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## Gianfranco Gilardi, FRSC

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Titoli	PhD, DIC, FRSC, CBiol, MIBiol
Nazionalità	Italiana e Britannica
Ruolo	Professore Ordinario di Biochimica - Università di Torino, IT

### Formazione Universitaria:

1991	Ph.D. in Biotecnologie, Imperial College London, e Diploma of Imperial College (DIC), UK
1986	Laurea in Scienze Biologiche, 110/110 con lode e menzione, Facoltà di Scienze MFN, Università di Torino, IT

### Carriera Accademica (Italia):

2002 - presente	Professore Ordinario di Biochimica, Dipartimento di Scienze della Vita e Biologia dei Sistemi, Università di Torino, IT
2006 - presente	Componente del Collegio Docenti del Dottorato in Scienze Farmaceutiche e Biomolecolari, Università di Torino, IT
2021 - presente	Vice-Direttore per la Ricerca Scientifica del Dipartimento di Scienze della Vita e Biologia dei Sistemi, Università di Torino, IT
2014 - 2015	Direttore del Dottorato in Scienze Farmaceutiche e Biomolecolari, Università di Torino, IT
2012 - 2015	Direttore del Dipartimento di Scienze della Vita e Biologia dei Sistemi, Università di Torino, IT
2014 - 2015	Componente della Commissione Abilitazione Scientifica Nazionale Settore Concorsuale: 05/E1 - Biochimica Generale e Biochimica Clinica, Settore Scientifico Disciplinare BIO/10 - Biochimica
2006 - 2015	Componente del Senato Accademico Università di Torino, IT
2010 - 2012	Presidente della Commissione Ricerca del Senato Accademico Università di Torino, IT
2012 - 2015	Presidente della Commissione Programmazione e Sviluppo del Senato Accademico Università di Torino, IT
2009 - 2011	Presidente del Corso di Laurea Magistrale in Biotecnologie Industriali, Università di Torino, IT
2003 - 2006	Direttore del Dipartimento di Biologia Animale e dell'Uomo, Università di Torino, IT
2002	Chiamata per Chiara Fama nel ruolo di Ordinario di Biochimica presso l'Università di Torino, IT

### Carriera all'estero:

2011 - 2014	Visiting Professor presso il Department of Life Sciences, Imperial College London (UK).
2003 - 2010	Reader in Protein Engineering, Department of Molecular Biosciences, Imperial

	College London (UK).
1995 - 2001	Lecturer e poi Senior Lecturer presso il 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).

### **Società Scientifiche, Ruoli Editoriali**

Socio corrispondente dell'Accademia delle Scienze, Torino, IT  
 Socio corrispondente dell'Accademia delle Scienze di Bologna, Bologna, IT  
 Fellow of The Royal Society of Chemistry (FRSC)  
 Socio della American Chemical Society  
 Socio della Società Italiana di Biochimica (Componente del Direttivo dal 2019 al 2022)  
 Socio della Biochemical Society, UK  
 Socio dell' Institute of Biology (MIBiol) e Chartered Biologist (CBiol) UK  
 Editor-in-Chief of Biotechnology and Applied Biochemistry, Wiley, ISSN:1470-8744 dal 2010 al 2022

### **Titolare di corsi universitari:**

Biochimica per le Lauree Triennali in Chimica, Scienze Biologiche, Scienze Naturali, Scienze Motorie, Università di Torino, IT  
 Ingegneria Proteica e Disegno di Farmaci per la Laurea Magistrale in Biotecnologie Industriali, Università di Torino, IT

### **Supervisione di Tesi di Dottorato in Ricerca**

Ha firmato più di 30 tesi di Dottorato in Ricerca, 10 presso l'Imperial College di Londra e più di 20 presso l'Università di Torino.

