



Name and surname: Patrycja Ledwoń, MSc
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Date of birth: 23/05/1994
Residence: Wrocław, Poland

Education

Since 2018: Participant of *BioTechNan* – interdisciplinary doctoral studies and internship program. Double diploma PhD studies in Chemical Sciences (Wrocław University of Science and Technology) and Pharmaceutical Sciences (University of Florence). PhD thesis title: *Design, synthesis and biological investigation of new peptides and peptidomimetics of cosmeceutical interest*. Supervisors: Prof. Rafał Latajka, Prof. Paolo Rovero.

2016-2018: Master degree in Chemistry (Medical Chemistry), University of Wrocław (Supervisor: Dr. Marek Cebrat; group of Prof. Zbigniew Szewczuk). Title: *"Synthesis of Safirinium compounds and their application as ionization tags"*

2013-2016: Bachelor degree in Chemistry (Medical Chemistry), University of Wrocław (Supervisor: prof. Tadeusz Lis). Title: *"Calcium and Iron(II) ascorbates"*

Internships

April-August 2021: Laboratory of Peptide and Protein Chemistry and Biology, Interdepartmental Research Unit "PeptLab", University of Florence. Supervisor: prof. Paolo Rovero (funded by *European Peptide Society* Mobility Fellowship).

August-September 2020: Faculty of Chemistry, University of Florence. PhD thesis development. Supervisors: prof. Anna Maria Papini, prof. Paolo Rovero (funded by *BioTechNan* scholarship).

March-June 2020: *Erasmus+* internship program, Faculty of Chemistry, University of Florence. Project title: *Professional development in the field of bioorganic chemistry*. Supervisor: prof. Anna Maria Papini.

June-Sept. 2019: *BioTechNan* internship program, Faculty of Chemistry, University of Florence. PhD thesis development. Supervisors: prof. Anna Maria Papini, prof. Paolo Rovero.

July-Sept. 2018: *Erasmus+* internship program, Faculty of Chemistry, University of Florence. Project title: *Development of a diagnostic technology based on mass spectrometry to fish out biologically relevant glycopeptides by phenylboronic-modified resin*. Supervisors: prof. Anna Maria Papini, prof. Paolo Rovero. Published in February, 2020.

Grants

January 2022-January 2023: National Science Centre (Poland), PRELUDIUM grant no. 2021/41/N/ST4/04020. Project Title: *New Thrombospondin-1-deriving Peptides as TGF- β Activators of Cosmeceutical Interest*. Role: Principal Investigator.

Awards and Scholarships

November 2021: The Wrocław University of Science and Technology (Faculty of Chemistry) pro-quality scholarship for preeminent PhD Students of the Department (one-year scholarship)

November 2021: The Wrocław University of Science and Technology Rector's Scholarship for preeminent PhD Students (one-year scholarship)

November 2021: The Wrocław University of Science and Technology Rector's Award for scientific activity in 2020/21

April 2021: The Wrocław University of Science and Technology Own Fund Scholarship for preeminent PhD Students

May 2019: XVII Polish Seminary for Students "Na Pograniczu Chemii i Biologii", Jastrzębia Góra (Poland). The Award for one of the best conference oral presentations for *Serpins' role in skin treatment: structure, active fragments and mechanism of inhibition*

February 2018: President of Wrocław Scholarship for Students going to study abroad (4-months scholarship)

