



Nevena Veljkovic, Ph. D.

Principal Research Fellow

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PERSONAL INFORMATION

Citizenship: Serbian

Date of Birth: January 27, 1972

Place of Birth: Belgrade, Yugoslavia

EDUCATION

2001 Ph.D., Faculty of Technology and Metallurgy, University of Belgrade, Serbia
Chemistry and chemical technology

1999 M.S., University of Belgrade, Serbia

Biomedical Engineering

1996 B.S., Faculty of Technology and Metallurgy, University of Belgrade, Serbia

Chemical Engineering

PROFESSIONAL EXPERIENCE

- 2013- Head, Centre for Multidisciplinary Research, Institute Vinca
- 2013- Principal Research Fellow, Institute of Nuclear Sciences Vinca
- 2013- Teacher, PhD studies, Faculty of Pharmacy, University of Belgrade (Chemical Biology)
- 2008-2013 Senior Research Associate, Institute of Nuclear Sciences Vinca
- 2011-2012 Teacher, Master studies, Faculty of Biology, University of Belgrade (Bioinformatics)
- 2003-2008 Research Associate, Institute of Nuclear Sciences Vinca
- 1997-2002 Research Assistant, Institute of Nuclear Sciences Vinca
- 1996-1997 Research Trainee, Experimental oncology 2, National Cancer Institute, CRO, Aviano, Italy

PROJECTS & NETWORKS

- 2015-2018 “NGP-NET: Non-globular proteins - from sequence to structure, function and application in molecular physiopathology” COST BM1405
Roles: MC MEMBER and VICE-CHAIR of the Working Group on Protein Repeats.
- 2013-2016 “GLISTEN: GPCR-Ligand Interactions, Structures, and Transmembrane Signalling:

- a European Research Network” COST C1207
Role: MC MEMBER SUBSTITUTE
- 2011-2014 “Quantitative relationships between structure and activity and physicochemical characterization of pharmacologically active substances” Ministry of Sciences Serbia no.172033
Role: CO-INVESTIGATOR.
- 2011-2014 “Application of the eiip/ism bioinformatics platform in discovery of novel therapeutic targets and potential therapeutic molecules” Ministry of Sciences R Serbia no. 173001
Role:COLLABORATOR.
- 2008-2012 “EUGESMA– The European Genomic and Epigenetic Study on MDS and AML” COST BM0801
Roles: MC MEMBER and VICE-CHAIR of the Working Group on Novel Drugs.
- 2006-2010 “Identification and characterization of HIV-1 host factors” Ministry of Sciences Serbia no. 143001
Role: COLLABORATOR.
- 2005-2010 “Array Technologies for BSL 3 and BSL 4 Pathogens” COST B28
Role:COLLABORATOR.
- 2004-2007 “TRIoH –Targeting Replication and Integration of HIV” EU FP6, Integrated project,LSHB-CT-2003-503480
Role: COLLABORATOR.

SELECTED TALKS

“Long-range intermolecular interactions and important insights into biological processes”, From Solid State to Biophysics 7, Cavtat, Croatia, June 2014 (invited talk)

“Unravelling Key Determinants of Protein Function by Fourier Transform Based Method for Sequence Analysis”, Data Mining in Bioinformatics 2012, Belgrade, Serbia, June 2012 (invited talk)

“Physical activity against HIV disease, breast and prostate cancer: insights from the vasoactive intestinal peptide (VIP) based molecular mechanism” Physical Activity for Everyone 2010, Belgrade, Serbia, December 2010 (invited talk)

Ph.D. STUDENTS Supervised

Branislava Gemovic,
Thesis defended in April 2015 at Faculty of Biology, University of Belgrade, Serbia

Ana Djordjevic-Vujicic, PharmD
Thesis defended in June 2013 at Faculty of Pharmacy, University of Belgrade, Serbia

Nada Vasiljevic, MD
Thesis defended in May 2011 at School of Medicine, University of Belgrade, Serbia

