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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

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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

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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

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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.

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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

2022

3. Giuriato, D., Correddu, D., Catucci, G., Di Nardo, G., Bolchi, C., Pallavicini, M. and Gilardi, G. "Design of a H2 O2 -generating P450SPα 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

7. 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), J. Inorg. Biochem., 231, 111785, DOI: 10.1016/j.jinorgbio.2022.111785.

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

11. Vignali, E., Pollegioni, L., Di Nardo, G., Valetti, F., Gazzola, S., Gilardi, G. and Rosini, E. "Multi-enzymatic cascade reactions for the synthesis of cis,cis-muconic acid", Adv. Synth.Catal. (2022), 364, 114-123, DOI: 10.1002/adsc.202100849 Catucci, G.,

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 α-Hydroxy Fatty Acids from Fatty Acids by Intermediate α-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.

14. Cheropkina, H., Catucci, G., Marucco, A., Fenoglio, I., Gilardi, G., and Sadeghi, S.J "Human flavin-containing monooxygenase 1 and its long-sought hydroperoxyflavin intermediate", Biochem. Pharm. (2021), 193, 114763 DOI: 10.1016/j.bcp.2021.114763

15. Arizzi, M., Morra, S., Gilardi, G., Pugliese, M., Gullino, M. L., and Valetti, F. "Improving sustainable hydrogen production from green waste: [FeFe]-hydrogenases quantitative gene expression RT-qPCR analysis in presence of autochthonous consortia", Biotechnology for Biofuels (2021), 14:182, DOI: 10.1186/s13068-021-02028-3

16. Winkler, M., Duan, J., Rutz, A., Felbek, C., Scholtysek, L., Lampret, O., Jaenecke, J., Apfel, U.P., Gilardi, G., Valetti, F., Fourmond, V., Hofmann, E., Léger, C. and Thomas Happe, T. "A safety cap protects hydrogenase from oxygen attack", Nature Communications (2021), 12:756, 1-10, DOI: 10.1038/s41467-020-20861-2

17. Correddu, D., Di Nardo, G. and Gilardi, G. "Self-Sufficient Class VII Cytochromes P450: From Full-Length Structure to Synthetic Biology Applications", Trends in Biotechnology (2021), 2049, 1-24, DOI: 10.1016/j.tibtech.2021.01.0111

18. Di Nardo, G., Zhang, C., Marcelli, A.G. and Gilardi, G. "Molecular and Structural Evolution of Cytochrome P450 Aromatase", Int. J. Mol. Sci. (2021), 22, 631, DOI: 10.3390/ijms22020631

19. Di Nardo, G., Di Venere, A., Zhang, C., Nicolai, E., Castrignanò, S., Di Paola, L., Gilardi, G. and Mei, G. "Polymorphism on human aromatase affects protein dynamics and substrate binding: spectroscopic evidence", Biology Direct (2021), 16:8, 1-12, DOI: 10.1186/s13062-021-00292-9

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", Biolectrochemistry (2021), 138, 107729, DOI: 10.1016/j.bioelechem.2020.107729

21. Bortolussi, S., Catucci, G., Gilardi, G. and Sadeghi, S.J. "N-and S-oxygenation activity of truncated human flavin-containing monooxygenase 3 and its common polymorphic variants" Archives of Biochemistry and Biophysics (2021), 697:1086633, DOI: 10.1016/j.abb.2020.108663

2020

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

23. Sadeghi, S.J., S.J., Di Nardo, G., and Gilardi, G. "Chimeric Cytochrome P450 3A4 used for in vitro prediction of food-drug interactions", Biotechnol. Appl. Biochem., (2020), 67 (4), 541-548, DOI: 10.1002/bab.1993

24. Catucci, G., Valetti, F., Sadeghi, S.J. and Gilardi, G. "Biochemical features of Dye-decolorizing peroxidases: current impact on lignin degradation" Biotechnol. Appl. Biochem., (2020), 67(5), 751-759, DOI: 10.1002/bab.2015

25. Zhang, C., Schilirò, T., Gea, M., Bianchi, S., Spinello, A., Magistrato, A., Gilardi, G. and Di Nardo, G. "Molecular Basis for Endocrine Disruption by Pesticides Targeting Aromatase and Estrogen Receptor", Int. J. Environ. Res. Public Health, (2020), 17, 5664, DOI:10.3390/ijerph17165664

