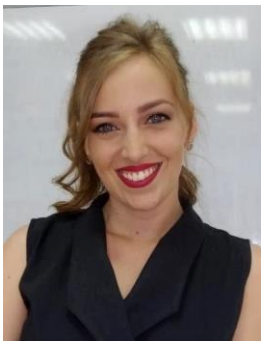
PERSONAL INFORMATION

Milena Petrović



Dimitrija Tucovića 30/10, 34000, Kragujevac, Serbia

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milena.petrovic@pmf.kg.ac.rs

Sex Female | Date of birth 28/03/1995 | Nationality Serbian

WORK EXPERIENCE

March 2023 – to date

Research Associate

Faculty of Science, University of Kragujevac, Serbia; https://www.pmf.kg.ac.rs/

October 2022 - March 2023

Research Assistant

Faculty of Science, University of Kragujevac, Serbia; https://www.pmf.kg.ac.rs/

December 2019 - October 2022

Junior Research Assistant

Faculty of Science, University of Kragujevac, Serbia; https://www.pmf.kg.ac.rs/

- **Research**: design and synthesis of new heterocyclic compounds as potential therapeutic agents; purification and structural characterization (applying different spectroscopic techniques); investigation of cytotoxic activity of newly synthesized compounds against human cancer cells, as well as their inhibitory activity against enzyme dihydroorotate dehydrogenase (*h*DHODH); examination of ADMET properties.

EDUCATION AND TRAINING

January 2024 - January 2025

Postdoctoral fellowship (12 months)

Institut Pasteur de Lille, Deprez lab (INSERM U1177 Drugs and molecules for living systems); Research group of Prof. Rebecca Deprez-Poulain.

October 2019 - August 2023

PhD in Chemistry – Organic Chemistry

Doctoral studies at Faculty of Science, University of Kragujevac, Serbia

- Doctoral thesis title: "*Synthesis, antiproliferative activity, and lipophilicity of new quinoline-4-carboxylic acid derivatives as potential dihydroorotate dehydrogenase inhibitors*", supervised by professor Dr. Milan D. Joksović

October 2018 - July 2019

MSc degree in Chemistry

Faculty of Science, Kragujevac, Serbia

October 2014 - August 2018

BSc degree in Chemistry

Faculty of Science, Kragujevac, Serbia

September 2010 - June 2014

Grammar school “Svetozar Marković”

Jagodina, Serbia

PERSONAL SKILLS

Mother tongue(s): Serbian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English language	B2	B2	B2	B2	B2

Communication skills

- communicative
- willing to teamwork
- competitive
- friendly
- responsible
- reliable
- well organized
- self-critical

Job-related skills

- design and synthesis of potentially bioactive compounds
- one-pot and multistep synthetic pathways
- Microwave synthesis
- good command of general synthetic techniques
- optimization of the reaction conditions
- structural characterization of compounds
- chromatography methods:
  Thin Layer Chromatography (TLC);
  column chromatography for the purification of organic compounds
  High-Pressure Liquid Chromatography (HPLC), analytical and preparative
  Combiflash chromatography for normal and reverse (C18) phase purifications
- Nuclear Magnetic Resonance (1D and 2D NMR analysis)
- Infra-Red (IR) spectroscopy
- Fluorimetry
- UV/Vis spectroscopy
- Hcube system
- Lipophilicity and solubility assays
- BSA/DNA binding studies

Computer skills
- MS Office, ChemDraw Professional 15.1, Biovia Draw 2017, Mnova Suite, SciFinder, TopSpin 4.0.9, MassLynx V4.1, Electronic Lab Book (ELB).

Driving licence
- B

ADDITIONAL INFORMATION

Projects

''Proof of concept of ERAP inhibition to overcome resistance in autoimmune disease''
Financial support from INSERM, University of Lille, Institut Pasteur de Lille and from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska Curie grant agreement No. 954992 (CAPSTONE-ETN).

Awards

2019. Grant from the Foundation for Young Talents, Republic of Serbia.

2023. Poster prize from the INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY for the poster entitled ''Design, synthesis and biological potential of novel indole-pyrazole hybrids''.

Referees

Dr. Violeta Marković
Assistant Professor of Chemistry
University of Kragujevac
Faculty of Science, Department of Chemistry
Radoja Domanovića 12, 34000 Kragujevac, Serbia
E-mail: violeta.markovic@pmf.kg.ac.rs

Dr. Katarina Jakovljevic
Postdoctoral researcher
Department of Materials Science and Engineering
Norwegian University of Science and Technology (NTNU)
Trondheim, Norway
+47 406 10 843 / katarina.jakovljevic@ntnu.no

Publications

1. **M.M. Petrović**, C. Roschger , S. Chaudary, A. Zierer, M. Mladenović , K. Jakovljević , V. Marković, B. Botta, M.D. Joksović; Potent human dihydroorotate dehydrogenase inhibitory activity of new quinoline-4-carboxylic acids derived from phenolic aldehydes: Synthesis, cytotoxicity, lipophilicity and molecular docking studies. *Bioorg. Chem.* 105,104373, 2020.

2. **M.M. Petrović**, C. Roschger , S. Chaudary, A. Zierer, M. Mladenović , V. Marković, S. Trifunovic, M.D. Joksović; Low cytotoxic quinoline-4-carboxylic acids derived from vanillin precursors as potential human dihydroorotate dehydrogenase inhibitors. *Bioorg. Med. Chem. Lett.* 46,128194, 2021.

3. **M.M. Petrović**, C. Roschger, K. Lang, A. Zierer, M. Mladenović, S. Trifunović, B. Mandić, M.D. Joksović; Synthesis and biological evaluation of new quinoline-4-carboxylic acid-chalcone hybrids as dihydroorotate dehydrogenase inhibitors. *Arch. Pharm.* 2, e2200374, 2023.

4. V. Fougiaxis, V. Barcherini, **M.M. Petrovic**, P. Sierocki, S. Warenghem, F.Leroux , N.B .Karroum , F.Petit-Cancelier , V. Rodeschini, D. Roche, B. Deprez, R. Deprez-Poulain; First fragment-based screening identifies new chemotypes inhibiting ERAP1-metalloprotease. *Eur. J. Med. Chem*. 280, 116926, 2024.

Conferences

1. Design, synthesis and biological potential of novel indole-pyrazole hybrids. **M.M. Petrović,** N. Srećković; 59th Meeting of the Serbian Chemical Society, Novi Sad, Serbia, June 1-2, 2023. Book of Abstracts, p. 106, poster presentation.
2. Design and biological evaluation of new chemotypes targeting ERAP1 discovered by fragment-based screening approach. V. Barcherini, V. Fougiaxis, **M.M. Petrovic**, S. Warenghem, N.B. Karroum, F. Leroux, B. Deprez and R. Deprez-Poulain. The 58th edition of the International Conference on Medicinal Chemistry (RICT 2024), Bordeaux, France, July 3-5, 2024, poster presentation.
3. First fragment-based screening unvealing rhodanine-based selective ERAP1 metalloprotease inhibitor. **M.M. Petrovic**, V. Fougiaxis,V. Barcherini, P. Sierocki, S. Warenghem, F.Leroux , N.B.Karroum , F.PetitCancelier, V. Rodeschini, D. Roche, B. Deprez, R. Deprez-Poulain. 9th Drug Discovery Day, Institut Pasteur of Lille, France, December 13th, 2024. Book of Abstracts p. 9, oral dommunication.