- Training of teaching and research staff "Building an appropriate relationship with students and the rules of business communication" (Assistant Professor Nevena Buđevac, University of Belgrade - Faculty of Pharmacy)
- Training of teaching and research staff within the program of continuing education "TRAIN (Training and Research for Academic Newcomers)" organized by the University of Belgrade
- Course for teachers and associates "Knowledge tests in measuring educational outcomes" (Prof. Panta Kovačević, Assistant Professor Ivana Petrović, University of Belgrade - Faculty of Pharmacy)
- Operator Training on BD FACSCalibur
- Course: Principles of working with experimental animals, University of Belgrade - Faculty of Pharmacy

- Training: "Safe work with hazardous chemicals and waste disposal". University of Belgrade - Faculty of Pharmacy, Center for Toxicological Risk Assessment
- Seminar: "Implementation of the Rulebook on technical requirements for pressure equipment and the Rulebook on inspections of pressure equipment", Serbian Chamber of Commerce, Belgrade
- Course: "SRPS ISO 9001: 2008 introduction to the standard". University of Belgrade-Faculty of Pharmacy, Belgrade.
- Course: "GMP - good manufacturing practice". University of Belgrade-Faculty of Pharmacy, Belgrade.
- Seminar: "GMP - good manufacturing practice". Serbian Chamber of Commerce, Belgrade.

### **Teaching activities:**

- Integrated academic studies: Immunology (practical classes), Immunology with immunochemistry (theoretical and practical classes), Laboratory diagnostics of immune system disorders (theoretical and practical classes), Immunology (classes in English)
- Specialist academic studies - study program Biological medicines: Transplantation, Biological drugs in the treatment of malignant tumors
- Mentor of seven final / graduate theses on integrated academic, ie. undergraduate studies and four final theses in specialist academic studies Biological Drugs. Membership in more than 100 commissions for the defense of final / graduate theses on integrated academic, ie. undergraduate studies and specialist academic studies and for the defense of four final theses in the narrower health specialization in Clinical Immunochemistry. She is the mentor of one doctoral thesis.

### **Textbooks:**

- Nevena Arsenović-Ranin, Zorica Stojić-Vukanić, Biljana Bufan. Methods in Immunology and Immunochemistry. University of Belgrade – Faculty of Pharmacy, Belgrade. ISBN: 978-86-6273-004-6. 2012
- Biljana Bufan, Ivan Jančić. Disorders of immune system and their laboratory diagnosis. University of Belgrade – Faculty of Pharmacy, Belgrade. ISBN: 978-86-6273-066-4. 2020

### **Activities within the Faculty:**

- Head of Testing in the Laboratory for Microbiological Testing, University of Belgrade - Faculty of Pharmacy
- Chairmen of the Committee for organizing and conducting the student evaluation procedure of the University of Belgrade - Faculty of Pharmacy
- Member of the Accreditation Working Group in charge of preparing documentation for accreditation of the institution and for control of materials for accreditation of doctoral academic studies and specialist academic studies of the University of Belgrade - Faculty of Pharmacy (2019)
- Member of the Committee for Solidarity Assistance to Employees of the University of Belgrade - Faculty of Pharmacy

- Member of the Working Group for drafting the Rulebook on detailed conditions for election to the title of teacher at the University of Belgrade - Faculty of Pharmacy

**Activities within wider Academic Community:**

- Membership in the Society of Immunologists of Serbia
- Engagement in the Directorate for National Reference Laboratories, Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia in the COVID laboratory for SARS-CoV-2 PCR detection (March-June 2020)
- Membership in the Working Group of the Government of the Republic of Serbia for coordination of activities and determining the needs of publicly owned microbiological laboratories carrying out laboratory tests for the presence of SARS-CoV-2 Virus
  - Coordinator of the continuing education course: "Vaccines against infectious diseases - where are we today?"
  - Membership in the organizing committee of the Congress Immunology at the confluence of multidisciplinary approaches (Belgrade, December 6-8, 2019)
  - Reviewed papers for international scientific journals (Pharmaceutical Biology, Frontiers in Immunology, Archives of Medical Science)