26. Catucci, G., Aramini, D., Sadeghi, S.J. and Gilardi, G. "Ligand stabilization and effect on unfolding by polymorphism in human flavincontaining monooxygenase 3" Int. J. Biol. Macromol. (2020), 162, 1484-1493, DOI: 10.1016/j.ijbiomac.2020.08.032

27. Di Nardo, G. and Gilardi, G. "Natural Compounds as Pharmaceuticals: The Key Role of Cytochromes P450 Reactivity" Trends in Biochemical Sciences (2020) 45 (6) 511-525, DOI: 10.1016/j.tibs.2020.03.004

28. Catucci, G., Gilardi, G. and Sadeghi, S.J. "Production of drug metabolites by human FMO3 in Escherichia coli" Microbial Cell Factories (2020) 19:74, DOI:10.1186/s12934-020-01332-1

29. Parween, S., Di Nardo, G., Baj, F., Zhang, C., Gilardi, G., Pandey, A.V. "Differential effects of variations in human P450 oxidoreductase on the aromatase activity of CYP19A1 polymorphisms R264C and R264H" Journal of Steroid Biochemistry and Molecular Biology (2020) 96,105507, DOI: 10.1016/j.jsbmb.2019.105507

30. Somale, D., Di Nardo, G., Di Blasio, L., Puliafito, A., Vara-Messler, M., Chiaverina, G., Palmiero, M., Monica, V., Gilardi, G., Primo, L. and Gagliardi, P.A. "Activation of RSK by phosphomimetic substitution in the activation loop is prevented by structural constraints", Scientific Reports (2020), 10 (1), Article number 591, DOI: 10.1038/s41598-019-56937-3

31. Ciaramella, A., Catucci, G., Di Nardo, G., Sadeghi, S.J. and Gilardi, G. "Peroxide-driven catalysis of the heme domain of A. radioresistens cytochrome P450 116B5 for sustainable aromatic rings oxidation and drug metabolites production", New Biotech (2020), 54, 71-79, DOI: 10.1016/j.nbt.2019.08.005

32. Minerdi, D., Sadeghi, S.J. Pautasso, L., Morra, S., Aigotti, R., Medana, C., Gilardi, G. Gullino, M.L. and Gilardi, G. "Expression and role of CYP505A1 in pathogenicity of Fusarium oxysporum f. sp. Lactucae", Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics, (2020), 1868 (1), Article number 140268, DOI: 10.1016/j.bbapap.2019.140268

2019

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

34. Catucci, G., Gao, C., Rampolla, G., Gilardi, G., and Sadeghi, S.J. "Uncoupled human flavin-containing monooxygenase 3 releases superoxide radical in addition to hydrogen peroxide", Free Radical Biology and Medicine, (2019) 145, 250-255, DOI: 10.1016/j.freeradbiomed.2019.09.038

35. Ciaramella, A., Catucci, G., Gilardi, G. and Di Nardo, G. "Crystal structure of bacterial CYP116B5 heme domain: New insights on class VII P450s structural flexibility and peroxygenase activity", Int. J. Biol. Macromol. (2019), 140, 577-587, DOI: 10.1016/j.ijbiomac.2019.08.141

36. Catucci, G., Sadeghi, S.J. and Gilardi, G. "Direct time-based ITC approach for substrate turnover measurement demonstrated on human FMO3", ChemComm, (2019), 55, 6217-6220, DOI: 10.1039/C9CC01356C

2018

37. 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, PNAS, (2018), 115 (52), E12370-E12377, DOI: 10.1073/pnas.1813183115

38. 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", J. Inorg. Biochem., (2018), 188, 9-17, DOI: 10.1016/j.jinorgbio.2018.08.003

39. 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 number 1826, DOI: 10.3389/fmicb.2018.01826

40. 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" Basic & Clinical Pharmacology & Toxicology, (2018), 123(6), 687-691, DOI: 10.1111/bcpt.13089

41. 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", Int. J. of Biol. Macromol. (2018), 118 (A), 460-468, DOI: 10.1016/j.ijbiomac.2018.06.104

42. 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" Biotechnol. Appl. Biochem., (2018), 65 (1), 46-53, DOI: 10.1002/bab.1613

43. Baravalle, R., Ciaramella, A., Baj, F., Di Nardo, G. and Gilardi, G. "Identification of endocrine disrupting chemicals acting on human aromatase", Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics, (2018) 1866 (1), 88-96, DOI: 10.1016/j.bbapap.2017.05.013

