Curriculum vitae Mihaela Matovina

Mihaela Matovina

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Education

May 2006 – **PhD in natural sciences-biology**, University of Zagreb, Faculty of Science; thesis: „Significance of human papillomavirus integration in the genome in the development of cervical cancer"[Croatian]

June 2002 – **MSc in Molecular and Cellular Biology**, University of Zagreb, Faculty of Science; thesis: „Molecular detection of bacterial infection in the placenta of human miscarriages"[Croatian]

June 1997 – **BSc in Molecular Biology**, University of Zagreb, Faculty of Science

Work experience

March 2014-present
Research Associate, Ruđer Bošković Institute, Division of Organic Chemistry and Biochemistry, Laboratory of protein biochemistry and molecular modelling, Zagreb, Croatia

July 2013-March 2014
Experienced Researcher, FP7 Integra-Life project, University of Zagreb, Faculty of Pharmacy and Biochemistry, Zagreb, Croatia

February 2011-June 2013
Experienced Researcher, FP7 TransMedRi project, University of Rijeka, School of Medicine, Rijeka, Croatia

September 2009-January 2011
Senior Research Assistant, Division of Molecular Medicine, Laboratory of Molecular Virology and Bacteriology, Ruđer Bošković Institute

September 2006-August 2009
Postdoctoral Research Associate, Brown University, Department of Molecular Biology, Cell Biology, and Biochemistry, Laboratory of Prof. Arthur Landy, Providence RI, USA

November 2002-August 2006
PhD student Division of Molecular Medicine, Laboratory of Molecular Virology and

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Bacteriology, Ruđer Bošković Institute

February 1998-November 2002
Research Assistant/MSc student, University hospital Merkur, Laboratory of Cytology and Clinical Genetics, Zagreb, Croatia

Teaching

2017-present lecturer of Genetic Engineering in Biotechnology course at University postgraduate interdisciplinary study Molecular biosciences, Josip Juraj Strossmayer University, Osijek, Croatia

Research grants (PI)

March 2021 – February 2025 PI of the Croatian Science Foundation (CSF) project „Dipeptidyl peptidase III interaction with SH2 domain-containing protein 3C – possible link between oxidative stress response and cell migration “, 130,000 EUR

December 2015 – December 2017 Co-PI of the Unity through Knowledge Fund (UKF) project „Elucidation of the physiological roles of human dipeptidyl peptidase III“ (PI: Koraljka Husnjak, Ubiquitin Signaling Group, Institute of Biochemistry II, Goethe University School of Medicine, Frankfurt am Main, Germany); 185,000 EUR

Fellowships and awards

2010 Annual Award of the Director of Ruđer Bošković Institute for outstanding achievement in the field of molecular medicine

Supervision of doctoral students and postdoctoral researchers

2021-present: supervision of PhD student Lea Barbarić

2016-2021: joint supervision (with Sanja Tomić) of PhD student Sara Matić – graduated on September 30 2021

2015-2017: supervision of two postdoctoral researchers employed on UKF project “Elucidation of the physiological roles of human dipeptidyl peptidase III”, RBI

Organizational skills and competences

Organization of Workshop on Molecular Methods in Microbiology and Epidemiology, June 12-15 2012, University of Rijeka, Faculty of Medicine, Rijeka Croatia

Participation in the organization of international scientific meeting FEBS Lecture Course on Cellular Signaling & 4th Dubrovnik Signaling Conference, May 21-27 2004, Dubrovnik, Croatia.

Membership in science organizations and bodies

Croatian Society of Biochemistry and Molecular Biology (HDBMB)

Croatian Association for Cancer Research (CACR)/ European Association for Cancer Research (EACR) – EACR Ambassador

