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Lecturer's biography

Jelena Ivančić Jelečki – University of Zagreb, Center for Research and Knowledge Transfer in Biotechnology, Zagreb, Croatia

Jelena Ivančić Jelečki, studied Molecular biology at the University of Zagreb and graduated in 2000. The following year she started working at the Institute of Immunology Inc., at the Research and Development Department, Molecular Biomedicine Unit lead by prof. Renata Mažuran and later by Dubravko Forčić, PhD. This Unit focused on (a) molecular pathogenesis and attenuation mechanisms of RNA viruses, mainly measles and mumps virus; and (b) chromatographic methods for virus and nucleic acid purification. She received a doctoral degree at 2010 at the University of Zagreb. In 2013, the Department became a scientific centre of University of Zagreb, under the name Centre for Research and Knowledge Transfer in Biotechnology. Groups' scientific interest is currently mostly focused on (a) molecular epidemiology and genetics of human Paramyxoviruses and Pneumoviruses, (b) rational design of attenuated RNA viruses and (c) mumps pathogenesis and neurovirulence. As a researcher, Jelena Ivančić Jelečki has participated in 9 scientific projects (2 ongoing) and in 2011-2013 she has lead an international project entitled "The influence of viral population diversity on safety and immunogenicity of licensed mumps vaccine strain" financed by the FP7 project TRANSVAC. She is the co-author of 25 research papers with *h*-index 10 and has actively participated in over 30 international scientific congresses and a number of educational courses, mostly focused on various aspects of virology research. Since 2015 she has been collaborating with the WHO regarding measles molecular epidemiology and genotyping, as an associate of Croatian National Measles/Rubella Laboratory. Since 2017, she is a guest lecturer at the Faculty of Science in Zagreb, course "Microbiology of pathogens".

Sadržaj ovog materijala isključiva je odgovornost Korisnika projekta „Jačanje kapaciteta CerVirVac-a za istraživanja u virusnoj imunologiji i vakcinologiji“ (KK.01.1.1.01.0006) Sveučilišta u Rijeci Medicinskog fakulteta, Znanstvenog centra izvrsnosti za virusnu imunologiju i cjepiva.

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Martina Marchetti-Deschmann – Institute of Chemical Technologies and Analytics, Vienna, Austria

Martina Marchetti-Deschmann has more than 20 years' experience in Instrumental Bioanalytical Chemistry with special focus on mass spectrometry, separation sciences, biomolecule identification and detailed characterization. In 2002 she joined Prof. Hillenkamp at the University of Münster, one of the pioneers for MALDI, a key ionization technique for biomolecular mass spectrometry. In 2003 she joined the Institute of Chemical Technologies and Analytics at TU Wien and is a well-known expert in Proteomics, Glycomics focussing on method development, future directing applications of MS and instrument improvements.

Her Proteomics work covers not only genetically well characterized species but also not so common species and biomaterial (e.g. biological glues from glow worms, ticks or salamanders). One of her contributions to the glycomics field was awarded in 2006 with the RCM Beynon Prize, an award for an innovative advance in mass spectrometric instrumentation or methodology that has had the greatest immediate impact in its particular subdiscipline over the previous two years. Since 2009 she establishes MALDI mass spectrometric imaging in Austria and is an internationally recognized expert in the field building her capacities through European based networks (COST Actions: Workgroup Leader Mass Spectrometry Imaging: New Tools for Healthcare Research 2011-2015, Workgroup Leader in MULTi-modal imaging of FOREnsic SciEnce Evidence (MULTI-FORESEE) - tools for Forensic Science since 2017, Correlated Multimodal Imaging in Life Sciences(COMULIS) since 2018) and national networks (Correlated Multimodal Imaging Node Austria (CMI) and ViCEM).