E' stato esaminatore di Tesi di Dottorato presso la Oxford University (Chimica), University of Newcastle (Ingegneria Chimica), University of Sussex (Biochimica), Università di Parma (Biochimica), Università di Modena (Chimica), Università di Roma "Tor Vergata" (Biochimica),

### **Attività di Ricerca Scientifica:**

Coordina un gruppo di ricerca di respiro internazionale composto da un Professore Associato, tre Ricercatori Universitari, due Tecnici di Laboratorio e diversi assegnisti di ricerca, dottorandi di ricerca e laureandi nell'ambito dell'ingegneria proteica applicata alle biotecnologie e biosensoristica. I suoi laboratori, muniti di strumenti di avanguardia, si occupano di proteine ed enzimi redox con particolare riferimento a monoossigenasi e idrogenasi. Progetti attualmente in atto vanno da studi di struttura-funzione dell'aromatasi umana, enzima coinvolto nella sintesi di

ormoni steroidei, a studi di ingegneria proteica di P450 umani e batterici per usi di biocatalisi, metabolismo di farmaci e bioremediation di inquinanti ambientali.

Gli aspetti riguardanti la biosensoristica e il metabolismo di farmaci ad opera di monoossigenasi di fegato umano sono stati inclusi in brevetti parte della spin off dell'Imperial College, la NanoBioDesign Ltd (2002-2008), di cui è stato il fondatore scientifico e che ha sviluppato una piattaforma elettrochimica per lo screening metabolico di nuovi farmaci.

Nominato Socio Corrispondente dell'Accademia delle Scienze di Torino e Fellow della Royal Society of Chemistry (FRSC) and Membro della American Chemical Society, è autore di più di 200 lavori scientifici che vanno da articoli su riviste internazionali, capitoli di libri e brevetti. E' stato relatore su invito a numerosi congressi e scuole internazionali, è stato presidente del comitato organizzatore di due congressi internazionali ed è stato parte del comitato organizzatore di altri 20 congressi internazionali.

E' stato valutatore di progetti per lo UK BBSRC Committees Biochemistry and Cell Biology, Biomolecular Sciences, Engineering Biological Systems, UK EPSRC – Interface chemistry-biology, per la The Netherlands NWO - Netherlands Organization for Scientific Research, per la EU dal FP3 a H2020, per The Human Frontier Science Programme, The European Research Council, per il Consiglio Nazionale delle Ricerche (CNR Biotechnology), per il MIUR (Progetti di Interesse Nazionale, PRIN) per l'Agenzia Spaziale Italiana (ASI) e per la Fondazione San Paolo Foundation. E' stato valutatore di pubblicazioni scientifiche internazionali per le riviste scientifiche gr 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.

E' stato consulente scientifico per la Pfizer, (Sandwich, Kent, UK) ed è stato direttore scientifico (CSO, Chief Scientific Officer) per la NanoBioDesign Ltd (London) di cui è stato il fondatore.



ARTICOLI SU RIVISTA:

2023

1. Correddu, D., Catucci, G., Giuriato, D., Di Nardo, G., Ciaramella, A. and Gilardi, G. "Catalytically self-sufficient CYP116B5: Domain switch for improved peroxygenase activity", Biotechnol. J. (2023), e2200622, DOI: 10.1002/biot.202200622
2. Cheropkina, H., Catucci, G., Cesano, F., Marucco, A., Gilardi, G. and Sadeghi, S.J. "Bioelectrochemical platform with human monooxygenases: FMO1 and CYP3A4 tandem reactions with phorate" (2023), Bioelectrochemistry, 150, 108327, DOI: 10.1016/j.bioelechem.2022.108327

