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Mattia Sturlese, PhD

Personal Information

Nationality: Italian.
Date of birth: 17/03/1981
Civil status: Married, two children.
Address: Via Roma 34/B, San Vendemiano, 31020, TV, Italy

Education

Mar 2014-now Università degli studi di Padova Padova,Italy

Senior Postdoctoral Fellowship at [Molecular Modeling Section](#),
Dipartimento di Scienze del Farmaco (DSF), Padova University.
Supervisor: Prof. Stefano Moro.

Mar 2012-Feb 2014 Università degli studi di Padova Padova,Italy

Postdoctoral Fellowship at Department of Chemical Science, Padova
University. Supervisor: Dr. Massimo Bellanda. Project title: Identification
of lead compounds by NMR and Computational strategies against
African trypanosomiasis.

Mar2011-Feb2012 Università degli studi di Padova Padova,Italy

Postdoctoral Fellowship at Department of Chemical Science, Padova
University. Supervisor: Dr. Massimo Bellanda. Project title: Structural
Characterization of STAS domains of SulP anion transporters.

2008-2010 Università degli studi di Padova Padova,Italy

PhD Program in [Bioscience and Biotechnology](#), Department of Chemical
Science, Padova University. Supervisor: Prof. Stefano Mammi. Project
title: The anti-apoptotic proteins DJ-1 and Mcl-1: molecular basis of
different protein-ligand interactions leading to apoptosis.

Ten month Visiting Ph.D. program at [Sanford|Burnham Medical
Research Institute](#), La Jolla, CA, USA. (2010) Supervisor Prof. Maurizio
Pellecchia. Project title: New inhibitor design of antiapoptotic B-cell
lymphoma/leukemia-2 (Bcl-2) family proteins.

2008-2009: Scientific collaboration with [SIENABIOTECH](#); Project title:
rational design and synthesis of antiproliferative and neuroprotective
molecules through modulation of protein-protein interaction. ([Molecular
Modeling Section](#), Department of Pharmaceutical Science). Supervisors:
Prof. Stefano Moro(UNIPD) and Alessandro Padova (SIENABIOTECH).

2007 Università degli studi di Padova Padova,Italy

Post graduate fellowship at [Molecular Modeling Section](#), Department of
Pharmaceutical Science grant by [SIENABIOTECH](#). Project title: rational
design and synthesis of antiproliferative and neuroprotective molecules
through modulation of protein-protein interaction. Supervisors: Prof.
Stefano Moro(UNIPD) and Alessandro Padova (SIENABIOTECH).

2002-2007 Università degli studi di Padova Padova,Italy

Medicinal Chemistry and Pharmaceutical Technology degree.

Experimental thesis title: three-dimensional model optimization of A_{2B} adenosine receptor and its application on new antagonist design.

Supervisor Prof. Stefano Moro.

2000-2002 Università degli studi di Firenze Florence,Italy

Medicinal Chemistry and Pharmaceutical Technology Studies.

Publications

1. M. Sturlese, M. Lelli, B. Manta, S. Mammi, M. A. Comini, M. Bellanda. "¹H, ¹³C and ¹⁵N resonance assignment of the mature form of monothiol glutaredoxin 1 from the pathogen *Trypanosoma brucei*", **Biomolecular NMR Assignments** (2014).
2. D. Gorbunov*, M. Sturlese*, F. Nies, M. Kluge, M. Bellanda, R. Battistutta & Dominik Oliver. "Molecular architecture and the structural basis for anion interaction in prestin and SLC26 transporters" **Nature Communication** (2014).
*Authors equally contributed.
3. B. Manta, C. Pavan, M. Sturlese, C. Berndt, R.L. Krauth-Siegel, M. Bellanda and M. A. Comini. "Iron-sulfur cluster (ISC) binding by mitochondrial monothiol glutaredoxin-1 of *Trypanosoma brucei*: molecular basis of ISC coordination and relevance for parasite infectivity". **Antioxidants & Redox Signaling** (2012).
4. S. Girotto, M. Sturlese, M. Bellanda, I. Tessari, M. Bisaglia, L. Bubacco, M. Mammi. "Dopamine-derived quinones cause structural perturbations of DJ-1 through modifications at Cys106 and Cys53. **Journal of Biological Chemistry**" (2012).
5. W.J. Placzek, M. Sturlese, B. Wu, J.F. Cellitti, J. Wei, M. Pellecchia. "Identification of a novel Mcl-1 binding motif." **Journal of Biological Chemistry** (2011).
6. Caporale, L. Gesiot, M. Sturlese, A. Wittelsberger, S. Mammi and E. Peggion, "Design, Conformational Studies and Analysis of Structure-Function Relationships of PTH(1-11) Analogues: the Essential Role of Val in Position 2". **Amino Acids**. (2011).
7. Caporale, M. Sturlese, L. Gesiot, F. Zanta, A. Wittelsberger, C. Cabrele. "Side-Chain Cyclization Based on Serine Residues: Synthesis, Structure and Activity of a Novel Cyclic Analogues of the Parathyroid Hormone Fragment 1-11" **J. Med. Chem.** (2010).
8. Caporale, M. Sturlese, E. Schievano, S. Mammi, E. Peggion. "Synthesis and structural studies of new analogues of PTH(1-11) containing C(alpha)-tetra-substituted amino acids in position 8". **Amino acids**. (2010).
9. Girotto S., Bellanda M., Sturlese M., Tessari I., Mammi S., Bisaglia M., Bubacco L. Structural Characterization of the Interaction Between Dj-1 and Dopamine-Derived Quinones. **Movement Disorders**, m.a. (2010).
10. Masciocchi J, Frau G, Fanton M, Floris M, Sturlese M, Palla P, Cedrati F, Rodriguez-Tomé P, Moro S. "MMsINC: a large-scale

chemoinformatics database." **Nucleic Acids Research** (2009).