She is currently focused on:

1) applying MALDI and DESI as soft ionization techniques for surface analysis in the field of MSI;

2) developing sample preparation strategies to gather proteomics and glycomic information from sample surfaces and combining this strategy with classical Omics approaches; and

3) combining the emerging field of MS imaging with imaging methodologies traditionally used in other fields, i.e. MRI, CT, PET, IR, Raman (medicine) or XRF, AFM (material sciences), building a strong basis for new developments for multimodal imaging.

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Vladimir Savić – Croatian Veterinary Institute,

Poultry Center, Zagreb

Vladimir Savić graduated from Veterinary Faculty in Zagreb where he also obtained MSc degree from poultry physiology and pathology. He also obtained PhD from molecular virology at the Faculty of Sciences in Zagreb. Vladimir Savić works in the field of viral poultry diseases for nearly three decades. He is currently director of the Poultry Centre of the Croatian Veterinary Institute and head of the National reference laboratory for avian influenza and Newcastle disease. Vladimir Savić was also working at times for FAO and other organizations as consultant or expert for avian influenza and other poultry diseases in several countries in Europe, Asia and Africa. He was leader or collaborator in several national and international research projects related to poultry disease and currently works on research grant dealing with neuroinvasive arboviral infections with his particular interest in West Nile and Usutu viruses. Vladimir Savić was awarded by the Croatian Academy of Sciences and Arts for Outstanding scientific achievement in the field of medical sciences for 2005.

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Monique Lafon - Institut Pasteur, Paris, France

Monique Lafon is Head of the Viral Neuro-Immunology Laboratory at Institut Pasteur since 2001. She is also, since July 2014, Dean of the Virology Department. A former student of the "Ecole Normale Supérieure", Monique Lafon holds a PhD in Biochemistry/Microbiology from the University of Paris Descartes.

Within the laboratory of Viral Neuro-Immunology of Institut Pasteur (Paris) Monique Lafon's research focuses on the virulence of the rabies virus and seek to understand how rabies virus escapes the host defenses. Her team has discovered that rabies virus has evolved robust mechanisms i) to upregulate PD-L1 at the surface of the infected neurons, allowing the destruction of protective T lymphocytes through a PD-1/PDL-1 mechanism, and ii) to activate survival signaling pathways leading to the protection of infected neurons against premature apoptosis.

They have shown that a peptide whose sequence includes the G protein cytoplasmic domain reproduced the neuroprotective property of the G protein. This leads interesting openings for the construction of a drug to treat neurodegenerative diseases. The neuroprotective and neuro regenerative properties of this peptide, Neurovita, were demonstrated in several models of neurons injury including spinal cord injury in rat and degeneration of retina in mice.

On the sidelines of the work on neuroprotection, the BBB-Minibrain model gave the opportunity to study the passage of molecules targeting the nervous system, and to investigate the neurovirulence of Yellow Fever vaccines by following a 3R approach (Replace, Reduce and Refine animal use in the experiments).

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Christophe Prehaud- Institut Pasteur, Paris, France

Dr Christophe Prehaud obtained his Ph.D. degree in 1984 at Paris University (UPMC) on a molecular and genetic study of the Rabies virus glycoprotein (RABV-G). Then, he moved to Oxford-UK (NERC Institute of Virology) as a European Economic Community (EEC) postdoc fellow before undertaking a post doc training in Australia (CSIRO). He joined Institut Pasteur (Paris, France) in 1994 where he works with Dr Monique Lafon in her research unit (Viral NeuroImmunology) on the Neuron-Rabies Virus interaction. Since then, their work demonstrated the key role of the RABV-G in the neuron survival phenotype of virulent RABV strains and allowed to identify the serine-threonine microtubule associated serine-threonine kinase MAST2 as neuronal protein partner of RABV-G. From this basic research project, they identify a short polypeptide molecule, Neurovita, which can trigger neuronal survival and axonal neuroregeneration. The use, delivery and optimization of this molecule is currently developed in a translational research program by using in vivo models as well as *in cellulo* human neuronal cells and BBB-Minibrain models.

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