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3. Giuriato, D., Correddu, D., Catucci, G., Di Nardo, G., Bolchi, C., Pallavicini, M. and Gilardi, G. "Design of a H<sub>2</sub> O<sub>2</sub>-generating P450SP $\alpha$  fusion protein for high yield fatty acid conversion" (2022), Protein Sci., 12, :e4501, DOI: 10.1002/pro.4501
4. Catucci, G., Turella, S., Cheropkina, H., De Angelis, M., Gilardi, G. and Sadeghi, S.J. "Green production of indigo and indirubin by an engineered Baeyer–Villiger monooxygenase" (2022), Biocatalysis and Agricultural Biotechnology, 44, 102458, DOI: 10.1016/j.bcab.2022.102458
5. Zhang, C., Gilardi, G. and Di Nardo, G., "Depicting the proton relay network in human aromatase: New insights into the role of the alcohol-acid pair" Protein Sci., 31 (9), e4389, DOI:10.1002/pro.4389
6. Famulari, A., Correddu, D., Di Nardo, G., Gilardi, G., Chiesa, M. and García-Rubio, I. "CYP116B5hd, a self-sufficient P450 cytochrome: A dataset of its electronic and geometrical properties" (2022), Data in Brief, 42, 108195, DOI: 10.1016/j.dib.2022.108195
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8. Catucci, G., Ciaramella, A., Di Nardo, G., Zhang, C., Castrignanò, S. and Gilardi, G. "Molecular Lego of human cytochrome P450: the key role of heme domain flexibility for the activity of the chimeric proteins" (2022) J Mol Sci. 23 (7), 3618, DOI:10.3390/ijms23073618.
9. Correddu, D., Aly, S.H., Di Nardo, G., Catucci, G., Prandi, C., Blangetti, M., Bellomo, C., Bonometti, E., Viscardi, G. and Gilardi, G. "Enhanced and specific epoxidation activity of P450 BM3 mutants for the production of high value terpene derivatives" (2022) RSC Adv., 12, 33964-33969, DOI: 10.1039/d2ra06029a

10. Gea, M., Zhang, C., Tota, R., Gilardi, G., Di Nardo, G., and Tiziana Schilirò, "Assessment of Five Pesticides as Endocrine-Disrupting Chemicals: Effects on Estrogen Receptors and Aromatase", *Int. J. Environ. Res. Public Health* (2022), 19, 1959, DOI: 10.3390/ijerph19041959
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12. Ciaramella, A., Di Nardo, G., Zhang, C., Castrignanò, S. and Gilardi, G. "Molecular Lego of Human Cytochrome P450: The Key Role of Heme Domain Flexibility for the Activity of the Chimeric Proteins" *Int. J. Mol. Sci.* (2022), 23, 3618, DOI: 10.3390/ijms23073618

## 2021

13. Bertolini V., Pallavicini, M., Tibhe, G., Roda, G., Arnoldi, S., Monguzzi, L., Zoccola, M., Di Nardo, G., Gilardi, G. and Bolchi, C., "Synthesis of  $\alpha$ -Hydroxy Fatty Acids from Fatty Acids by Intermediate  $\alpha$ -Chlorination with TCCA under Solvent-Free Conditions: A Way to Valorization of Waste Fat Biomasses", *ACS Omega* (2021), 6, 47, 31901–31906. DOI: 10.1021/acsomega.1c04640.
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20. Panicco, P., Castrignanò, C., Sadeghi, S.J., Di Nardo, G. and Gilardi, G. "Engineered human CYP2C9 and its main polymorphic variants for bioelectrochemical measurements of catalytic response", *Bioelectrochemistry* (2021), 138, 107729, DOI: 10.1016/j.bioelechem.2020.107729
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22. Zhang, C., Catucci, G., Di Nardo, G. and Gilardi, G. "Effector role of cytochrome P450 reductase for androstenedione binding to human aromatase", Int. J. Biol. Macromol. (2020), 164, 510-517, DOI: 10.1016/j.ijbiomac.2020.07.163
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33. Catucci, G., Querio, G., Sadeghi, S.J., Gilardi, G., Levi, R. "Enzymatically produced trimethylamine N-Oxide: Conserving it or eliminating it", Catalysts (2019), 9(12), Article number 1028, DOI: 10.3390/catal9121028
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## 2018

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## 2017

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#### BREVETTI:

