

PERSONAL INFORMATION

Martina Pacetti

WORK EXPERIENCE

03/2024 – 07/2024

Collaborative activities as Buddy student.

Department of Pharmaceutical Sciences of University of Perugia, Italy.
Prof. S. Massari

09/2023 – 03/2024

Abroad period as PhD student.

Department of Biomolecular sciences of University of Aarhus, Denmark.
Prof. M. Denham

05/2023 – 07/2023

Collaborative activities as tutor for students attending the laboratories of drug analysis course in Pharmacy.

Department of Pharmaceutical Sciences of University of Perugia, Italy.
Prof. S. Sabatini, T. Felicetti and A. Astolfi.

2021/2022 and 2022/2023

Teaching support activities for students attending the drug analysis course in CTF.

Department of Pharmaceutical Sciences of University of Perugia, Italy.
Prof. S. Massari

12/2020 – 07/2021

Experimental thesis in Medicinal Chemistry

Department of Pharmaceutical Sciences of University of Perugia, Italy. Supervised by Prof. S. Massari and V. Cecchetti.

07/2022

Pre-graduation traineeship in pharmacy.

Dr. Paolo Carducci's Pharmacy. 177, Via Tuderte, Narni Scalo (TR), 05036, Italy.

EDUCATION AND TRAINING

07/2022

Authorization to practice the profession of Pharmacist

Examination at the University of Perugia with a vote of 96/100.

01/11/2021- current (end
31/10/2024)

PhD courses begin in Pharmaceutical Sciences.

Curricula: Early Phase Drug Discovery (XXXVII cycle) at the University of Perugia, Italy.
Supervisors: M. Morlando and S. Massari.

15/07/2021

Master's degree in pharmacy (LM/13 Pharmacy and Industrial Pharmacy).

Experimental thesis at the University of Perugia with a vote of 110/110 cum laude titled: "Optimization of the chemical procedure for the synthesis of cycloheptathiophene-3 carboxamide derivatives and their evaluation as anti-influenza agents." – Supervisors: S. Massari and V. Cecchetti.

08/2016 – 07/2021

Degree course in Pharmacy.

Department of Pharmaceutical Sciences of University of Perugia, Italy.

07/2016

Scientific high school graduation.

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

English

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

Communication skills

- Good communication skills with people from different countries gained through my experience in the academic laboratory in Italy and during my abroad period in Denmark.

Organisational / managerial skills

- Good team-leading skills gained through my experience in the academic laboratory as a PhD student. I can manage my daily work, as well as the work of the thesis students respecting the set goals and deadlines.
- Good organization skills gained through the five years course of pharmacy degree, the experimental thesis period, and the PhD course. Especially, I can organize an organic synthesis procedure until getting the final compounds and evaluate their activity through *in vitro* assays (enzymatic and in cells).

Job-related skills

Medicinal chemistry

- Use of different instrumental techniques for chemical characterization of synthesised compounds: NMR, IR, UV, HPLC and HRMS;
- capacity for purification of compounds using column chromatography, Reveleris Buchi, distillation and crystallization;
- hit-to-lead optimization, structure activity relationship studies, chemical modification to improve the chemical-physical properties of the molecules by using the multi-steps synthetic route and multicomponent reactions, also exploiting the microwave instrument.

30/05/2024 - Theoretical and practical course on the use of the **Wave Creoptix by Alfatest** Department of Pharmaceutical Sciences of University of Perugia, Italy.

21-29/09/2022 - Theoretical and practical course on the use of the **NMR by Bruker** (NMR spectroscopy, quantitative NMR, Fragment Based Screening experiments, metabolomics). Department of Pharmaceutical Sciences of University of Perugia, Italy.

29/08 – 2/09/2022 - Theoretical and practical course on the use of the **Ion Mobility Qtof System – MassHunter Acquisition** – MH Qualitative and IM- Browser – MH Profinder and Statistical Software platform **by Agilent**. Department of Pharmaceutical Sciences of University of Perugia, Italy.

Molecular biology

- Biological evaluation of small molecules through enzymatic and in-cells assays also using the microplate reader. Independent use of biological techniques such as gene cloning and transfection and western blot of proteins by using ChemiDoc instruments. Ability to process and differentiate stem cells to cortical neurons and organoids and perform electrophysiology assays.

15/12/2022 - Theoretical and practical course on the use of the **BD Accuri™ C6 Plus Cytometer**. Department of Pharmaceutical Sciences of University of Perugia, Italy.