**Projects:**

- "Plasticity of the immune system during aging: the immunomodulatory potential of estrogen" (Ministry of Education, Science and Technological Development of the Republic of Serbia, OI project number 175050).
  - "Neuroimmune aspects of mood, anxiety and cognitive effects of leads/drug candidates acting at GABAA and/or sigma-2 receptors: In vitro/in vivo delineation by nano-and hiPSC-based platform" (NanoCellEmoCog; Science Fund Republic of Serbia)
  - "Converting molecular profiles of myeloid cells into biomarkers for inflammation and cancer" (European Cooperation in Science and Technology COST action CA20117)
  - "A sound proteome for a sound body: targeting proteolysis for proteome remodeling" (COST action CA20113)

**Publications:**

- Dimitrijević M, Arsenović-Ranin N, **Bufan B**, Nacka-Aleksić M, Kosec D, Pilipović I, Kotur-Stevuljević J, Simić Lj, Sopta J, Lepasavić G. Sex-based differences in monocytic lineage cells contribute to more severe collagen-induced arthritis in female rats compared with male rats. *Inflammation* 2020;43(6):2312-2331. doi: 10.1007/s10753-020-01302-0
- **Bufan B**, Arsenović-Ranin N, Petrović R, Živković I, Stoiljković V, Lepasavić G. Strain specificities in influence of ageing on germinal centre reaction to inactivated influenza virus antigens in mice: sex-based differences. *Exp Gerontol* 2020;133:110857. doi: 10.1016/j.exger.2020.110857
- Stojić-Vukanić Z, Pilipović I, **Bufan B**, Stojanović M, Lepasavić G. Age and sex determine CD4+ T cell stimulatory and polarizing capacity of rat splenic dendritic cells. *Biogerontology* 2020;21(1):83-107. doi: 10.1007/s10522-019-09845-y
- Dimitrijević M, Arsenović-Ranin N, Kosec D, **Bufan B**, Nacka-Aleksić M, Pilipović I, Lepasavić G. Sexual dimorphism in Th17/Treg axis in lymph nodes draining

inflamed joints in rats with collagen-induced arthritis. *Brain Behav Immun* 2019;76:198-214. doi: 10.1016/j.bbi.2018.11.311

- Stojkowska J, Djurdjevic Z, Jancic I, **Bufan B**, Milenkovic M, Jankovic R, Miskovic-Stankovic V, Obradovic B. Comparative *in vivo* evaluation of novel formulations based on alginate and silver nanoparticles for wound treatments. *J Biomater Appl* 2018;32(9):1197-1211. doi: 10.1177/0885328218759564

- Petrović R\*, **Bufan B\***, Arsenović-Ranin N, Živković I, Minić R, Radojević K, Leposavić G. Mouse strain and sex as determinants of immune response to trivalent influenza vaccine. *Life Sci* 2018;207:117-126. doi: 10.1016/j.lfs.2018.05.056

- Lukic J, Jancic I, Mirkovic N, **Bufan B**, Djokic J, Milenkovic M, Begovic J, Strahinic I, Lozo J. *Lactococcus lactis* and *Lactobacillus salivarius* differently modulate early immunological response of Wistar rats co-administered with *Listeria monocytogenes*. *Benef Microbes* 2017;8(5):809-822. doi: 10.3920/BM2017.0007

- Stojić-Vukanić Z, **Bufan B**, Pilipović I, Vujnović I, Nacka-Aleksić M, Petrović R, Arsenović-Ranin N, Leposavić G. Estradiol enhances capacity of TLR-matured splenic dendritic cells to polarize CD4+ lymphocytes into IL-17/GM-CSF-producing cells *in vitro*. *Int Immunopharmacol* 2016;40:244-253. doi: 10.1016/j.intimp.2016.09.001

- Stojić-Vukanić Z, **Bufan B**, Arsenović-Ranin N, Kosec D, Pilipović I, Perisović-Nanut M, Leposavić G. Aging affects AO rat splenic conventional dendritic cell subset composition, cytokine synthesis and T-helper polarizing capacity. *Biogerontol* 2013;14(4):443-459. doi: 10.1007/s10522-013-9444-5

- **Bufan B**, Mojsilović S, Vučićević D, Vučević D, Vasiljić S, Balint B, Čolić M. Comparative effects of aspirin and NO-releasing aspirins on differentiation, maturation and function of human monocyte-derived dendritic cells *in vitro*. *Int Immunopharmacol* 2009;9:910-917. doi: 10.1016/j.intimp.2009.03.016