178. Liganini, A., Gribaudo, G., Di Nardo, G., Gilardi, G. (2018) "Composizioni comprendenti bloccanti dei canali del calcio per l'uso nel trattamento di infezioni virali" PCT / 102018000007669 (31/07/2018)
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183. Gilardi, G. and Cass, A.E.G (2006) "A metal electrode comprising an oxidative drug-metabolising enzyme (DME) immobilised at the surface of an electrode to allow efficient transfer of electrons from the electrode to a catalytic site within the DME", US 10/651,046, US 2007-0128684
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185. Gilardi, G. (2001) "Solubilisation of P450 enzymes by Molecular Lego", WO03014341, EP1414950
186. Gilardi, G. and Cass, A.E.G (2001) "Engineering redox sensors by Molecular Lego", WO03014721, EP1415145
187. Gilardi, G., Cass, A.E.G. and Tsotsou G.E. (2000) "General method for high throughput screening of NAD(P)H-dependent enzyme activity", WO0157236, EP1259636, US2003186347, CA2398789, AU2869401
188. Durrant J.R., Cass, A.E.G. and Gilardi, G. (1998) "Biochemical devices and their methods of manufacture", WO9954718, EP1071945

#### EDITORIALI :

189. Gilardi G. and Sadeghi, S.J. Editorial: Special Issue on "Flavin Monooxygenases" in Catalysts (2021), 11, 69, DOI:10.3390/catal11010069
190. Porta, R., Martini, C., Bolognesi, M., Magnani, M., Cutruzzolà, F., Monti, E., Capitanio, N., Condorelli, D., Della Ragione, F., Federici, L., Gilardi, G., Hrelia, S., Lucacchini, A., Santucci, A., Ammendola, R., Bellotti, V., Bettuzzi, S., Caruso, D., Maccarrone, M., Passi, A., Palmieri, L., Ruoppolo, M., "Basic and applied science at the time of COVID-19" in FEBS Letters (2020), 594 (18), 2933-2934, DOI: <https://doi.org/10.1002/1873-3468.13927>

191. 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
192. Gilardi, G. Editorial to the Special Issue “Cytochrome P450 Biotechnology” in *Biotechnology and Applied Biochemistry* (2013), 60, 1
193. Editor-in-Chief of *Biotechnology and Applied Biochemistry*, Wiley USA, ISSN: 1470-8744
194. 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

#### REVISIONE E TRADUZIONE DI LIBRI:

195. *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
196. *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

#### ORGANIZZAZIONE E PRESIDENZA DI SESSIONI DI CONGRESSI E SCUOLE INTERNAZIONALI:

197. Co-organiser of the Post-graduate School in “Enzyme Discovery and Engineering for Biotechnological Applications”, December 3-5, 2019, Napoli, Italy.
198. Co-organiser of the one-day Conference on “La Nanobiologia: Nuove Tecnologie e Nuova Biologia” Accademia delle Scienze, Torino, October 17, 2019, Torino, Italy
199. Member of the Scientific Advisory Committee of the 14th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held in York, July 15-19, 2018, York, UK
200. 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, Napoli, Italy.
201. Member of the Scientific Advisory Committee of the 13th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held in July 2016 in Vancouver, Canada.
202. 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, The Netherlands
203. Organiser of the International Workshop “Seeing enzymes in action”, International Center for workshops in the Sciences, Lorentz Center, University of Leiden, October 2015, Leiden, The Netherlands
204. Member of the Scientific Advisory Committee of the 12th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held in September 2014 in Kyoto, Japan

205. Organizers of the “Biorefinery” Symposium within the “European Biotech Week” – co-organised with Assobiotec and Federchimica, held Torino in October 2013, Torino, Italy
206. Chairman of the Bioengineering session at the 11th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, held Torino in June 2012, Torino, Italy
207. Chairman to the Organising Committee for the 11th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, to be held Torino in June 2012, Torino, Italy
208. 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, Torino, Italy
209. 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, Torino, Italy
210. 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, Torino, Italy
211. 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, The Netherlands
212. Chairman of the NanoBiotechnology session at the Biochemical Society meeting, Riccione, September 2006, Riccione, Italy.
213. Chairman of the Inter-protein electron transfer session at the European transient electron transfer network, University of Seville, July 2003, Seville, Spain.
214. Chairman of the Luminescence, fluorescence, bioluminescence session del The UK-French BBSRC-CNRS International Workshop in Electrochemical and Fluorescence Sensing within microstructured Biological Sensors, March 2000, Saint-Germain-au-Mont-d’Or, Lyon, France.
215. Chairman of the Intra-protein Electron Transfer session, NATO-ESF Workshop Biological Electron Transfer Chains: Genetics, Composition and Mode of Operation May 1997, Tomar, Portugal.
216. Chairman of the Protein Design session, 6th International Conference Perspectives on Protein Engineering: Challenges for Structural Biology, June 1997, Norwich, UK.
217. Organiser of the first International Workshop Type-1 copper site proteins, University of Leiden, July 1992, Leiden, The Netherlands.