5/12/2022 - Theoretical and practical course on the use of the **Microplate reader Infinite 200 PRO modello “M PLEX” Tecan**. Department of Pharmaceutical Sciences of University of Perugia, Italy.

Digital skills

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
Independent	Independent	Independent	Independent	Basic user

- good command of office suite (word processor, spread sheet, presentation software)
- excellent command of scientific programs: SciFinder, ACDLabs, Chemdraw, Mestrenova, TopSpin, PubMed, PubChem, eMolecules, UniProt, RCSB Protein Data Bank, Clustalw, UCSC, Primer3, .

Driving licence

B

ADDITIONAL INFORMATION

Publications

Felicetti T., Di Iacovo N., Della Fazio M.A., Piobbico D., Pieroni S., **Pacetti M.**, Yu J., Sun Y., Massari S., Barreca M.L., Sabatini S., Tabarrini O., Cecchetti V., Wang F., Pommier Y., Morlando M., Servillo G., and Manfroni G. "New anti-ovarian cancer quinolone derivatives acting by modulating microRNA processing machinery". *RSC Med. Chem.* **2024**.

Bonomini A., Felicetti T., **Pacetti M.**, Bertagnin C., Coletti A., Giammarino F., De Angelis M., Poggialini F., Macchiarulo A., Sabatini S., Mercorelli B., Nencioni L., Vicenti I., Dreassi E., Cecchetti V., Tabarrini O., Loregian A., and Massari S. "Optimization of potent, broad-spectrum, and specific anti-influenza compounds targeting RNA polymerase PA-PB1 heterodimerization". *Eur. J. Med. Chem.* **2024**, 277, 116737.

Bonomini, A., Zhang, J.; Zago, H.J.; **Pacetti, M.**; Tabarrini, O. Massari, S.; Mercorelli, B.; Zhan, P. and Loregian, A. "Synergistic activity of an RNA polymerase PA-PB1 interaction inhibitor with oseltamivir against human and avian influenza viruses in cell culture and *in ovo*" *Antiviral Res.* **2024**, 105980.

Pacetti, M.; Pismataro, M. C.; Felicetti, T.; Giammarino, F.; Bonomini, A.; Tiecco, M.; Bertagnin, C.; Barreca, M. L.; Germani, R.; Cecchetti, V.; Vicenti, I.; Tabarrini, O.; Zazzi, M.; Loregian A. and Massari, S. "Switching the three-component Biginelli-like reaction conditions for the regioselective synthesis of new 2-amino[1,2,4]triazolo[1,5-a]pyrimidines", *Org. Biomol. Chem.*, **2023**. *co-first author

Pismataro, M. C., Astolfi A., Barreca M. L., **Pacetti M.**, Schenone S., Bandiera T., Carbone A., and Massari S. "Small Molecules Targeting DNA Polymerase Theta (POL θ) as Promising Synthetic Lethal Agents for Precision Cancer Therapy", *J. Med. Chem.* **2023**, 66, 10, 6498–6522.

Pacetti, M.; Casciari, M.; Bonomini, A.; Bertagnin, C.; Felicetti, T.; Tabarrini, O.; Loregian, A. and Massari, S. "Investigation of the Cycloheptathiophene-3-carboxamide Core for the Discovery of Influenza Virus Polymerase inhibitors". XIII Paul Ehrlich Meeting, Rome, June 17th - 19th, **2024**.

Pacetti, M.; Felicetti T., Pismataro, M.C.; Tabarrini, O. and Massari, S., "Regioselective synthesis of functionalized 1,2,4-triazolo[1,5-a]pyrimidine nuclei through tunable Biginelli-like three-component reactions." XII Paul Ehrlich Meeting, Thessaloniki, July 16th - 18th, **2023**.

Pacetti, M.; Felicetti, T.; Pismataro, M.C.; Bonomini, A.; Bertagnin, C.; Cecchetti, V.; Loregian, A.; Tabarrini, O.; and Massari, S. "Lead optimization of Influenza polymerase PA-PB1 subunits interaction disruptors". The 30th Young Researcher Fellows Meeting, Paris, February 1st – 3rd, **2023**.

Pacetti, M.; Felicetti, T.; Pismataro, M.C.; Bonomini, A.; Bertagnin, C.; Cecchetti, V.; Loregian, A.; Tabarrini, O.; and Massari, S. "Cycloheptathiophene-3-Carboxamides Exert Potent Anti-Influenza Activity by Hampering PA-PB1 Heterodimerization of Viral Polymerase". XI Paul Ehrlich Meeting, Barcelona, July 14th - 16th, **2022**.

