# Gianfranco Gilardi, FRSC



Titles: PhD, DIC, FRSC, CBiol, MIBiol

Nationality: Italian

Position: Full Professor of Biochemistry - University of Torino, IT

## **Higher Education:**

1991: Ph.D. in Biotechnology and Diploma of Imperial College (DIC), Imperial

College London, UK

1986: Degree in Biological Sciences, 110/110 cum laude et mentione, Faculty

of Natural Sciences, University of Torino, IT

## Academic Career (Italy):

2002 - present: Full Professor of Biochemistry, School of Natural Sciences, University of Torino. IT

2006 – present: Member of the Council of the PhD programme in Pharmaceutical and

Biomolecular Sciences and Director (period 2009-12), PhD School of Natural Sciences and Innovative Technologies, University of Torino

2012 – 2015 and 2003-2006: Head of the Department of Life Sciences and Systems

Biology of the University of Torino

2014 – 2015: Member of the Committee for National Scientific Qualification

Competition – Subject: General Biochemistry and Clinical Biochemistry

2012 – 2015: Chairman of the Committee for Programming and Development of the

Senate of the University of Torino

2010 – 2012: Chairman of the Committee for Scientific Research of the Senate of the

University of Torino

2009 – 2011: Chairman of the Master degree course in Industrial Biotechnology -

University of Torino

2006 – 2015: Member of the Academic Senate of the University of Torino

## Academic Career (outside Italy):

2011 – 2014: Visiting Professor at Imperial College London

2003 – 2010: Reader in Protein Engineering, Department of Molecular Biosciences,

Imperial College London (UK).

1995 – 2001: Lecturer and then Senior Lecturer in the Department of Biochemistry,

Imperial College London (UK).

1993 – 1994: Post-doctoral research associate, Department of Biochemistry, Imperial

College London (UK).

1991 – 1993: Post-doctoral research fellow, Chemistry Department, Leiden University,

(NL)

1987 – 1991: Research Fellowship, Technological Investments of Montedison, Centre

for Biotechnology, Imperial College London (UK).

# Editorial, Membership of Professional Bodies, Learned Societies:

Editor-in-Chief of the US journal Biotechnology and Applied Biochemistry, Wiley, ISSN: 1470-8744

Fellow of The Royal Society of Chemistry (FRSC)

Member of the Accademia delle Scienze, Torino, IT

Member of the American Chemical Society

Member of The Biochemical Society, UK

Member of The Institute of Biology (MIBioI) and Chartered Biologist (CBioI) UK

Member of the Italian Biochemical Society (Component of the Managing Council from 2019)

# **Taught Courses:**

Biochemistry course (convenor) for the undergraduate courses in Biological Sciences, in Chemistry, in Natural Sciences

Protein Engineering and Drug Design course (convenor) – second year master degree course in Industrial Biotechnology – Univ. of Torino

## **Post-graduate Supervision:**

He has supervised more than 30 PhD students, 10 at Imperial College London and more than 20 at the University of Torino, they all successfully completed.

He has frequently acted as external examiners at Oxford University (Chemistry), University of Newcastle (Chemical Engineering), University of Sussex (Biochemistry), University of Parma (Biochemistry), University of Modena (Chemistry), University of Rome "Tor Vergata" (Biochemistry),

#### **Current Research interests and Scientific Track Record:**

Head of an international research group in Protein Engineering applied to biosensing supported by first class technical facilities. His research is focused on redox systems with particular reference to electron transfer proteins and monooxygenase enzymes. Current projects range from engineering human aromatase for structural-functional studies of steroidal hormones metabolism to engineering versatile artificial four helix bundles for

bioelectronic devices, functional studies of hydrogenase for the construction of an artificial leaf for alternative energy sources. Particular emphasis has been given over the last 5 years to cytochrome P450 enzymes and their applications in the environmental and drug development fields. The pharmaceutical aspects of this work were patented and captured in the Imperial College spin off company NanoBioDesign, of which he was the sole scientific founder.

Elected Fellow of the Royal Society of Chemistry (FRSC) and Member of the American Chemical Society, author of over 100 refereed papers, 11 chapters in edited books, several patents, invited speaker to over 50 international congresses, workshops and seminar series, organizer and chairman to several international meetings.