44. 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" BBA - Proteins and Proteomics (2018), 1866(1), 116-125, DOI: 10.1016/j.bbapap.2017.07.009

2017

45. Gao, C., Catucci, G., Castrignanò, S., Gilardi, G. and Sadeghi, S.J. "Inactivation mechanism of N61S mutant of human FMO3 towards trimethylamine" Scientific Reports (2017), 7: 14668, DOI: 10.1038/s41598-017-15224-9

46. Ciaramella, A., Minerdi, D. and Gilardi, G. "Catalytically self-sufficient cytochromes P450 for green production of fine chemicals" Rendiconti Lincei (2017) 28 (1), 169-181, DOI: 10.1007/s12210-016-0581-z

47. 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" Analytical Biochemistry, (2017) 522, 46-52, DOI: 10.1016/j.ab.2017.01.024

48. Catucci, G., Gao, C., Sadeghi, S.J. and Gilardi, G. "Chemical applications of Class B flavoprotein monooxygenases" Rendiconti Lincei (2017) 28 (1), 195-206, DOI: 10.1007/s12210-016-0583-x

49. Morra, S., Valetti, F. and Gilardi, G. "[FeFe]-hydrogenases as biocatalysts in bio-hydrogen production" Rendiconti Lincei (2017) 28 (1), 183-194, DOI: 10.1007/s12210-016-0584-9

50. 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

51. Baravalle, R., Di Nardo, G., Bandino, A., Barone, I., Catalano, S., Andò, S., Gilardi, G. "Impact of R264C and R264H polymorphisms in human aromatase function", Journal of Steroid Biochemistry & Molecular Biology, (2017), 167, 23-32, DOI: 10.1016/j.jsbmb.2016.09.022

52. 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" Electrochimica Acta, (2017) 228, 611-618, DOI: 10.1016/j.electacta.2017.01.131

53. 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", Journal of Steroid Biochemistry & Molecular Biology, (2017), 165, 438-447, DOI: 10.1016/j.jsbmb.2016.09.003

54. 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

2016

55. Gao, C., Catucci, G., Di Nardo, G, Gilardi, G. and Sadeghi, S.J. "Human flavin-containing monooxygenase 3: Structural mapping of gene polymorphisms and insights into molecular basis of drug binding", Gene, (2016), 593 (1), 15, 91–99, DOI: 10.1016/j.gene.2016.08.020

56. Di Nardo, G., Sadeghi, S.J. and Gilardi, G. "Utilizzo di monossigenasi per la biocatalisi industriale", La Chimica e L'Industria, (2016), 5-6, 12–15, DOI: http://dx.medra.org/10.17374/CI.2016.98.5.12

57. Morra, S., Arizzi, M., Valetti, F. and Gilardi, G. "Oxygen stability in the new [FeFe]-hydrogenase from Clostridium beijerinckii SM10 (CbA5H)", Biochemistry, (2016) DOI: 10.1021/acs.biochem.6b00780

58. Arizzi, M., Morra, S., Pugliese, M., Gullino, M.L., Gilardi, G. and Valetti, F., "Biohydrogen and biomethane production sustained by untreated matrices and alternative application of compost waste", Waste Management, (2016), 56, 151-157, DOI: 10.1016/j.wasman.2016.06.039

59. Catucci, G., Romagnolo, A., Spina, F., Varese, G.C., Gilardi, G. and Di Nardo , G., "Enzyme-substrate matching in biocatalysis: in silico studies to predict substrate preference of ten putative ene-reductases from Mucor circinelloides MUT44", Journal of Molecular Catalysis B: Enzymatic (2016), 131,94-100, doi:10.1016/j.molcatb.2016.06.008

60. Catucci, G., Zgrablic, I., Lanciani, F., Valetti, F., Minerdi, D., Ballou, D., Gilardi, G. and Sadeghi, S.J. "Characterization of a new Baeyer-Villiger monooxygenase and conversion to a solely N-or S-oxidizing enzyme by a single R292 mutation", BBA - Proteins and Proteomics (2016), 1864 (9), 1177-1187, DOI: 10.1016/j.bbapap.2016.06.010

61. Di Nardo, G., Dell'Angelo, V., Catucci, G., Sadeghi, S.J. and Gilardi, G. "Subtle structural changes in the Asp251Gly/Gln307His P450 BM3 mutant responsible for new activity toward diclofenac, tolbutamide and ibuprofen" Archives Biochem and Biophys (2016), 602, 106-15. doi: 10.1016/j.abb.2015.12.005

