

Prof. Mattia Falconi Curriculum Vitae

Personal details

Born in Rome on 03/30/1963

Qualifications and Education

Biological Sciences degree 110/110 cum laude, University of Rome "Tor Vergata".

PhD in Biochemistry, University of Rome "La Sapienza".

Post-doctoral training at Italian and foreign institutions and professional appointments:

- 1991 scholarship C.N.R. under the theme "Targeted modifications of proteins".
- 1992 scholarship C.N.R. under the theme "Characterization of target proteins and their modifications".
- 1993-1994 researcher C.N.R.S. (Centre National de la Recherche Scientifique) at the CECAM "Centre Europeen de Calcul Atomique et Moleculaire" Université Paris-Sud and at the Ecole Normale Supérieure de Lyon, France.
- 1994 scholarship I.N.F.M. (National Institute of Physics).
- 1996 scholarship I.N.F.M.
- 1997 post-doctoral fellowship at the Institute of Biochemical Sciences and Pharmacology, University of Catania.
- 2000 grant for cooperation in research on "Molecular dynamics simulations of globular proteins", Department of Biology, University of Rome "Tor Vergata".
- 2002 researcher in the scientific-disciplinary sector BIO/11, Molecular Biology Department of Biology, University of Rome "Tor Vergata", Faculty of Sciences
- 2005 Associate Professor at the Department of Biology, University of Rome "Tor Vergata" in the scientific-disciplinary sector BIO/11, Molecular Biology.

Funds received for research activities

He obtained research funding from various agencies such as C.N.R., E.C., I.N.F.M., Ministry of Research, Ministry of Health. In detail the grants obtained most important are:

- Targeted Project C.N.R. Biotechnologia e Biostrumentazione project "Bioengineering of antioxidant enzymes";
- Human Capital and Mobility project of the European Community project "Superoxide dismutase: structure, function and dynamics";
- Advanced Research Project PRA Institute of Physics of Matter I.N.F.M. on "Recognition processes in biological macromolecules";
- PRIN project "Dynamics of proteins: an experimental approach and simulation at different time windows";
- Project PRIN "DNA topoisomerase I";
- FIRB "Structural studies of membrane proteins by site directed spin spectroscopy";
- Project of the Ministry of Health "Molecular targets in the prevention and control of cancer";
- Project PRIN "Function and structure of eukaryotic DNA topoisomerase I".

Scientific activities

It was Peer Reviewer of international journals such as: Proteins, J. Am Chem Soc, J. Phys. Chem., FEBS Letters, EMBO Journal. His scientific work focuses on the use of computational methods for the understanding of the structural-functional recognition in biological macromolecules. In particular it concerns:

- understanding of the recognition mechanism between macromolecules or between proteins and substrates or inhibitors through electrostatic calculations, Brownian dynamics, molecular dynamics and molecular docking simulations;
- molecular modelling of unknown protein structures and design of point mutations targeted to the modulation of structural-functional activity in proteins;
- classical molecular dynamics simulations of native and mutant proteins to understand the structure-dynamics-function relationship.

He is the author of 90 articles in international journals with high impact value.

Teaching Activity

Mattia Falconi holds four courses at the Department of Biology, University of Rome "Tor Vergata":

- "Structural Biology and Bioinformatics" (6 CFU) Master of Science in Bioinformatics;
- "Linux for biologists" (2 CFU) optional activity for all the Biology and Biotechnology first and master degrees.
- "Classical Molecular Dynamics of Biomolecules" (2 CFU) optional activity for the Master Degree in Bioinformatics.

In the Department of Biochemistry, Università of Rome "La Sapienza" he holds the course "Molecular Mechanics and Dynamics of Biomolecules" Master in Bioinformatics: Biomedical and Pharmaceutical Applications", Director Prof. Stefano Pascarella.

Institutional assignments

From 2010 to 2012 he served as a Member of the Commission for the Confirmation of researchers in the Scientific-Disciplinary Sector BIO/11.