Neven Sumonja, B.S., PhD student, Faculty of Biology, University of Belgrade

Jelica Vucicevic, PharmD, PhD student, Faculty of Pharmacy, University of Belgrade

RESEARCH INTERESTS

The research interests of Dr Nevena Veljkovic focus on sequence analyses methods for recognition of protein sequence repeats/patterns. In her studies these approaches have been applied in the investigation of protein domains and their associations with disease, classification of human protein variants and predictions of protein-protein interactions. She works on applying bioinformatics in analysis of natural autoantibodies, the biomarkers ubiquitously present in human sera, having important, although not fully understood physiological function. Dr Veljkovic also studies *in silico* screening filters for drug-like molecules.

Complete Publication List

<http://www.ncbi.nlm.nih.gov/pubmed?term=veljkovic%20n>.

Publication List

Veljkovic N, Vucicevic J, Tassini S, Glisic S, Veljkovic V, Radi M. Preclinical discovery and development of maraviroc for the treatment of HIV. *Expert Opin Drug Discov*. 2015 Jun;10(6):671-84.

Veljkovic V, Glisic S, Muller CP, Scotch M, Branch DR, Perovic VR, Sencanski M, Veljkovic N, Colombatti A. In silico analysis suggests interaction between Ebola virus and the extracellular matrix. *Front Microbiol*. 2015 Feb 19;6:135. doi: 10.3389/fmicb.2015.00135. eCollection 2015. PubMed PMID: 25745423;

Veljkovic V, Loiseau PM, Figadere B, Glisic S, Veljkovic N, Perovic VR, Cavanaugh DP, Branch DR. Virtual screen for repurposing approved and experimental drugs for candidate inhibitors of EBOLA virus infection. *F1000Res*. 2015 Feb 2;4:34. doi: 10.12688/f1000research.6110.1. eCollection 2015.

Zivković M, Djurić T, Stojković L, Jovanović I, Končar I, Davidović L, Veljković N, Alavantić D, Stanković A. CXCL16 haplotypes in patients with human carotid atherosclerosis: preliminary results. *J Atheroscler Thromb*. 2015;22(1):10-20.

Mandic M, Drinovec L, Glisic S, Veljkovic N, Nohr J, Vrecl M. Demonstration of a direct interaction between β 2-adrenergic receptor and insulin receptor by BRET and bioinformatics. *PLoS One*. 9(11):e112664. doi: 10.1371/journal.pone.0112664. eCollection 2014.

Veljkovic V, Glisic S, Veljkovic N, Bojic T, Dietrich U, Perovic VR, Colombatti A. Influenza vaccine as prevention for cardiovascular diseases: Possible molecular mechanism. *Vaccine*. 2014 Jul 19. pii: S0264-410X(14)00933-5. doi: 10.1016/j.vaccine.2014.07.007.

Perovic VR, Muller CP, Niman HL, Veljkovic N, Dietrich U, Tosic DD, Glisic S, Veljkovic V. Novel Phylogenetic Algorithm to Monitor Human Tropism in Egyptian H5N1-HPAIV Reveals Evolution toward Efficient Human-to-Human Transmission. *PLoS One*. 2013 Apr 26;8(4):e61572.

Gemovic B, Perovic V, Glisic S, Veljkovic N. Feature-based classification of amino acid substitutions outside conserved functional domains. *Scientific World Journal*. 2013;2013:948617. doi: 10.1155/2013/948617. eCollection 2013.

Nikolic K, Veljkovic N, Gemovic B, Srdic-Rajic T, Agbaba D. Imidazoline-1 receptorligands as apoptotic agents: pharmacophore modeling and virtual docking study. *CombChem High Throughput Screen*. 2013 May;16(4):298-319

Mancini M, Veljkovic N, Leo E, Aluigi M, Borsi E, Galloni C, Iacobucci I, Barbieri E, Santucci MA. Cytoplasmatic compartmentalization by Bcr-Abl promotes TET2 loss-offunctionin chronic myeloid leukemia. *J Cell Biochem*. 2012Aug;113(8):2765-74.

