CV of Michael Quagliata

Personal data

Name and surname: Michael Quagliata

Date and place of birth: 10 June 1997, Riva del Garda (TN), Italy

Nationality: Italian

Personal e-mail: michaelquagliata97@gmail.com

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Vocational training

Since 11.2025: Post-doc research fellow working on the project: "Synthesis and structural characterisation of modified peptides for the development of diagnostic, therapeutic and vaccine products". Principal investigator: Prof. Anna Maria Papini.

11.2021-10.2024: PhD in Chemistry (XXXVII cycle) with praise, defending the thesis "Exploring the Role of Secondary Structure in Peptides: 3 case studies", Tutor: Prof. Anna Maria Papini, Co-tutor: Prof. Ines Neundorf.

09.2019-07.2021: 2nd level Degree in Organic Chemistry of the University of Florence with a grade of 110/110 cum laude with the thesis "Myelin peptide epitopes cross-reactive with bacterial non-typeable Heamophilus influenzae anti-hyperglucosylated adhesin antibodies in Multiple Sclerosis", Supervisor: Prof. Anna Maria Papini.

06.2016-07.2019: 1st level Degree in Chemistry of the University of Florence with a grade of 110/110 cum laude. Thesis title: "New polyfunctionalized BODIPY derivatives as potential theranostics", Supervisor: Prof. Stefano Cicchi.

09.2011-06.2016: Scientific Diploma at the A.Maffei high school in Riva del Garda

International Scientific Mobility

01/01/24-30/06/24: 6 months as visiting PhD Student at the University of Cologne (Germany) in the lab of Prof. Dr. Ines Neundorf. In this period, I worked on the synthesis, structural characterization and biological activity evaluation of novel antimicrobial peptide. Title of the project: "Characterisation, mechanism of action and antimicrobial activity evaluation of triazolyl-bridged Cell-penetrating peptide (CPPs)". Supervisor: Prof. Dr. Ines Neundorf

Scholarships and prizes

2023: Winner of the "EPS Mobility Fellowships" funded by the European Peptide Society.

2023: Winner of the "Sara Lapi" Award for the Best Master Thesis in Chemistry.

2021: Winner of the scholarship (3 years) for PhD in Chemistry (XXXVII cycle)

2020: Winner of the «Dipartimenti Eccellenti 2018-2022» scholarship funded by the Department of Chemistry 'Ugo Schiff' of the University of Florence

2019 and 2020: Winner of a scholarship funded by the DSU (Right to University Study) of the Tuscany region.

Conferences

25-29.08.24: 37th European Peptide Symposium (EPS) and 14th International Peptide Symposium (IPS). Florence, Italy. 2 poster presentations: *Synthesis, conformational analysis and biological activity evaluation of novel antiviral peptides blocking the SARS-CoV-2 cell-entry*; *Synthesis, characterization and biological activity evaluation of a dual-drug based on the antibacterial peptide lugdunin functionalized with the Carbonic Anhydrase sulfonamide inhibitor acetazolamide.*

11-16.02.24 Gordon Research Conference, "Chemistry and Biology of Peptides", Ventura, California, Unites States. Poster presentation: *Triazolyl-bridged analogs of ACE2(24-42) and sequences derived from Internal Fusion Peptide (IFP) exert antiviral activity against SARS-CoV-2*.

10,11.02.24 Gordon Research Seminar, "Chemistry and Biology of Peptides", Ventura, California, Unites States. Discussion leader and poster presentation: *Triazolyl-bridged analogs of ACE2(24-42) and sequences derived from Internal Fusion Peptide (IFP) exert antiviral activity against SARS-CoV-2*.

23.09.23 Scientific day dedicated to young researchers of ItPS, Florence, Italy. Oral presentation: *Antiviral peptides inhibitors of protein-protein interactions against SARS-CoV-2.*

28.08-02.09.22: 36th European Peptide Symposium (EPS) and 12th International Peptide Symposium (IPS). Sitges, Spain. Poster presentation: *Anti-hyperglucosylated adhesin of non-typeable Haemophilus influenzae antibodies cross-reacting with glucopeptides of NogoR and OMGp myelin proteins.*

15.06.22: 4th National Congress of Italian Peptide Society (ItPS), Naples, Italy. Oral presentation: *N-glucosylated peptides of NogoR and OMGp proteins cross react with anti-hyperglucosylated adhesin of non-typeable Haemophilus influenzae antibodies in Multiple Sclerosis*.