11. Fanton M, Floris M, Frau G, Masciocchi J, Sturlese M, Palla P, Cedrati F, Rodriguez-Tomé P, Moro S. "MMsINC: a new web-based large-scale chemoinformatics platform." in **BIOTECHNO 2008 Proceedings**, IEEE Computer Society Press, 64-69 (2008).
12. Leone S, Mutti C, Kazantsev A, Sturlese M, Moro S, Cattaneo E, Rigamonti D, Contini A. "SAR and QSAR study on 2-aminothiazole derivatives, modulators of transcriptional repression in Huntington's disease." **Bioorg Med Chem.** 16, (2008).

Congress
Participations and
awards

- I. XXXVIII National Congress on Magnetic Resonance; Bressanone, 10-13 September 2008. Poster: *Synthesis, biological evaluation, and NMR studies of a peptide-paclitaxel conjugate.*
- II. MOE European User Group Meeting; Wellcome Trust Genome Campus Conference Centre, Hinxton Hall, Cambridge, 21-24 October 2008. Poster and Oral Presentation: MMsINC®: a new public large-scale database for chemoinformatic research.
- III. XXXIX National Congress on Magnetic Resonance: Perspectives and new development. Palermo 21-24 September 2009. Poster: *Structural and functional modifications induced on DJ-1 by Dopaminoquinones (DAQ).*
- IV. NPCF3: Nuove prospettive in Chimica Farmaceutica. Ciocco (LU), 13-14 February 2012.
- V. XL National Congress on Magnetic Resonance: Perspectives and new development. Parma 26-28 September 2011 Poster: *The identification of new Mcl-1 peptidic Inhibitor by Phage Display and NMR.*
- VI. *Computationally Driven Drug Discovery Meeting. CDDD Meeting. Aquila, 21-23 November 2011. Poster: The identification of new Mcl-1 Inhibitor reveals new interactors in its apoptotic pathway. Award: First Place in Poster Competition.*
- VII. XLI National Congress on Magnetic Resonance: Perspectives and new development. Pisa 17-19 September 2012. Poster: *An NMR study on the interaction between the anti-Apoptotic proteins Bcl-X_L and DJ-1.*
- VIII. *3rd Annual User group Meeting of BioNMR: NMR and protein dynamics in structural biology. June 10 - 13, 2013, Budapest, Hungary. Oral communication: Structural Studies Of Monothiol Grx1 From The Parasite Trypanosoma Brucei*
- IX. *35th FGMR Discussion Meeting and Joint Conference of the German, Italian and Slovenian Magnetic Resonance Societies. Frauenchiemsee 9-12 September 2013. Poster: Structural Studies of Monothiol GRX1 From The Parasite Trypanosoma brucei*
- X. *III Computationally Driven Drug Discovery Meeting. Verona, 04-06 March 2014. Poster: A combined NMR and Computational Strategy for Fragment Based Drug Discovery(FBDD): The Antiapoptotic protein Bcl-X_L as case study*
- XI. *4th Annual User group Meeting of BioNMR: NMR and protein*

dynamics in structural biology. May 5 - 9, 2014, Warsaw, Poland
Poster: Structure determination of the dithiol glutaredoxin Grx1 from the pathogen Trypanosoma brucei.

Didactic activities

2014: Teaching Assistant: Industrial Organic Chemistry
(Industrial Chemistry Master, University of Padova)
2013: Teaching Assistant: Industrial Organic Chemistry
(Industrial Chemistry Master, University of Padova)
2012: Teaching Assistant: Industrial Organic Chemistry
(Industrial Chemistry Master, University of Padova)
2009: Academic Tutor (Faculty of Pharmacy, University of Padova)
2008: Academic Tutor (Faculty of Pharmacy, University of Padova)

Professional Skills

Molecular Modeling: Structure-based and ligand-based drug design, docking and virtual screening, Molecular Dynamics, Drug-likeness Optimization, structure and ligand-based Pharmacophore Modeling, Homology Modeling, Protein-Protein Docking, molecular database management, Quantum Mechanical Calculation, Programming [Scientific Vector Language (mid-level), Python (mid level), Bash scripting (expert level)].

Protein-NMR: Multidimensional (1D,2D,3D) and hetero-nuclear spectra acquisition, processing and analysis. Drug discovery by NMR. Peptide and Protein NMR Assignment (homonuclear and heteronuclear assignment), Peptide and Protein NMR structure determination.

Molecular Biology: Recombinant protein expression and purification from E. Coli., Isotope-labeling, residue-specific-labeling, reverse-specific-labeling protein expression for NMR purpose. Phage Display. Gel electrophoresis of Proteins and Peptides.

Others techniques: High performance Liquid Chromatography (HPLC), Fluorescence and Fluorescence Polarized Spectroscopy, Circular Dichroism, UV spectroscopy.

Grants & Fellowship

2013 - Senior Postdoctoral Fellowship (Assegno di Ricerca Senior), Dept of Pharmaceutical and Pharmacological Sciences.

2013 - "Progetto Giovani Studiosi 2013", University of Padova. 24k euro.

Languages

Mother tongue: Italian, Spanish.
Other languages: English.