Marius I. Mihăşan, PhD

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2004 - 2006	Junior researcher position and diploma work on protein purification and characterization in the lab of Prof. Dr. Roderich Brandsch, Albert-Ludwigs-University Freiburg
2006 - 2009	PhD thesis on the role of several genes from the catabolic megaplasmid pAO1 of *Arthrobacter nicotinovorans* in the lab of Prof. Dr. Roderich Brandsch, Albert-Ludwigs-University, Freiburg and prof. Dr. Vlad Artenie, Alexandru Ioan Cuza University of Iasi
2004 - 2009	Junior researcher at the Institute for Biological Research, Iaşi, Romania
2009 - 2013	Assistant lecturer at the Faculty of Biology, Alexandru Ioan Cuza University of Iasi
2010 - 2012	Post Doc, Laboratory of Molecular and Experimental Biology, Faculty of Biology, Alexandru Ioan Cuza University of Iasi, project PD No. 337
2013 - 2016	Assistant Professor at the Faculty of Biology, Alexandru Ioan Cuza University of Iasi
2014- 2015	PostDoc, Laboratory of Molecular and Experimental Biology, Faculty of Biology, Alexandru Ioan Cuza University of Iasi, part of the project POSDRU/159/1.5/S/133652.
February – July 2017	Fulbright Research Fellow, Darie Biochemistry & Proteomics Group, Department of Chemistry & Biomolecular Science, Clarkson University, Potsdam, NY, 13699-5810, USA
2016 - 2019	Associate professor at the Faculty of Biology, Alexandru Ioan Cuza University of Iasi
Since 2020	Professor, Biochemistry and Molecular Biology Lab, Faculty of Biology, Alexandru Ioan Cuza University

Research overview:

The main subject of research is the molecular biology of the pAO1 megaplasmid related to the nicotine-generated oxidative stress defense mechanism as well as sugar-catabolism. I focus on the molecular evolution of the pAO1 megaplasmid as a way of investigating its role in spreading of catabolic traits among Gram-positive soil bacteria as well as a way of identifying the origin of the megaplasmid. Lately, in collaboration with dr. Lucian Hritcu, I am interested in the evaluation of possible medical applications of the *Paenarthrobacter nicotinovorans* (former *Arthrobacter nicotinovorans*) nicotine-derivates. As *Paenarthrobacter nicotinovorans* could be used to decontaminate nicotine-containing waste, I am also exploring the biotechnological applications of this strain in collaboration with Dr. Stefan Marius.

Funding:

- PN-III-P1-1.1-TE-2016-0367 Developing an *Arthrobacter nicotinovorans* biotechnology for neuro-pharmaceuticals production;
- PN-II 50BM/2016 - Romania - P.R.P. China joint research project - Nicotine - from toxic residue to metabolic derivatives with neuroprotective effects;
- PN-II-RU-TE-2014-4-0106 – Effects of 6-hydroxy-nicotine on chlorisondamine-induced oxidative stress and neurotoxicity: relevance for Alzheimer's disease**.**

Awards:

- ''Emil Racovita'' Prize by the Romanian Academy for ''pAO1 Megaplasmid – Structure and Function'', 2013
- ''Young Researcher of the year 2013'' awarded by the A.I Cuza University of Iaşi, 2014

Selected publications:

Mihasan, M.; Babii, C.; Aslebagh, R.; Channaveerappa, D.; Dupree, E. & Darie, C. C., Proteomics based analysis of the nicotine catabolism in *P. nicotinovorans* pAO1, Scientific Reports, 2018, 8, Article number: 16239

Hritcu, Lucian, Radu Ionita, Diana Elena Motei, Cornelia Babii, Marius Stefan & **Marius Mihasan**. 2017. "Nicotine versus 6-Hydroxy-l-Nicotine against Chlorisondamine Induced Memory Impairment and Oxidative Stress in the Rat Hippocampus." Biomedicine & Pharmacotherapy 86: 102–8.

Mihăşan M, Brandsch R. 2016. A predicted T4 secretion system and conserved DNA-repeats identified in a subset of related Arthrobacter plasmids. Microbiol Res 191:32–37.