**LETTURE KEY-NOTE, PLENARIE SU INVITO:**

218. Directed evolution of monooxygenases for biotechnology – delivered by the Post-graduate School in Enzyme Discovery and Engineering for Biotechnological Applications, December 3-5, 2019, Napoli, Italy

219. Molecular Lego: Clicking together protein domains to assemble nano-tools – delivered at the one-day Conference “La Nanobiologia: Nuove Tecnologie e Nuova Biologia” Accademia delle Scienze, Torino, October 17, 2019, Torino, Italy
220. Engineering catalytically self-sufficient human P450 3A4 and P450 19A1 (aromatase) active on electrode surfaces – delivered at the International Conference on Cytochrome P450 (ICCP450), The University of Queensland, Brisbane, Australia  
23 – 27 June 23-27, 2019, Brisbane, Australia
221. Exploitation of Engineered Monooxygenases for Biocatalysis *in vitro* and *in vivo* – delivered at the International Conference on Applied Catalysis & Chemical Engineering  
April 8-10, 2019 - Dubai, UAE
222. Catalytically self-sufficient CYP116B5 from *A. radioresistens*: peroxide-driven catalysis and biotechnological applications – delivered at the International Congress on Cytochrome P450 Biodiversity & Biotechnology 2018, held in York, July 15-19, 2018, York, UK
223. 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, Italy
224. La natura delle biomolecole – delivered at the Corso di formazione e aggiornamento per docenti di scuole secondarie di secondo grado “Biologia e ricadute applicative - Accademia delle Scienze, Torino, January 17, 2018, Torino, Italy
225. Cytochrome P450 electrodes for drug metabolism screening – delivered at the SciX Conference 2017 held in October 2017 in Reno, Nevada, USA
226. 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, Germany
227. 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, Italy
228. 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, Napoli, Italy
229. Control of conformation and oligomerization states as a mechanism of regulation in human aromatase - delivered at the European Biotech Week 2016 “Biochemistry of Protein-Protein and Protein-Lipid Interactions: Applications to Biotechnology”, held in September 2016, Teramo, Italy
230. 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, Roma, Italy
231. 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, France

232. A wedding made in heaven: Engineered monooxygenases 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, Italy
233. 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, Japan
234. Bioethanol production by glucose fermentation from microalgae – delivered at the Workshop “Bioalma”, March 2014, Catania, Italy
235. 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
236. 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
237. 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, Leiden, The Netherlands
238. Bioelectrochemistry of P450 enzymes - delivered at the 10th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, Woods Hole, USA
239. Electrochemical biosensors for proteomics - delivered at the First summer school in nanobiotechnology, July 2009, Villa Gualino, Torino, Italy
240. 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, Italy
241. 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
242. Tailoring human Cytochromes P450 for biosensing: from fundamentals to gadgets - delivered at the PhD School of the University of Naples, December 2008, Napoli, Italy
243. 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
244. Construction of a liver chip by modular redox assemblies – delivered at the EU conference Metalloenzymes and Chemical Biomimetics, May 2005, Roma, Italy
245. Engineering Human Cytochrome P450s for Nanobiotechnology - delivered at the International RSC Conference BioNano 3 – September 2005 – Univ. of Sussex, Brighton, UK