62. Polliotto, V., Morra, S. Livraghi, S., Valetti, F., Gilardi, G. and Giamello,E., "Electron transfer and H2 evolution in hybrid systems based on [FeFe]-hydrogenase anchored on modified TiO2", International Journal of hydrogen energy, (2016), 41, 10547-10556, DOI:10.1016/j.ijhydene.2016.05.002

63. Morra, S., Mongili, B., Maurelli, S., Gilardi, G. and Valetti, F., "Isolation and Characterization of a New [FeFe]-Hydrogenase from Clostridium perfringens", Biotechnol. Appl. Biochem., (2016), 63, 305-311. DOI: 10.1002/bab.1382

64. Castrignanò, S, Valetti, F., Gilardi, G. and Sadeghi, S.J. "Graphene oxide–mediated electrochemistry of glucose oxidase on glassy carbon electrodes", Biotechnol. Appl. Biochem. (2016), 63 (2), 157-162, DOI: 10.1002/bab.1392.

65. Heath, G.R., Li, M., Polignano, I.L., Richens, J.L., Catucci, G., O'Shea, P.,Sadeghi, S.J., Gilardi, G., Butt, J.N. and Jeuken, L.J.C. "Layer-by-Layer Assembly of Supported Lipid Bilayer Poly-L-Lysine Multilayers", Biomacromolecules (2016), 17 (1), 324-335, DOI: 10.1021/acs.biomac.5b01434

66. Minerdi, D., Zgrablic, I., Castrignanò, S., Catucci, G., Medana, C., Terlizzi, M.E., Gribaudo, G., Gilardi, G. and Sadeghi, S.J. "Escherichia coli overexpressing a Baeyer-Villiger monoxygenase from

Acinetobacter radioresistens become resistant to Imipenem" Antimicrobial Agents and Chemotherapy (2016), 60, 64-74, DOI: 10.1128/AAC.01088-15

67. 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" BBA – Bioenergetics (2016) 1857, 98–106, DOI: 10.1016/j.bbabio.2015.10.005.

2015

68. 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.

69. 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" Bioelectrochem. (2015) 106, 258–262, DOI:10.1016/j.bioelechem.2015.08.001.

70. Rua, F., Sadeghi, S.J., Silvia Castrignanò, S., Valetti, F. and Gilardi, G. "Electrochemistry of Canis familiaris cytochrome P450 2D15 with gold nanoparticles: An alternative to animal testing in drug discovery" Bioelectrochem. (2015) 105, 110-116 , DOI:10.1016/j.bioelechem.2015.03.012

71. Castrignanò, S, Gilardi, G. and Sadeghi, S.J. "Human flavin-containing monooxygenase 3 on graphene oxide for drug metabolism screening" Anal. Chem. (2015) 87 (5), 2974–2980, DOI: 10.1021/ac504535y

72. 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", Electrochem. Comm. (2015), 52, 25-28, DOI: 10.1016/j.elecom.2015.01.007

73. 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

74. 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

2014

75. 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", Anal. Chem., (2014), 86 (5), 2760–2766

76. 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", Int. J. of Hydrogen Energy (2014), 9018-27

2013

77. 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

78. Xia, J., Giovannozzi, A.M., Sadeghi, S.J., Gilardi, G. and Rossi, A.M. "Laser-written nanoporous silicon diffraction gratings for biosensors", Applied Optics (2013) 52 (35) DOI: dx.doi.org/10.1364/AO.99.099999

79. Lo, J., Di Nardo, G., Griswold, J., Egbuta , C., Jiang, W., Gilardi, G. and Ghosh, D., "Structural basis for the functional roles of critical residues in human cytochrome P450 aromatase", Biochemistry (2013), 52 (34), 5821–5829

80. Valetti, F. and Gilardi, G. "Improvement of biocatalysts for industrial and environmental purposes by saturation mutagenesis", Biomolecules (2013), 3, 778-811

81. Di Nardo, G. and Gilardi, G. "Human aromatase: perspectives in biochemistry and biotechnology", Biotechnol. Appl. Biochem. (2013), 60, 92-101.

82. Catucci, G., Occhipinti, A., Maffei, M., Gilardi, G. and Sadeghi, S.J. "Effect of Human Flavin-Containing Monooxygenase 3 Polymorphism on the Metabolism of Aurora Kinase Inhibitors", Int. J. Mol. Sci. (2013), 14, 2707-2716.