31.03.22: 3rd Student Indian Peptide Society Symposium (sIPS), online. Oral presentation: *Cross Reaction between Antibodies to Hyperglucosylated Adhesin of Non-typeable Haemophilus Influenzae and N-glucosylated Peptide Epitopes of Myelin Proteins*.

14.12.21: Workshop Ms Hybrids 2021, Florence, Italy. No scientific contribution

12.12.20: 3rd National conference of Italian Society of Peptides (ItPS), online. No scientific contribution

Publications

[1] Tino, A.M.; **Quagliata, M.**; Schiavina, M.; Pacini, L.; Papini, A.M.; Felli, I.C.; Pierattelli, R. "Revealing the Potential of a Chimaera: a Peptide-Peptide Nucleic Acid Molecule Designed To Interact with the SARS-CoV-2 Nucleocapsid Protein." *Angew. Chem. Int. Ed.* **2025***,* e202420134 https://doi.org/10.1002/anie.202420134

[2] Grabeck, J.; Mayer, J.; Miltz, A.; Casoria, M.; **Quagliata, M**; Meinberger, D.; Klatt, A.R.; Wielert, I.; Maier, B.; Papini, A.M.; Neundorf, I. "Triazole-bridged peptides with enhanced antimicrobial activity and potency against pathogenic bacteria." *ACS Inf. Dis*, **2024**. https://doi.org/10.1021/acsinfecdis.4c00078

[3] Acar, M.; Tatini, D.; Fidi, A.; Pacini, L.; **Quagliata, M.**; Nuti, F.; Papini, A.M.; Lo Nostro, P. "A Promising Compound for Green Multi-Responsive Materials Based on Acyl Carrier Protein" *Langmuir*, **2024**. https://doi.org/10.1021/acs.langmuir.4c00476

[4] **Quagliata, M.**; Papini, A.M.; Rovero, P. "Therapeutic applications of thymosin peptides: a patent landscape 2018-present." *Expert Opin. Ther. Patents*, **2023**. https://doi.org/10.1080/13543776.2023.2298833

[5] **Quagliata, M.**; Papini, A.M.; Rovero, P. "Chemically modified antiviral peptides against SARS-CoV-2." *J. Pep. Sci*, **2023**, e3541. https://doi.org/10.1002/psc.3541

[6] Stincarelli, M.A.; **Quagliata, M.**; Di Santo, A.; Pacini, L.; Fernandez, F.R.; Arvia, R.; Rinaldi, S.; Papini, A.M.; Rovero, P.; Giannecchini, S. "SARS-CoV-2 inhibitory activity of a short peptide derived from internal fusion peptide of S2 subunit of spike glycoprotein." *Virus Research*, **2023**, 334, 199170. https://doi.org/10.1016/j.virusres.2023.199170

[7] **Quagliata, M.**; Stincarelli, M.A.; Papini, A.M.; Giannecchini, S.; Rovero, P. "Antiviral Activity against SARS-CoV-2 of Conformationally Constrained Helical Peptides Derived from Angiotensin-Converting Enzyme-2." *ACS Omega*, **2023**, 8, 25, 22665–22672. https://doi.org/10.1021/acsomega.3c01436

[8] **Quagliata, M.**; Papini, A.M.; Rovero, P. "Malaria vaccines." *Expert Opin. Ther. Patents*, **2023**, 33, 3, 169-178. https://doi.org/10.1080/13543776.2023.2190884

[9] **Quagliata, M.**; Nuti, F.; Real-Fernandez, F.; Kirilova Kirilova, K.; Santoro, F.; Carotenuto, A.; Papini, A. M.; Rovero, P. "Glucopeptides derived from myelin-relevant proteins and hyperglucosylated nontypeable Haemophilus influenzae bacterial adhesin cross-react with multiple sclerosis specific antibodies: A step forward in the identification of native autoantigens in multiple sclerosis." *J. Pep. Sci*, **2023**, pp. 1-8, ISSN:1075-2617. https://doi.org/10.1002/psc.3475