Pacetti M., Casciari M., Bonomini A., Bertagnin C., Felicetti T., Loregian A., and Massari S. "Structural and Mechanistic Studies of Cycloheptathiophene-3-Carboxamide Based Compounds as Potent and Broad-Spectrum Anti-Influenza Agents". XXVIII Congresso Nazionale della Società Chimica Italiana (SCI), Milano (Italy), August 26th–30th, **2024**.

Pacetti M., Casciari M., Felicetti T., Bertagnin C., Bonomini A., Giammarino F., Vicenti I., Tabarrini O., Zazzi M., Loregian A., and Massari S. "Tailored synthesis of functionalized 1,2,4-triazolo[1,5-a]pyrimidine cores via regioselective Biginelli-like three-component reactions". XI EFMC Young Medicinal Chemists' Symposium (YMCS), Rome (Italy), September 5th-6th, **2024**.

Pacetti, M.; Felicetti, T.; Pismataro, M.C.; Bonomini, A.; Bertagnin, C.; Cecchetti, V.; Loregian, A.; Tabarrini, O.; Massari, S. "Cycloheptathiophene-3-Carboxamides: a Next-Generation of Antiviral Agents Inhibiting Influenza Virus Polymerase". XXXVIII Congresso Interregionale della Società Chimica Italiana sezione Toscana, Umbria, Marche, Abruzzo (TUMA), Perugia, September 1st and 2nd, **2022**.

Contributions to congresses

Casciari, M.; Pacetti, M.; Primavera, E.; Milano, F.; Astolfi, A.; Cecchetti, V.; Martelli, M.P.; Barreca, M.L. and Massari S. "Design and Synthesis of AKT1 Allosteric Inhibitors for Acute Myeloid Leukemia". XIII Paul Ehrlich Meeting, Rome, June 17th - 19th, **2024**. (POSTER PRESENTATION)

Pacetti, M.; Felicetti, T.; Bonomini, A.; Pismataro, M.C.; Bertagnin, C.; Vicenti, I.; De Angelis, M.; Vagaggini, C.; Poggialini, F.; Dreassi, E.; Nencioni, L.; Zazzi, M.; Cecchetti, V.; Loregian, A.; Tabarrini, O.; Massari, S. "Cycloheptathiophene-3-Carboxamides as Influenza Polymerase PA-PB1 Protein-Protein Interaction Inhibitors". XXVII National Meeting in Medicinal Chemistry (NMMC). Bari, September 11th – 14th, **2022**. (POSTER PRESENTATION)

Felicetti T.; Pismataro, M.C.; Bertagnin, C.; Pacetti, M.; Bonomini, A.; Cecchetti, V; Loregian, A.; Tabarrini, O.; Massari, S. "1,2,4- Triazolo [1,5-a]pyrimidines: Efficient One-Step Synthesis and Functionalization as Antiviral Agents". XXVII Congresso Nazionale della Società chimica Italiana, September 14th – 23th, **2021**. (ORAL PRESENTATION)

Thesis co-supervisor

10/**2024**: Laura Salinas, Graduate Experimental Thesis in Tesi di Laurea in Biotechnology entitled:" Design and synthesis of cHTC analogues as anti-influenza agents and optimization of the chemical procedure". Department of Pharmaceutical Sciences, University of Perugia

10/**2022**: Tommaso Baldelli, Chemistry and Pharmaceutical Technology (CTF) entitled:" Design and synthesis of cycloheptathiophene-based compounds showing potent anti-influenza activity," Department of Pharmaceutical Sciences, University of Perugia

07/**2022**: Chiara Bertoso, Graduate Experimental Thesis in Biotechnology entitled:" Synthesis of 1,2,3-triazole-based compounds through click chemistry reaction," Department of Biotechnology, University of Perugia.

06/**2022**: A.A. 2020/2021 - Margherita Burali, Graduate Thesis in Pharmacy entitled:" SOD1 in amyotrophic lateral sclerosis and as drug discovery," Department of Pharmaceutical Sciences, University of Perugia.

Honours and awards

Winner of the Degree Award Competition in memory of Prof. Giuseppina Scassellati Sforzolini on behalf of the "Soroptimist International Club Perugia" (**2023**).

Winner of the Competition for awarding prizes to recent graduates in the year 2021 on behalf of the Board of Directors of "Ternana Opera Educatrice" (**2022**).

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali" ai soli fini del concorso.

Perugia, 20/10/2024