

## **SIMI SCIENTIFIC COMMITTEE**

*Section: Pollution Control and Monitoring*

### **Dr. Mihai NITA-LAZAR**



#### ***SHORT PROFESSIONAL INFO***

Dr. Nita-Lazar is a highly adaptive and innovative scientist with a broad expertise in microbiology, molecular and cell biology combined with in-depth knowledge of (glycol)protein biochemistry. His research based on the role of (glycol)proteins in intercellular interactions generates a track record of driving advanced research with more than twenty years of experience in conducting scientific projects and publishing results in high impact factor journals such as *Science*, *Molecular Cell*, *Cancer Research*, etc (web of science: > 40 publications and > 800 citations, h-index 10). Dr. Nita-Lazar has a broad multicultural scientific experience gained in prestigious worldwide laboratory (France, Switzerland, USA). Moreover, he was mentoring students from various international programs such as i) Predoctoral Research (APEX) at Boston University Medical Center, MA, USA; ii) Program of Excellence in Education at Research Science Institute / Massachusetts Institute of Technology, MA, USA; iii) Expert at University of Maryland, MD, USA. Dr. Nita-Lazar holds memberships from i) Romanian Society of Biochemistry and Molecular Biology; ii) Society for Glycobiology; iii) American Association of Cancer Research; iv) American Society for Cell Biology v) Balkan Environmental Association.

#### ***ACTUAL POSITION***

**2014-** present: Senior research scientist at National Research and Development Institute for Industrial Ecology – ECOIND, Bucharest, Romania.  
PI at Pollution Control Department- Bioassays-Biological Analysis Laboratory.

#### ***ACADEMIC QUALIFICATION***

**1999-**Post-university diploma in *Radioactive isotopes* from the Faculty of Physics at University of Bucharest, Romania  
**1998-**Ph.D in *Sciences de la Vie et de la Sante* from the University of Sciences and Technology of Lille, Villeneuve d'Ascq, France.  
**1998-**Ph.D in *Biology*, specialization in biochemistry from the Romanian Academy, Bucharest, Romania.  
**1994-**MS in *Biology*, specialization in biochemistry from the Faculty of Biology at University of Bucharest, Romania.

#### ***RESEARCH INTEREST***

At the present, the research focusses on the assessment and ecotoxicological control of the contaminated environmental by chemicals (personal care products, estrogens, pharmaceutical products, pesticides, detergents, heavy metals, etc). The acute and chronic toxic effects as well as the biomarkers induced by the adaptation mechanism to the new environmental conditions are analysed and identified at transcriptional and translational levels on a large range of biological models from the aquatic systems such as fish (*Cyprinus carpio*), algae (*Selenastrum capricornutum*), *Daphnia* sp. or bacteria, according to the European Regulation. Moreover, we are interested in the interaction host-parasite which is modulated by the environmental conditions.

## **SCIENTIFIC PUBLICATIONS / AWARDS (selection)**

- Wacker M., Linton D., Hitchen P.G., **Nita-Lazar M.**, Haslam S.M., North S.J., Panico M., Morris H.R., Dell A., Wren B.W. and Aebi M. (2002) N-linked protein glycosylation in *Campylobacter jejuni* and its functional transfer into *Escherichia coli*. **Science** **298**, 1790-1793.
- Nita-Lazar M.**, Wacker M., Schegg B., Amber S. and Aebi M. (2005) The N-X-S/T consensus sequence is required but not sufficient for bacterial N-linked protein glycosylation. **Glycobiology** **15**, 361-367.
- Nita-Lazar M.** and Lennarz W.J. (2005) Pkc1p modifies CPY\* degradation in the ERAD pathway. **Biochemical and Biophysical Research Communications** **332**, 357-361.
- Szathmary R., Biemann R., **Nita-Lazar M.**, Burda, P. and Jakob C.A. (2005) Yos9 protein is essential for degradation of misfolded glycoproteins and may function as lectin in ERAD. **Molecular Cell**, **19**, 765-775.
- Nita-Lazar M.**, Noonan V., Lei T., Rebutini I., Walker J., Liwosz A., Menko S.A and Kukuruzinska M.A. (2009) Overexpression of DPAGT1 leads to aberrant N-glycosylation of E-cadherin and cellular discohesion in oral cancer. **Cancer Research** **69**, 5673-80.
- Nita-Lazar M.**, Rebutini I., Walker J. and Kukuruzinska M.A. (2010) Hypoglycosylated E-cadherin promotes the assembly of tight junctions through the recruitment of PP2A to adherens junctions. **Experimental Cell Research**. **316**, 1871-1884.
- Nita-Lazar M.**, Banerjee A., Feng C., Amin M.N., Frieman M.B., Chen W.H., Cross A.S., Wang L-X and Vasta G.R. (2015) Desialylation of airway epithelial cells during influenza virus infection enhances pneumococcal adhesion via galectin binding. **Molecular Immunology**, **65**, 1-16.
- Nita-Lazar M.**, Banerjee A., Feng C. and Vasta G.R. (2015) Galectins regulate the inflammatory response in airway epithelial cells by modulating the expression of SOCS1 and RIG1. **Molecular Immunology**, **68**, 194-202.
- Nita-Lazar M.**, Mancini J., Feng C., González-Montalbán N., Ravindran C., Jackson S., Heras-Sánchez A.d.l., Giomarelli B., Ahmed H., Haslam S.M., Wu G., Dell A., Ammayappan A., Vakharia V.N. and Vasta, G.R. (2016) The zebrafish galectins Drgal1-L2 and Drgal3-L1 bind in vitro to the infectious hematopoietic necrosis virus (IHNV) glycoprotein and reduce viral adhesion to fish epithelial cells\*, **Developmental and Comparative Immunology**, **55**, 241-252.
- Nita-Lazar M.**, Galaon T., Banciu A., Paun I., Stoica C. and Lucaciu I. (2016) Screening of various harmful compounds in a new bacterial biological model. **JEPE**, **17**, 237-247.
- Nita-Lazar M.**, Gheorghe S., Anghelache A., Banciu A., Stoica C. and Lucaciu I. (2016) Modulation of the bacterial defense mechanisms by various chemical structures. **Rev. Chim.**, **67**, 1454-1457.

## **AWARDS**

- 2009: mentoring “Awarded Distinguished Paper” from Research Science Institute Student Reports, Boston, Massachusetts, USA.
- 2007: Winner of Postdoctoral Fellows Award, BUSDM 26<sup>th</sup> annual Science Day, March 2007, Boston, Massachusetts, USA.
- 2004: Winner of a free registration to the 29<sup>th</sup> FEBS Congress, June 2004, Warsaw, Poland.
- 2004: Winner of a travel award for ASBMB Annual Meeting and 8<sup>th</sup> IUBMB Conference, June 2004, Boston, Massachusetts, USA.