[10] Strauss, P.; Nuti, F.; **Quagliata, M.**; Papini, A.M.; Hurevich, M. "Accelerated solid-phase synthesis of glycopeptides containing multiple N-glycosylated sites." *Org. Bio. Chem*, **2023**, 21, 1674-1679. https://doi.org/10.1039/D2OB01886A

[11] Staśkiewicz, A.; **Quagliata, M.**; Real-Fernandez, F.; Nuti, F.; Lanzillo, R.; Brescia-Morra, V.; Rusche, H.; Jewginski, M.; Carotenuto, A.; Brancaccio, D.; Aharoni, R.; Arnon, R.; Rovero, P.; Latajka, R.; Papini, A.M. "Role of Helical Structure in MBP Immunodominant Peptides for Efficient IgM Antibody Recognition in Multiple Sclerosis.", *Front. Chem*. **2022**, 10, 885180. https://doi.org/10.3389/fchem.2022.885180.

Proceedings

[1] **Quagliata, M.**; Stincarelli, M. A.; Di Santo, A.; Pacini, L.; Real-Fernandez, F.; Arvia, R.; Rinaldi, S.; Giannecchini, S.; Papini, A. M.; Rovero, P. Synthesis, Conformational Analysis and Biological Activity Evaluation of Novel Antiviral Peptides Blocking the SARS-CoV-2 Cell-Entry. In *Proceedings of the 37th European Peptide Symposium*; The European Peptide Society, 2024; pp 2080–2080. https://doi.org/10.17952/37EPS.2024.P2080.

[2] **Quagliata, M.**; Brenzini Biagioni, F.; Giovannuzzi, S.; De Luca, V.; Capasso, C.; Nocentini, A.; Supuran, C. T.; Rovero, P.; Papini, A. M. Synthesis, Characterization and Biological Activity Evaluation of a Dual-Drug Based on the Antibacterial Peptide Lugdunin Functionalized with the Carbonic Anhydrase Sulfonamide Inhibitor Acetazolamide. In *Proceedings of the 37th European Peptide Symposium*; The European Peptide Society, 2024; pp 2083–2083. https://doi.org/10.17952/37EPS.2024.P2083.

[3] Grabeck, J.; Mayer, J.; Mayer, A.; Casoria, M.; **Quagliata, M.**; Meinberger, D.; Klatt, A. R.; Wielert, I.; Maier, B.; Papini, A. M.; Neundorf, I. Triazole-Bridged Peptides with Enhanced Antimicrobial Activity and Potency against Pathogenic Bacteria. In *Proceedings of the 37th European Peptide Symposium*; The European Peptide Society, 2024; pp 1092–1092. https://doi.org/10.17952/37EPS.2024.P1092.

Memberships

I'm a member of ItPS (Società Italiana Peptidi) and EPS (European Peptide Society). Moreover, I'm a reviewer of the Journal of Peptide Science.

Organisational skills

Member of the local organizing committee 37th European Peptide Symposium (EPS) and 14th International Peptide Symposium (IPS).

Technical skills

During my studies, I acquired an excellent knowledge of the most common techniques of organic and inorganic chemistry and the ability to research and develop an organic reaction. As a peptide chemist, I also acquired experience in the synthesis and characterisation of these biological molecules. In particular, my expertise regards solid phase peptide synthesis (SPPS), both manual and with automatic synthesisers, and characterisation using liquid chromatography techniques (HPLC, UHPLC) coupled with mass spectrometry. I have also acquired a good knowledge of spectroscopic techniques for the structural characterisation of peptides such as Circular Dichroism (CD) and NMR. Finally, during my research, I acquired a good knowledge in Enzyme-Linked ImmunoSorbent Assay (ELISA) and Surface Plasmon Resonance (SPR), as well as basic knowledge of protein synthesis and purification by bacteria and biological tests to assess antimicrobial activity (INT assay).

Foreign languages

English: level B2 (First, Cambridge) done in 2016

German: basic level (studied for 10 years).

Soft skills

Having worked 6 summers in the restaurant industry as a waiter I can work very well in a team, and I can handle stress while remaining focused and concentrated on the objective. I consider myself a precise person and I always try to learn new techniques and methodologies to improve my skills. I can adapt to any working environment without problems.