Referee to the UK BBSRC Committees Biochemistry and Cell Biology, Biomolecular Sciences, Engineering Biological Systems, UK EPSRC – Interface chemistry-biology, The Netherlands NWO - Netherlands Organization for Scientific Research, The EU from FP3 to present FP7, The Human Frontier Science Programme, The European Research Council, The Italian Research Council (CNR Biotechnology, The Italian Space Agency and the San Paolo Foundation granting bodies and to the international journals Journal of the American Chemical Society, Analytical Chemistry, Journal of Biological Inorganic Chemistry, Journal of Physical Chemistry, Angewandte Chemie, Biophysical Journal, Biochemistry, Biosensors and Bioelectronics, scientific consultant to Pfizer Sandwich (Kent) and NanoBioDesign Ltd (London), Scientific founder of Imperial College spin off NanoBioDesign Ltd (London), Chief Scientific Officer till 2010 to NanoBioDesign Ltd (London).

# Prof. GIANFRANCO GILARDI FRSC PhD, DIC, MBiol, CBiol



	All	Since 2012	Trend
Citations	3855	1748	360
H-index	37	25	
i10 -index	89	63	90 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 0

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#### 2018

- 1. Luganini, A., Di Nardo, G., Munaron, L., Gilardi, G., Pla, A.F., Gribaudo, G. "Human cytomegalovirus US21 protein is a viroporin that modulates calcium homeostasis and protects cells against apoptosis, <u>PNAS</u>, (2018), 115 (52), E12370-E12377
- 2. Castrignanò, S., Di Nardo, G., Sadeghi, S.J. and Gilardi, G. "Influence of inter-domain dynamics and surrounding environment flexibility on the direct electrochemistry and electrocatalysis of self-sufficient cytochrome P450 3A4-BMR chimeras", <u>J. Inorg. Biochem.</u>, (2018), 188, 9-17, DOI: 10.1016/j.jinorgbio.2018.08.003
- 3. Luganini, A., Terlizzi, M.E., Catucci, G., Gilardi, G., Maffei, M.E. and Gribaudo, G. "The Cranberry Extract Oximacro® Exerts In Vitro Virucidal Activity Against Influenza Virus by Interfering with Hemagglutinin", Front. Microbiol., (2018), 9, article 1826, DOI: 10.3389/fmicb.2018.01826
- Catucci, G., Bortolussi, S., Rampolla, G., Cusumano, D., Gilardi, G. and Sadeghi, S.J. "Flavin-containing Monooxygenase 3 Polymorphic Variants Significantly Affect Clearance of Tamoxifen and Clomiphene" <u>Basic & Clinical Pharmacology & Toxicology</u>, (2018), in press, DOI: 10.1111/bcpt.13089
- 5. Gao, C., Catucci, G., Gilardi, G. and Sadeghi, S.J. "Binding of methimazole and NADP(H) to human FMO3: In vitro and in silico studies", <a href="Int. J. of Biol. Macromol.">Int. J. of Biol. Macromol.</a> (2018), 118 (A), 460-468, DOI: 10.1016/j.ijbiomac.2018.06.104
- 6. Di Nardo, G., Cimicata, G., Baravalle, R., Dell'Angelo, V., Ciaramella, A., Catucci, G., Ugliengo, P. and Gilardi, G. "Working at the membrane interface: Ligand-induced changes in dynamic conformation and oligomeric structure in human aromatase" Biotechnolology and Applied Biochemistry, (2018), 65 (1), 46-53, DOI: 10.1002/bab.1613

- 7. Baravalle, R., Ciaramella, A., Baj, F., Di Nardo, G. and Gilardi, G. "Identification of endocrine disrupting chemicals acting on human aromatase", <u>Biochimica et Biophysica Acta (BBA) Proteins and Proteomics</u>, (2018) 1866 (1), 88-96, DOI: 10.1016/i.bbapap.2017.05.013
- 8. Castrignanò, S., D'Avino, S., Di Nardo, G., Catucci, G., Sadeghi, S.J. and Gilardi, G. "Modulation of the interaction between human P450 3A4 and B. megaterium reductase via engineered loops" <u>BBA Proteins and Proteomics</u> (2018), 1866(1), 116-125DOI: 10.1016/j.bbapap.2017.07.009