246. 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 - Roma – Italy
247. Molecular Lego of Redox Proteins for Nanotechnology - delivered at the European Heterogeneous Electron Transfer Network, University of Leiden, September 2004, Leiden, The Netherlands
248. Human P450s in drug discovery - delivered at the International School "From Structural Genomics to Drug Discovery", September 2004, University of Parma, Parma, Italy
249. Heterogeneous Electron Transfer of Engineered Redox Proteins - delivered at the European COST-Chemistry D-41, September 2004, University of Modena, Italy
250. Engineering cytochrome P450s for nanobiotechnology - delivered at the Inorganic Biochemistry – Royal Society of Chemistry – Metallo-enzyme Structure and Function – January 2004, London, UK
251. Protein Engineering for Nanobiotechnology - delivered at the EuroNanoForum, December 2003, Trieste, Italy
252. Intra- and inter-electron transfer in engineered cytochrome P450s - delivered at the European Transient Electron Transfer Network, University of Seville, July 2003, Seville, Spain
253. Applications of P450 enzymes to nanobiotechnology - delivered at EUROBIC 2002, July 2002, Lund, Sweden.
254. Manipulating redox proteins and enzymes: Applications to nanotechnology - delivered at the Bioelectrochemistry – Life Science Symposium, September 2002, Lund University, Sweden.
255. Construction of novel redox proteins by modular building blocks - delivered at Leiden University, January 2001, Leiden, The Netherlands.
256. Molecular lego: engineering artificial redox chains for biosensing - delivered at The 6th World Congress on Biosensors. Biosensors 2000, May 2000, San Diego, USA.
257. Engineering P450 for nanobiotechnology - delivered at the International Symposium on Advances in Bioinorganic Chemistry, November 2000, Mumbai, India.
258. Designing P450 enzymes to build macromolecular assemblies for nanobiotechnology - delivered at The 11th World Congress on Biotechnology: Biotechnology 2000, September 2000, Berlin, Germany
259. 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.
260. Engineering redox proteins for nanobiotechnology - delivered at The Institute of Physics Annual Congress, March 2000, Brighton, United Kingdom.
261. Design of molecular assemblies of p450 enzymes for nanobiotechnology - delivered at the Bioanalytical Sensors, Biochip and Nanobiotechnologies International Workshop, December 2000, Autrans, France

262. 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.
263. 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.
264. Rational design of multi-domain redox proteins: The molecular lego approach - delivered at the 9th European Congress on Biotechnology, July 1999, Brussels, Belgium.
265. Design of novel multi-domain redox proteins - delivered at the annual meeting on Redox Proteins and Enzymes of the University of Edinburgh, June 1999, Fribush, United Kingdom.
266. Construction of novel redox proteins by modular building blocks - delivered at the international conference Protein Engineering and Electron Transfer, November 1998, London, United Kingdom.
267. 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.
268. Rational design versus directed evolution of proteins - delivered at the Post-graduate School in Protein structure, May 1998, University of L'Aquila, L'Aquila, Italy.
269. Engineering an artificial flavocytochrome - delivered at 6th International Conference Perspectives on Protein Engineering: Challenges for Structural Biology, June 1997, Norwich, United Kingdom.
270. Construction of novel redox proteins by modular building blocks - delivered at the Structural biology industrial platform. John Innes Centre, June 1997, Norwich, United Kingdom.
271. Engineering proteins for biosensing - delivered at the PhD School of the University of Alessandria, November 1997, Alessandria, Italy.
272. Intramolecular electron transfer in single-site mutated azurin - delivered at the Italian Biochem. Society (SIB) Annual Meeting, 1995, Torino, Italy.
273. Backbone dynamics of azurin from Pseudomonas aeruginosa studied by 15-N NMR relaxation times - delivered at the Italian Biochem. Society (SIB) Annual Meeting, 1995, Torino, Italy.
274. Engineering binding proteins for optical sensing - delivered at the 3rd International Conference Perspectives in Protein Engineering, 1994, Oxford, United Kingdom
275. Reagentless fluorescence sensors produced by protein engineering - delivered at 3rd World Congress on Biosensors. Biosensors 1994, New Orleans, USA.
276. Lignin peroxidase and lignin biodegradation - delivered at Proteins94, 1994, Verona, Italy.
277. 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.

278. 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.

279. NMR approaches to lignin biodegradation - delivered at the International Congress in Biomass Biodegradation, Alexandria, Egypt, 1988

Torino, 03/04/2023

Giuseppe Gilardi