Stojković L, Djurić T, Stanković A, Dinčić E, Stančić O, Veljković N, Alavantić D, Zivković M. The association of V249I and T280M fractalkine receptor haplotypes with diseasecourse of multiple sclerosis. *J Neuroimmunol*. 2012 Apr;245(1-2):87-92.

Glisic S, Veljkovic N, JovanovicCupic S, Vasiljevic N, Prljic J, Gemovic B, Perovic V, Veljkovic V. Assessment of hepatitis C virus protein sequences with regard tointerferon/ribavirin combination therapy response in patients with HCV genotype 1b. *Protein J*. 2012 Feb;31(2):129-36.

Veljkovic M, Dopsaj V, Dopsaj M, Branch DR, Veljkovic N, Sakarellos-Daitsiotis MM, Veljkovic V, Glisic S, Colombatti A. Physical activity and natural anti-VIP antibodies:potential role in breast and prostate cancer therapy. *PLoS One*. 2011;6(11):e28304.

Veljkovic M, Branch DR, Dopsaj V, Veljkovic V, Veljkovic N, Glisic S, Colombatti A. Can natural antibodies to VIP or VIP-like HIV-1 glycoprotein facilitate prevention and supportive treatment of breast cancer? *Med Hypotheses*. 2011 Sep;77(3):404-8.

Vasiljevic N, Veljkovic N, Kosec T, Ma XZ, Glisic S, Prljic J, Vujcic AD, Markovic L, Branch DR. A bioinformatics approach to identify natural autoantibodies from healthy blood donors' sera reactive with the HCV NS5A-derived peptide by immunoassay. *Viral Immunol*. 2011 pr;24(2):69-76.

Tintori C, Veljkovic N, Veljkovic V, Botta M. Computational studies of the interaction between the HIV-1 integrase tetramer and the cofactor LEDGF/p75: insights from molecular dynamics simulations and the informational spectrum method. *Proteins*. 2010;78(16):3396-408.

Veljkovic V, Niman HL, Glisic S, Veljkovic N, Perovic V, Muller CP. Identification of hemagglutinin structural domain and polymorphisms which may modulate swine H1N1 interactions with human receptor. *BMC Struct Biol*. 2009 Sep 28;9:62.

Veljkovic V, Veljkovic N, Muller CP, Müller S, Glisic S, Perovic V, Köhler H. Characterization of conserved properties of hemagglutinin of H5N1 and human influenzaviruses: possible consequences for therapy and infection control. *BMC Struct Biol*. 2009 Apr 7;9:21.

Mancini M, Veljkovic N, Corradi V, Zuffa E, Corrado P, Pagnotta E, Martinelli G, Barbieri E, Santucci MA. 14-3-3 ligand prevents nuclear import of c-ABL protein in chronic myeloid leukemia. *Traffic*. 2009 Jun;10(6):637-47

Reviews

Maga G, Veljkovic N, Crespan E, Spadari S, Prljic J, Perovic V, Glisic S, Veljkovic V. New in silico and conventional in vitro approaches to advance HIV drug discovery and design. *Expert Opin Drug Discov*. 2013 Jan;8(1):83-92.

Veljkovic N, Glisic S, Prljic J, Perovic V, Veljkovic V. Simple and General Criterion for "In Silico" Screening of Candidate HIV Drugs. *Current Pharmaceutical Biotechnology*.2013;14(6): 1-8.

Veljkovic N, Glisic S, Perovic V, Veljkovic V. The role of long-range intermolecular interactions in discovery of new drugs. *Expert Opin Drug Discov*. 2011 Dec;6(12):1263-70.

Patent Application

Alfonso Colombatti, Roberto Doliana, Veljko Veljkovic, Nevena Veljkovic, Sanja Glisic, Vladimir Perovic Peptide agonists of toll-like receptor 5 ligand and methods of use, Patent Application, PN2014A000022, PCT/EP2015/059424