- 9. Gao, C., Catucci, G., Castrignanò, S., Gilardi, G. and Sadeghi, S.J. "Inactivation mechanism of N61S mutant of human FMO3 towards trimethylamine" <u>Scientific Reports</u> (2017), 7: 14668, DOI: 10.1038/s41598-017-15224-9
- Ciaramella, A., Minerdi, D. and Gilardi, G. "Catalytically self-sufficient cytochromes P450 for green production of fine chemicals" <u>Rendiconti Lincei</u> (2017) 28 (1), 169-181, DOI: 10.1007/s12210-016-0581-z
- 11. Catucci, G., Polignano, I., Cusumano, D., Medana, C., Gilardi, G., Sadeghi, S.J. "Identification of human flavin-containing monooxygenase 3 substrates by a colorimetric screening assay" <a href="https://doi.org/10.1016/j.ab.2017.01.024">Analytical Biochemistry</a>, (2017) 522, 46-52, DOI: 10.1016/j.ab.2017.01.024
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- 13. Morra, S., Valetti, F. and Gilardi, G. "[FeFe]-hydrogenases as biocatalysts in biohydrogen production" Rendiconti Lincei (2017) 28 (1), 183-194, DOI: 10.1007/s12210-016-0584-9
- 14. Degregorio, D., D'Avino, S., Castrignanò, S., di Nardo, G., Sadeghi, S.J., Catucci, G. and Gilardi, G. "Human cytochrome P450 3A4 as a biocatalyst: Effects of the engineered linker in modulation of coupling efficiency in 3A4-BMR chimeras" Frontiers in Pharmacology, (2017), 8 (MAR), art. no. 121, DOI: 10.3389/fphar.2017.00121
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- Castrignanò, S., Bortolussi, S., Catucci, G., Gholami, O., Valetti, F., Gilardi, G., Sadeghi, S.J. "Bioelectrochemical profiling of two common polymorphic variants of human FMO3 in presence of graphene oxide" <u>Electrochimica Acta</u>, (2017) 228, 611-618, DOI: 10.1016/i.electacta.2017.01.131
- Baravalle, R., Valetti, F., Catucci, G., Gambarotta, G., Chiesa, M., Maurelli, S., Giamello, E., Barone, I. Catalano, S. Andò, S., Di Nardo, G. and Gilardi, G., " Effect of sildenafil on human aromatase activity: from in vitro structural analysis to catalysis and inhibition in cells", <u>Journal of Steroid Biochemistry & Molecular Biology</u>, (2017), 165, 438-447, DOI: 10.1016/j.jsbmb.2016.09.003

18. Gilardi, G., Di Nardo, G., "Heme iron centers in Cytochrome P450: structure and catalytic activity", Rendiconti Lincei, (2017) 28 (1), 159-167, DOI: 10.1007/s12210-016-0565-z

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- Bilayer Poly-L-Lysine Multilayers", <u>Biomacromolecules</u> (2016), 17 (1), 324-335, DOI: 10.1021/acs.biomac.5b01434
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- 31. Morra, S., Maurelli, S., Chiesa, M., Mulder, D.W., Ratzloff, M.W., Giamello, E., King, P.W., Gilardi, G. and Valetti, F. "The effect of C298D mutation in CaHydA [FeFe]-hydrogenase: insights into the protein-metal cluster interaction by EPR and FTIR spectroscopic investigation" <u>BBA Bioenergetics</u> (2016) 1857, 98–106, DOI: 10.1016/j.bbabio.2015.10.005.

