

Dr. Raffaella Magrassi

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CONTACT:

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- Location: Genoa

EDUCATION:

- 1997 Graduated in Biology at the University of Genoa. Graded with first class honours .
- 2003 PhD in “Cellular Physiology and Neuroimmunophysiology”. University of Siena and Biophysics Institute of National Research Council (CNR)
- 2003 European Summer school: “Nanocapsules with functionalised surfaces and walls”International University Bremen (Germany)
- 2003 Course of principles of fluorescence techniques “Workshop on the Principles of Fluorescence Techniques”. Organized by Fluorescence Education Center (ISS) at Department of Physics, University of Genoa.
- 2004 Practical and Intensive Workshop: “3D Confocal Microscopy from microscopy to nanoscopy” at Department of Physics, University of Genoa.

WORKING EXPERIENCES:

1995-1997: Undergraduated student at the Italian Tumor Institute (IST), Genoa, in the laboratory of Mutagenesis

1997-1998: Apprenticeship at the Biophysics Institute of CNR, Genoa.

1999- 2000: PhD training in the laboratory of the Department of General and Human Physiology, at the University of Bologna.

2000-2002 PhD training at the Institute of Biophysics, CNR, Genoa in collaboration with the Department of Medical and Biological Chemistry of the University of Genoa.

2003-2006 Researcher on biomimetic and nanostructured systems at National Institute for the Physics of Matter (Department of Physics, University of Genoa).

2006-2009 Postdoctoral position at Department of Physics, University of Genoa.

2009 Permanent position as Researcher at CNR.

RESEARCH INTERESTS AND SKILLS

She developed her thesis of degree at the Italian Tumor Institute (IST), Genoa, in the laboratory of Mutagenesis where she carried out experiments of Cellular and Molecular Biology. She practiced her apprenticeship at the Biophysics Institute, National Research Council (CNR), Genova. Here she apprehended and applied the techniques of Electrophysiology and Molecular Biology on the ionic channels. During her PhD she worked in the laboratories of the Department of General and Human Physiology, at the University of Bologna where she consolidated her education in primary cell culture and Patch Clamp techniques. At the Biophysics Institute, CNR, Genoa she carried out fluorometric determination of the calcium concentration and biochemical methods. At the CNR-INFM's unit in Genoa (University of Genoa, Physics Department) her research work was focused on the characterization of nanostructured systems, with a range of applications spanning from basic research to advanced bio-medicine. During this period she improved her knowledge in Confocal and Two photon microscopy techniques in order to investigate biological system. From 2006 to February 2009 she worked on nano-medicine project (NanoMed labs) at Department of Physics, University of Genoa. The main aim of the project was to develop a system able to perform in parallel multiple planar patch clamp recordings, allowing fast screening of the effects of drugs on ion channel functionality. During these years she became skilled with technique of soft lithography refined by Focus Ion Beam (FIB). From the 2009 she is a researcher at Institute of National Research Council and since 2013 she collaborated with the Italian Institute of Technology on a scientific project focused on nanomaterials for biological application as nanocapsules, gold nanorods and graphene quantum dots. She currently studies on the field of fluorescence super resolution techniques using a quantitative approach to study single molecule localization of channel proteins and their heterodimer and from 2019 she works in mechanobiology lab (IBF) investigating how mechano-protein mutations affect the cell phenotypes at mechanical and physiological level.