

Curriculum vitae

Elena Maria Ghibaudi

Date and place of birth: 20th February 1968, Torino, Italy

Nationality: Italian

Address: Department of Chemistry, University of Torino, Via Giuria 7, I-10125, Torino, Italy

Phone number ++39-0116797951

Fax number ++39-0116707855

E-mail address elena.ghibaudi@unito.it

Current position

- Since 2/08/1999 – Assistant Professor in the Bioinorganic Chemistry and ESR Spectroscopy Group at the Dept. of Chemistry, University of Torino, Italy

Academic education

- 1991 Master degree in Chemistry, University of Torino, Italy
Title of the experimental thesis: Studies on the catalytic site of 'zucchini' ascorbate oxidase by EPR and optical spectroscopy
- 1996 Ph.D. in Chemistry, University of Torino, Italy
Title of the experimental thesis: Structure-function relationships in metallo-proteins and their models

Research experiences

- 1992-1993, Research fellowship at the Institute for Pharmacological Research “Mario Negri”, Lab. Of enzymology, Protein Chemistry Unit, Milano, Italy
- 1997-1999, Marie Curie Post-Doctoral Fellowship in the Département de Biologie Cellulaire et Moléculaire - Section de Bioénergétique - CEA/Saclay (Gif-sur-Yvette) - France. (Head: Dr. A.W.Rutherford)
- 2004 - FEBS Short Mobility Fellowship for a 3-month research stay at the DBCM (Section de Bioénergétique)/ CEA/Saclay (Paris)
- 2005 – Italian CNR fellowship for a 3-week research stay at the DBCM (Section de Bioénergétique)/ CEA/Saclay (Paris)

Research interests

- Spectroscopical characterisation of paramagnetic metal binding sites in biological and model systems through the concerted use of optical and ESR (electron spin resonance) spectroscopy
- Spectroscopical characterisation of enzymatically-generated radical intermediates
- Studies on the conformational dynamics of proteins and peptides by ESR spectroscopy and site-directed spin-labeling (SDSL), optical spectroscopy and circular dichroism
- Functional and structural investigation of enzymes adsorbed on nanomaterials through the concerted use of optical spectroscopy, circular dichroism, ESR spectroscopy associated with site-directed spin-labeling (SDSL) and activity assays
- Epistemology of chemistry, science communication and chemistry teaching

Teaching experience

- General chemistry - theoretical course
- General chemistry and stoichiometry - laboratory course

- Inorganic chemistry - laboratory course
 - Enzyme catalysis
 - Bioinorganic chemistry
 - Biologically active metal complexes (for PhD students)
 - ESR spectroscopy applied to structural biology issues
 - History of science and epistemology (for PhD students)
-
- Supervisor of several degree- and PhD-experimental thesis in Chemistry

Spoken languages:

- Italian (mother tongue)
- French (fluent)
- English (fluent)
- German (basic)

Technical skills

- CW-EPR spectroscopy
- UV-Vis absorption spectroscopy
- Circular dichroism
- Enzyme assays
- Solid-phase peptide synthesis
- Protein purification techniques
- Automated solid-phase protein sequencing
- Electrophoresis: SDS-PAGE, Analytical isoelectrofocusing, Preparative isoelectrofocusing, for the quantitative separation of isoenzymes

Other activities

- Referee for the following International journals:
 - Biochimica and Biophysica Acta - Proteins and Proteomics (Elsevier)
 - Archives of Biochemistry and Biophysics (Elsevier)
 - Journal of Inorganic Biochemistry (Elsevier)
 - BioMetals (Springer)
 - Biophysical Chemistry (Elsevier)
 - Journal of Peptide Science (Wiley)
 - Cell Biology International (Elsevier)
 - Biodegradation (Springer)
 - Letters in Drug Design & Discovery (Bentham)
 - Biomacromolecules (ACS)
 And for the Austrian Science Fund (FWF)
- 2001 – Supervisor of the translation of the popular scientific book “Gaia’s body” by Tyler Volk, UTET Publishing Co. (Torino), in collaboration with the Group of Science Teaching Methodologies of the University of Torino (Italy)
- 2008 – Lecturer at the Summer School for students enrolled in the “Progetto Lauree Scientifiche” (tr. Scientific Degrees Project) organised by MIUR (Minister for the University and the Scientific Research)
- Science popularisation activity, in collaboration with the scientific supplement of the newspaper “La Stampa”

- Collaboration with Science Education and Science Teaching journals
- Since 2008, lecturer and co-organizer at SPAIS, updating course for science teachers of the secondary school supported by the Italian Society of Chemistry and organized by Prof. Michele Floriano (University of Palermo).
- Since 2009, collaboration with the European Commission as an evaluator for the Marie Curie Fellowships (Life Sciences Panel)
- Since 2010, collaboration with the “Scuola estiva di ricerca educativa e didattica chimica *U.Segre*”, course for university chemistry teachers supported by the Italian Society of Chemistry
- Since 2011, in the editorial staff of the chemistry communication journal “L’alambicco – distillato di notizie su chimica e società” published by the University of Torino (www.alambicco.unito.it)
- Since 2013, member of the Board of the Division of Didactics of the Italian Chemical Society

Publications

As in January 2013, **54 papers** in national and international peer-reviewed journals (see attached).