- 32. Morra, S., Cordara, A., Gilardi, G. and Valetti, F. "Atypical effect of temperature tuning on the insertion of the catalytic iron-sulfur centre in a recombinant [FeFe]-hydrogenase", Protein Sci. (2015), 24 (12), 2090-2094, DOI: 10.1002/pro.2805.
- 33. Morra, S., Valetti, F., Sarasso, V., Castrignanò, S., Sadeghi, S.J., and Gilardi. G. "Hydrogen production at high Faradaic efficiency by a bio-electrode based on TiO2 adsorption of a new [FeFe]-hydrogenase from Clostridium perfringens" <u>Bioelectrochem.</u> (2015) 106, 258–262, DOI:10.1016/j.bioelechem.2015.08.001.
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- 35. Castrignanò, S, Gilardi, G. and Sadeghi, S.J. "Human flavin-containing monooxygenase 3 on graphene oxide for drug metabolism screening" <u>Anal. Chem.</u> (2015) 87 (5), 2974–2980, DOI: 10.1021/ac504535y
- 36. Di Nardo, G., Castrignanò, S., Sadeghi, S.J., Baravalle, R. and Gilardi, G. "Bioelectrochemistry as a tool for the study of aromatization of steroids by human aromatase", <u>Electrochem. Comm.</u> (2015), 52, 25-28, DOI: 10.1016/j.elecom.2015.01.007
- 37. Di Nardo, G., Breitner, M., Bandino, A., Ghosh, D., Jennings, G.K., Hackett, J.C. and Gilardi, G. "Evidence for an elevated aspartate pKa in the active site of human aromatase", J. Biol. Chem. (2015) 290, 1186-1196, DOI 10.1074/jbc.M114.595108
- 38. Minerdi, D., Sadeghi, S.J., Di Nardo, G., Rua, F., Castrignanò, S., Allegra P. and Gilardi, G. "CYP116B5: a new class VII catalytically self-sufficient cytochrome P450 from Acinetobacter radioresistens that enables growth on alkanes" Molec. Microbiol. (2015) 95 (3), 539–554, DOI: 10.1111/mmi.12883

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39. Castrignanò, S., Ortolani, A., Sadeghi, S.J., Di Nardo, G., Allegra, P. and Gilardi, G. "Electrochemical detection of human Cytochrome P450 2A6 inhibition: a step towards reducing dependence on smoking", <u>Anal. Chem.</u>, (2014), 86 (5), 2760–2766

40. Morra, S., Arizzi, M., Allegra, P., La Licata, B., Sagnelli, F., Zitella, P., Gilardi, G. and Valetti, F., "Expression of different types of [FeFe]-hydrogenase genes in bacteria isolated from a population of a bio-hydrogen pilot-scale plant", <a href="Int. J. of Hydrogen Energy">Int. J. of Hydrogen Energy (2014)</a>, 9018-27

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- 41. Di Nardo, G., Breitner, M., Sadeghi, S.J., Castrignanò, S., Mei, G., Di Venere, A., Nicolai, E., Allegra, P. and Gilardi, G., "Dynamics and flexibility of human aromatase probed by FTIR and time resolved fluorescence spectroscopy", PlosOne (2013), 8 (12), e82118
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- 150. Dainese, E., Gilardi, G., Maccarrone, M., Editorial to the Special Issue "Biochemistry of Protein–Protein and Protein–Lipid Interactions: Applications to Biotechnology" in Biotechnology and Applied Biochemistry (2018), 65 (1), 7-8
- 151. Gilardi, G. Editorial to the Special Issue "Cytochrome P450 Biotechnology" in Biotechnology and Applied Biochemistry (2013), 60, 1
- 152. Editor-in-Chief of Biotechnology and Applied Biochemistry, Wiley USA, ISSN: 1470-8744
- 153. FEBS Letters Special Issue: Biochemistry for Tomorrow's Medicine, Edited by Sergio Papa, Gianfranco Gilardi, Wilhelm Just, (2011) Volume 585, Issue 11, Pages 1503-1706

## **BOOK EDITING AND TRANSLATION:**

154. Harper's Illustrated Biochemistry, 28th Edition, Murray, R.K., Bender, D.A., Botham, K.M., Kennelly, P.J., Rodwell, V.W., Well, P.A., McGraw-Hill, Italian Edited Translation Harper's Biochimica Illustrata, 28 Edizione (2011) E.M.S.I., Roma pages 308-419 ISBN 978-88-86669-77-1

155. Biochemistry, 3rd Edition, Campbell, M.K. and Farrell, S.O., Thomson Brooks/Cole, Italian Edited Translation Biochimica 3 Edizione (2010), Edises srl. ISBN 978-88-7959538