Publications

1. M. Kijewska, F. Nuti, M. Wierzbicka, M. Waliczek, **P. Ledwoń**, A. Staśkiewicz, F. Real-Fernandez, G. Sabatino, P. Rovero, P. Stefanowicz, Z. Szewczuk, A.M. Papini *An Optimised Di-Boronate-ChemMatrix Affinity Chromatography to Trap Deoxyfructosylated Peptides as Biomarkers of Glycation*, *Molecules* **2020**, 25(3), 755; DOI: 10.3390/molecules25030755. IF: 3,267.
2. **P. Ledwoń**, A. Staśkiewicz, M. Jewgiński, R. Latajka *Wpływ reszt Δ Phe na konformację łańcucha peptydowego*, *Wiadomości Chemiczne* **2020**, 74(1-2), 9-32.
3. J. Krzciuk-Gula, **P. Ledwoń**, A. Staśkiewicz, R. Latajka *Wpływ różnych reszt β -aminokwasowych na zdolności koordynacyjne peptydów wobec jonów metali przejściowych*, *Wiadomości Chemiczne* **2020**, 74(3-4), 285-310.
4. F. Errante, **P. Ledwoń**, R. Latajka, P. Rovero, A.M. Papini *Cosmeceutical Peptides in the Framework of Sustainable Wellness Economy*, *Frontiers in Chemistry* **2020**, 8(572923); DOI: 10.3389/fchem.2020.572923. IF: 3,693.
5. **P. Ledwoń**, F. Errante, A.M. Papini, P. Rovero, R. Latajka *Peptides as Active Ingredients: a Challenge for Cosmeceutical Industry*, *Chemistry&Biodiversity* **2021**, 18(e2000833); DOI: 10.1002/cbdv.202000833. IF: 2,039.
6. A. Staśkiewicz, **P. Ledwoń**, P. Rovero, A.M. Papini, R. Latajka *Triazole-Modified Peptidomimetics: An Opportunity for Drug Discovery and Development*, *Frontiers in Chemistry* **2021**, 9(674705); DOI: 10.3389/fchem.2021.674705. IF: 3,693.
7. **P. Ledwoń**, A.M. Papini, P. Rovero, R. Latajka *Peptides and Peptidomimetics as Inhibitors of Enzymes Involved in Fibrillar Collagen Degradation*, *Materials* **2021**, 14(12), 3217-46. DOI: 10.3390/ma14123217. IF: 3,057.

Conference communications

Oral presentations:

23-17.09.2021: 63. Zjazd Naukowy Polskiego Towarzystwa Chemicznego, Łódź (Poland). **P. Ledwoń**, C. Bello, A.M. Papini, P. Rovero, R. Latajka *Synthesis and Structural Investigations of Novel Peptidomimetics with Elastase Inhibitory Properties* (presenting author, EN)

24-25.06.2021: ChemBiotIC (Chemistry & Biotechnology International Conference), Wrocław (Poland). **P. Ledwoń**, C. Bello, A.M. Papini, P. Rovero, R. Latajka *Design, Synthesis and Structural Investigations of Novel Peptide-Based Elastase Inhibitors with Fluorescent Properties* (presenting author, EN)

17-19.11.2020: IV Doctoral Forum, Jan Kochanowski University, Kielce (Poland). **P. Ledwoń**, C. Bello, A.M. Papini, P. Rovero, R. Latajka *Design, synthesis and biological investigation of new peptides and peptidomimetics preventing skin damage* (presenting author, EN)

8-12.09.2019: 25th Polish Peptide Symposium, Wojanów (Poland). M. Kijewska, F. Nuti, M. Wierzbicka, M. Waliczek, **P. Ledwoń**, A. Staśkiewicz, T. Koch, F. Real-Fernandez, G. Sabatino, P. Rovero, P. Stefanowicz, Z. Szewczuk, A.M. Papini *The novel Boronic-ChemMatrix Resin to selectively fish out deoxyfructosylated peptides* (co-author, EN)

12-15.05.2019: XVII Polish Seminary for Students "Na Pograniczu Chemii i Biologii", Jastrzębia Góra (Poland). **P. Ledwoń**, F. Errante, M. Jewgiński, P. Rovero, R. Latajka *Serpins' role in skin treatment: structure, active fragments and mechanism of inhibition* (presenting author, EN)

Posters:

8-12.09.2019: 25th Polish Peptide Symposium, Wojanów (Poland). **P. Ledwoń**, F. Errante, M. Jewgiński, P. Rovero, R. Latajka *Serpins' role in skin treatment: structure, active fragments and mechanism of inhibition* (presenting author, EN)

21-26.04.2018: 6th Conference of the Polish Mass Spectrometry Society, Miedzeszyn (Poland). M. Cebrat, **P. Ledwoń**, M. Bochynek, J. Fedorowicz, J. Sączewski, Z. Szewczuk *Application of Safirinium ionisation tags to the analysis of peptides and proteins* (co-author, EN)

3-7.09.2017: 24th Polish Peptide Symposium, Jastrzębia Góra (Poland). **P. Ledwoń**, M. Cebrat, Z. Szewczuk *Synthesis of fluorescent dyes Safirinium and their role in Mass Spectrometry as a peptide markers* (presenting author, EN)

3-7.09.2017: 24th Polish Peptide Symposium, Jastrzębia Góra (Poland). M. Cebrat, **P. Ledwoń**, M. Wierzbicka, J. Fedorowicz, J. Sączewski, Z. Szewczuk *Ultrasensitive method of protein detection using mass spectrometry and oligocyclic ionization tags* (co-author, EN)