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Peer-reviews in journals

Journal of Biomolecular Structure and Dynamics

Macedonian Journal of Chemistry and Chemical Engineering

Protein and Peptide Letters

Peer reviewed publications

1. Matić S, Tomašić Paić A, Sobočanec S, Pinterić M, Pipalović G, Martinčić M, **Matovina M***, Tomić S*. Interdisciplinary Study of the Effects of Dipeptidyl-Peptidase III Cancer Mutations on the KEAP1-NRF2 Signaling Pathway. Int J Mol Sci 2022; 23:1994.
2. **Matovina M**, Abram M, Repac-Antić D, Knežević S, Bubonja-Šonje M*. An outbreak of ertapenem-resistant, carbapenemase-negative and porin-deficient ESBL producing Klebsiella pneumoniae. Germs 2021; 11:199-210.
3. Blagojević B, Agić D, Serra AT, Matić S, **Matovina M**, Bijelić S, Popović BM*. An in vitro and in silico evaluation of bioactive potential of cornelian cherry (Cornus mas L.) extracts rich in polyphenols and iridoids. Food chemistry 2021; 335:127619.
4. Matić S, Kekez I, Tomin M, Bogár F, Šupljika F, Kazazić S, Hanić M, Jha S, Brkić H, Bourgeois B, Madl T, Gruber K, Macheroux P, Matković-Čalogović D, **Matovina M***, Tomić S*. Binding of dipeptidyl peptidase III to the oxidative stress cell sensor Kelch-like ECH-associated protein 1 is a two-step process. J Biomol Struct Dyn 2021; 39:6870-6881.
5. Sabljić I, Tomin M, **Matovina M**, Sučec I, Tomašić Paić A, Tomić A, Abramić M, Tomić S. The first dipeptidyl peptidase III from a thermophile: Structural basis for thermal stability and reduced activity. PLoS ONE 2018; 13: e0192488.
6. Sabol I, Milutin Gašperov N, **Matovina M**, Božinović K, Grubišić G, Fistonić I, Belci D, Alemany L, Džebro S, Dominis M, Šekerija M, Tous S, de Sanjosé S, Grce M. Cervical HPV type-specific pre-vaccination prevalence and age distribution in Croatia. PLoS ONE 2017; 12: e0180480.
7. **Matovina M**, Agic D, Abramic M, Matic S, Karacic Z, Tomic S. New findings about human dipeptidyl peptidase III based on mutations found in cancer. RSC Adv 2017; 58: 36326-34.
8. Gundić M, Tomić A, Wade RC, **Matovina M**, Karačić Z, Kazazić S, Tomić S. Human DPP III-Keap1 Interactions: a Combined Experimental and Computational Study. Croat Chem Acta 2016; 89:217-28.
9. Sobočanec S, Filić V, **Matovina M**, Majhen D, Šafranko ŽM, Hadžija MP, Krsnik Ž, Kurilj AG, Šarić A, Abramić M, Balog T. Prominent role of exopeptidase DPP III in estrogen-mediated protection against hyperoxia in vivo. Redox Biol 2016; 8:149-59.
10. Bubonja-Sonje M, **Matovina M**, Skrobonja I, Bedenic B, Abram M. Mechanisms of Carbapenem Resistance in Multidrug-Resistant Clinical Isolates of Pseudomonas aeruginosa from a Croatian Hospital. Microb Drug Resist 2015; 21:261-9.
11. Sabol I, **Matovina M**, Si-Mohamed A, Grce M. Characterization and Whole Genome Analysis of Human Papillomavirus Type 16 E1-1374∧63nt Variants. PLoS ONE 2012; 7:e41045.
12. Poljak-Blaži M, Jaganjac M, Sabol I, Mihaljević B, **Matovina M**, Grce M. Effect of ferric ions on reactive oxygen species formation, cervical cancer cell lines growth and E6/E7 oncogene expression. Toxicol In Vitro 2010; 25:160-6.

13. **Matovina M**, Seah N, Hamilton T, Warren D, Landy A. Stoichiometric Incorporation of Base Substitutions at Specific Sites in Supercoiled DNA and Supercoiled Recombination Intermediates. Nucleic Acids Res 2010; 38: e175.
14. Grce M, **Matovina M**, Milutin-Gašperov N, Sabol I. Advances in Cervical Cancer Control and Future Perspectives. Coll Antropol 2010; 34:731-6.
15. Sabol I, Cretnik M, Hadzisejdić I, Si-Mohamed A, **Matovina M**, Grahovac B, Levanat S, Grce M. A new approach for the evaluation of the human papillomavirus type 16 variability with high resolution melting analysis. J Virol Methods 2009;162:142-7.
16. **Matovina M**, Sabol I, Grubisic G, Milutin Gasperov N, Grce M. Identification of human papillomavirus type 16 integration sites in high-grade precancerous cervical lesions. Gynecol Oncol 2009;113(1):120-7.
17. Sabol I, **Matovina M**, Milutin Gasperov N, Grce M. Identification of a novel human papillomavirus type 16 E1 gene variant with potentially reduced oncogenicity. J Med Virol 2008;80:2134-40.
18. Milutin Gasperov N, Sabol I, **Matovina M**, Spaventi S, Grce M. Detection and typing of human papillomaviruses combining different methods: polymerase chain reaction, restriction fragment length polymorphism, line probe assay and sequencing. Pathol Oncol Res 2008;14:355-63.
19. Milutin Gasperov N, Sabol I, Halec G, **Matovina M**, Grce M. Retrospective study of the prevalence of high-risk human papillomaviruses among Croatian women. Coll Antropol 2007; Suppl 2:89-96.
20. **Matovina M**, Husnjak K, Milutin N, Ciglar S, Grce M. Possible role of viral and bacterial infections in miscarriages. Fertil Steril 2004;81:662-669.
21. Grce M, Husnjak K, **Matovina M**, Milutin N, Magdic L, Husnjak O, Pavelic K. Human Papillomavirus, cytomegalovirus and adeno-associated virus 2 infections in pregnant and non-pregnant women with cervical intraepithelial neoplasia. J Clin Microbiol 2004;42:1341-1344.