#### ORGANISATION AND CHAIR TO CONGRESSES AND INTERNATIONAL SCHOOLS:

- 156. Chairman of the Mechanisms of signal transduction session (Session 2) at the First National School on Chemical Sensors, Interdivisional Group of Sensors Italian Chemical Society (SCI), Napoli May 24 26, 2017, Naples.
- 157. Member of the Scientific Advisory Committee of the 13th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held in July 2016 in Vancouver. CA.
- 158. Chairman of the Proteins in Health and Disease session at the International Workshop "Seeing enzymes in action", International Center for workshops in the Sciences, Lorentz Center, University of Leiden, October 2015, Leiden, NL
- 159. Organiser of the International Workshop "Seeing enzymes in action", International Center for workshops in the Sciences, Lorentz Center, University of Leiden, October 2015, Leiden, NL
- 160. Member of the Scientific Advisory Committee of the 12th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held in September 2014 in Kyoto, JP
- 161. Organizers of the "Biorefinery" Symposium within the "European Biotech Week" co-organised with Assobiotec and Federchimica, held Torino in October 2013, IT
- 162. Chairman of the Bioengineering session at the 11th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held Torino in June 2012, IT
- 163. Chairman to the Organising Committee for the 11th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, to be held Torino in June 2012, IT
- 164. Chairman to the organising committee for the 36th International Congress of the Federation of the European Biochemical Societies (FEBS) Biochemistry for Tomorrow's Medicine held in Torino in June 2011, IT
- 165. Organiser of the Molecular Engineering for Medicine Symposium at the the 36th International Congress of the Federation of the European Biochemical Societies (FEBS) Biochemistry for Tomorrow's Medicine held in Torino in June 2011, IT
- 166. Chairman of the Synthetic Biology for Medicine session at the 36th International Congress of the Federation of the European Biochemical Societies (FEBS) Biochemistry for Tomorrow's Medicine held in Torino in June 2011, IT
- 167. Organiser of the first International Workshop Seeing enzymes in action, International Center for workshops in the Sciences, Lorentz Center, University of Leiden, November 2010, Leidein, NL

- 168. Chairman of the NanoBiotechnology session at the Biochemical Society meeting, Riccione, September 2006, IT.
- 169. Chairman of the Inter-protein electron transfer session at the European transient electron transfer network, University of Seville, July 2003, Seville, Spain.
- 170. Chairman of the Luminescence, fluorescence, bioluminescence session del The UK-French BBSRC-CNRS Interantional Workshop in Electrochemical and Fluorescence Sensing within microstructured Biological Sensors, March 2000, Saint-Germain-au-Montd'Or, Lyon, France.
- 171. Chairman of the Intra-protein Electron Transfer session, NATO-ESF Workshop Biological Electron Transfer Chains: Genetics, Composition and Mode of Operation May 1997, Tomar, PT.
- 172. Chairman of the Protein Design session, 6th International Conference Perspectives on Protein Engineering: Challenges for Structural Biology, June 1997, Norwich, UK.
- 173. Organiser of the first International Workshop Type-1 copper site proteins, University of Leiden, July 1992

## **KEY-NOTE, PLENARY AND INVITED LECTURES:**

- 174. Exploitation of monooxygenases in *vitro* and *in vivo* biocatalysis delivered at the Proteine 2018 Congress of the Italian Society of Biochemistry and Molecular Biology held in May 2018 in Verona, IT
- 175. La natura delle biomolecule delivered at the Corso di formazione e aggiornamento per docenti di scuole secondarie di secondo grado "Biologia e ricadute applicative Accademia delle Scienze held in January 2018 in Torino, IT
- 176. Cytochrome P450 electrodes for drug metabolism screening delivered at the SciX Conference 2017 held in October 2017 in Reno, Nevada, USA
- 177. Influence of inter-domain flexibility on the activity of 3A4-BMR chimeras in solution and on electrode surfaces – delivered at the 20<sup>th</sup> International Conference on Cytochrome P450 – Biochemistry, Biophysics and Biotechnology held in August 2017 in Dusseldorf, D
- 178. Human Aromatase: Catalytic mechanism and role on the emerging problem of endocrine disruptors delivered at the 59th Congress of the Italian Society of Biochemistry and Molecular Biology held in September 2017 in Caserta, IT
- 179. Bioelectrochemical sensing of cytochrome P450 activity: Applications in drug and steroid Metabolism delivered at the First National School on Chemical Sensors, Interdivisional Group of Sensors Italian Chemical Society (SCI), held in May 2017, Naples, IT
- 180. Control of conformation and oligomerization states as a mechanism of regulation in human aromatase delivered at the European Biotech Week 2016 "Biochemistry of

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- 181. Heme iron centres in cytochromes P450: structure and catalytic activity delivered at the Conference "Concepts In Catalysis: From Heterogeneous To Homogeneous And Enzymatic Catalysts" held in February, 2016 at The Accademia dei Lincei, Rome, IT
- 182. Newly-discovered and old-engineered P450s for interesting applications with a sprinkle of bioelectrochemistry delivered at the P4FIFTY Conference 'Towards P450 Applications' held in June 2015, Bischoffsheim Strasbourg, FR
- 183. A wedding made in heaven: Engineered monoxygenases and electrode interfaces delivered at the 58<sup>th</sup> Congress of the Italian Society of Biochemistry and Molecular Biology held in September 2015 in Urbino, IT
- 184. Bioelectrochemistry of human aromatase: evidence of the distributive nature of the catalytic mechanism delivered at the 12th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held in September 2014 in Kyoto, JP
- 185. Bioethanol production by glucose fermentation from microalgae delivered at the Workshop "Bioalma", March 2014, Catania, IT
- 186. Engineering human cytochrome P450 and omega-hydroxylation of fatty acids delivered at the 38th Federation of European Biochemical Societies Congress 2013 "Mechanisms in Biology", July 2013, Saint Petersburg, Russia
- 187. Cytochromes P450: A versatile class of enzymes of environmental and pharmacological applications delivered at University of Leeds Astbury Centre Seminar Series, January 2011, Leeds, UK
- 188. Getting "action" out of drug metabolising enzymes: Human cyt P450 and FMO3 delivered at the first International Workshop Seeing enzymes in action, International Center for workshops in the Sciences, Lorentz Center, University of Leiden, November 2010, Leidein, NL
- 189. Bioelectrochemistry of P450 enzymes delivered at the 10th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, Woods Hole, USA
- 190. Electrochemical biosensors for proteomics delivered at the First summer school in nanobiotechnology, July 2009, Villa Gualino, Torino, IT
- 191. Going beyond nature? The making of new enzymes by directed evolution delivered at the 54th National Meeting of the Italian Society of Biochemistry and Molecular Biology, September 2009, Catania, IT
- 192. Drug-drug interactions of human cytochrome P450s using a new electrochemical array - delivered at the International Congress on Novel Approaches to Lead Optimization Conference, May 2008, Philadelphia, USA
- 193. Tailoring human Cytochromes P450 for biosensing: from fundamentals to gadgets delivered at the PhD School of the University of Naples, December 2008, Naples, IT

- 194. Protein design for the construction of nanodevices delivered at the dti MNT workshop Nanomedicine: Nanoscience in the Development of Medical Diagnostics, February 2007, London, UK
- 195. Contruction of a liver chip by modular redox assemblies delivered at the EU conference Metalloenzymes and Chemical Biomimetics, May 2005, Rome, IT
- 196. Engineering Human Cytochrome P450s for Nanobiotechnology delivered at the International RSC Conference BioNano 3 – September 2005 – Univ. of Sussex, Brighton, UK
- 197. Protein Engineering for NanoBiotechnology delivered at the Nanotechnology and Smart Materials for Medical Applications: from Medical Diagnostics to Therapy International Association for Industrial Research November 2004 Rome IT
- 198. Molecular Lego of Redox Proteins for Nanotechnology delivered at the European Heterogeneous Electron Transfer Network, University of Leiden, September 2004, Leiden, The Netherlands
- 199. Human P450s in drug discovery delivered at the International School "From Structural Genomics to Drug Discovery", September 2004, University of Parma, IT
- 200. Heterogeneous Electron Transfer of Engineerd Redox Proteins delivered at the European COST-Chemistry D-41, September 2004, University of Modena, IT
- Engineering cytochrome P450s for nanobiotechnology delivered at the Inorganic Biochemistry – Royal Society of Chemistry – Metallo-enzyme Structure and Function – January 2004, London, UK
- Protein Engineering for Nanobiotechnology delivered at the EuroNanoForum,
  December 2003, Trieste, IT
- 203. Intra- and inter-electron transfer in engineered cytochrome P450s delivered at the European Transient Electron Transfer Network, University of Seville, July 2003, Seville, Spain
- 204. Applications of P450 enzymes to nanobiotechnology delivered at EUROBIC 2002, July 2002, Lund, Sweden.
- 205. Manipulating redox proteins and enzymes: Applications to nanotechnology delivered at the Bioelectrochemistry Life Science Symposium, September 2002, Lund University, Sweden.
- 206. Construction of novel redox proteins by modular building blocks delivered at Ledein University, January 2001, Leiden, The Netherlands.
- 207. Molecular lego: engineering artificial redox chains for biosensing delivered at The 6th World Congress on Biosensors. Biosensors 2000, May 2000, San Diego, USA.
- 208. Engineering P450 for nanobiotechnology delevered at the International Symposium on Advances in Bioinorganic Chemistry, November 2000, Mombai, India.

- 209. Designing P450 enzymes to build macromolecular assemblies for nanobiotechnology - delivered at The 11th World Congress on Biotechnology: Biotechnology 2000, September 2000, Berlin, Germany
- 210. Engineering artificial redox chains by molecular lego delivered at The Faraday Discussion 116 of the Royal Society of Chemistry: Bioelectrochemistry, July 2000, Southampton, United Kingdom.
- 211. Engineering redox proteins for nanobiotechnology delivered at The Institute of Physics Annual Congress, March 2000, Brighton, United Kingdom.
- 212. Design of molecular assemblies of p450 enzymes for nanobiotechnology delivered at the Bioanalytical Sensors, Biochip and Nanobiotechnologies International Workshop, December 2000, Autrans, France
- 213. Designing P450 enzymes to build macromolecular assemblies for nanobiotechnology delivered at The UK-French BBSRC-CNRS Interantional Workshop in Electrochemical and Fluorescence Sensing within microstructured Biological Sensors, March 2000, Saint-Germain-au-Mont-d'Or, Lyon, France.
- 214. Design of molecular assemblies of P450 enzymes for high through-put-screening of novel drugs and environmental pollutant delivered at the 4th Italian National Congress on Biotechnology, July 2000, Torino, Italy.
- 215. Rational design of multi-domain redox proteins: The molecular lego approach delivered at the 9th European Congress on Biotechnology, July 1999, Brussels, Belgium.
- 216. Design of novel multi-domain redox proteins delivered at the annual meeting on Redox Proteins and Enzymes of the University of Edinburgh, June 1999, Firbush, United Kingdom.
- 217. Construction of novel redox proteins by modular building blocks delivered at the international conference Protein Engineering and Electron Transfer, November 1998, London, United Kingdom.
- 218. Engineering protein electron transfer delivered at the 1st Annual Seminar for The Centre of Structural Biology at Imperial College, January 1998, Imperial College, London, United Kingdom.
- 219. Rational design versus directed evolution of proteins delivered at the Post-graduate School in Protein structure, May 1998, University of L'Aquila, Italy.
- 220. Engineering an artificial flavocytochrome delivered at 6th International Conference Perspectives on Protein Engineering: Challenges for Structural Biology, June 1997, Norwich, United Kingdom.
- 221. Construction of novel redox proteins by modular building blocks delivered at the Structural biology industrial platform. John Innes Centre, June 1997, Norwich, United Kingdom.
- 222. Engineering proteins for biosensing delivered at the PhD School of the University of Alessandria, November 1997, Alessandria, Italy.

- 223. Intramolecular electron transfer in single-site mutated azurin delivered at the Italian Biochem. Society (SIB) Annual Meeting, 1995, Turin, Italy.
- 224. Backbone dynamics of azurin from Pseudomonas aeruginosa studied by 15-N NMR relaxation times delivered at the Italian Biochem. Society (SIB) Annual Meeting, 1995, Turin, Italy.
- 225. Engineering binding proteins for optical sensing delivered at the 3rd International Conference Perspectives in Protein Engineering, 1994, Oxford, United Kingdom
- 226. Reagentless fluorescence sensors produced by protein engineering delivered at 3rd World Congress on Biosensors. Biosensors 1994, New Orleans, USA.
- 227. Lignin peroxidase and lignin biodegradation delivered at Proteins94, 1994, Verona, Italy.
- 228. Design of a biosensor with genetically engineered azurin as redox mediator Italian Biochemical Society Medal Award delivered at the Italian Biochem. Society (SIB) Annual Meeting, 1993, Trieste, Italy.
- 229. Modification of protein side-chain mobility in azurin by means of site-directed mutagenesis delivered at the FEBS Advanced School on Magnetic Resonance and Protein Dynamics, Erice, IT, 1993.
- 230. NMR approaches to lignin biodegradation delivered at the International Congress in Biomass Biodegradation, Alexandria, Egypt, 1988

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