83. Sadeghi, S.J. and Gilardi, G. "Chimeric P450 Enzymes: activity of artificial redox fusions driven by different reductases for biotechnological applications", Biotechnol. Appl. Biochem. (2013), 60, 102-110.

84. Sideri, A., Goyal, A., Di Nardo, G., Tsotsou, G.E. and Gilardi, G. "Hydroxylation of non-substituted polycyclic aromatic hydrocarbons by cytochrome P450 BM3 engineered by directed evolution", Journal of Inorganic Biochemistry, (2013), 120, 1-7.

85. Tsotsou, G.E., Di Nardo, G., Sheila J. Sadeghi, S.J., Fruttero, R., Lazzarato, L. , Bertinaria, M. and Gilardi G. "A rapid screening for cytochromes P450 catalysis on new chemical entities: cytochrome P450 BM3 and 1,2,5-oxadiazole derivatives", J. of Biomolecular Screening (2013), 18 (2), 211-218.

2012

86. Di Nardo, G. and Gilardi, G. "Optimization of the bacterial cytochrome P450 BM3 system for the production of human drug metabolites ", Int. J. Mol. Sci. (2012), 13, 15901-15924.

87. Rua, F., Di Nardo, G., Sadeghi, S.J. and Gilardi, G. "Towards reduction in animal sacrifice for drugs: Molecular modelling of Macaca fascicularis P450 2C20 for virtual screening of Homo sapiens P450 2C8 substrates",Biotechnol. Appl. Biochem. (2012), 59 (6), 479–489

88. Morra, S., Giraudo, A., Di Nardo, G., King, P.W., Gilardi, G. and Valetti, F. "Site Saturation Mutagenesis Demonstrates a Central Role for Cysteine 298 as Proton Donor to the Catalytic Site in CaHydA [FeFe]-Hydrogenase", PlosOne (2012), 7 (10), e48400.

89. Castrignanò, S., Sadeghi, S.J. and Gilardi, G. "Entrapment of human flavin-containing monooxygenase 3 in the presence of gold nanoparticles: TEM, FTIR and electrocatalysis", BBA - General Subjects (2012), 1820(12), 2072-2078.

90. Minerdi, D., Zgrablic, I., Sadeghi, S.J. and Gilardi G. "Identification of a novel Baeyer-Villiger monooxygenase from *Acinetobacter radioresistens*: close relationship to the Mycobacterium tuberculosis prodrug activator EtaA", Microb Biotechnol (2012), 5(6), 700-716

91. Rua, F., Sadeghi, S.J., Castrignanò, S., Di Nardo, G. and Gilardi, G. "Engineering Macaca fascicularis cytochrome P450 2C20 to reduce animal testing for new drugs", Journal of Inorganic Biochemistry (2012), 117, 277-284

92. Sadeghi, S.J., Ferrero, S., Di Nardo, G. and Gilardi G. "Drug-drug interactions and cooperative effects detected in electrochemically driven human cytochrome P450 3A4", Bioelectrochemistry (2012), 86, 87-91.

93. Tsotsou,G.E., Sideri A., Goyal, A., Di Nardo, G. and Gilardi, G. "Identification of Mutant Asp251Gly/Gln307His of Cytochrome P450 BM3 for the Generation of Metabolites of Diclofenac, Ibuprofen And Tolbutamide", Chem. Eur. J. (2012), 18, 3582 – 3588

94. Catucci, G., Gilardi, G., Jeuken, L. and Sheila J. Sadeghi, S.J. "In vitro drug metabolism by C-terminally truncated human flavin-containing monooxygenase 3", Biochem. Phamacol., (2012), 83, 551–558

95. Valetti, F., Fantuzzi, A., Sadeghi, S.J. and Gilardi, G. "Iron-based redox centres of reductase and oxygenase components of phenol hydroxylase from A.radioresistens: a redox chain working at highly positive redox potentials", Metallomics (2012), 4, 72 - 77

96. Ferrero, V.E.V., Di Nardo, G., Catucci, C., Sadeghi, S.J. and Gilardi G. "Fluorescence detection of ligand binding to labeled cytochrome P450 BM3", Dalton Transactions, (2012), 41, 2018-2025

2011

97. Morra, S., Valetti, F., Sadeghi, S.J., King, P.W., Meyer, T. and Gilardi, G. "Direct electrochemistry of an [FeFe]-hydrogenase on TiO_2 electrode", Chem Comm. (2011), 47, 10566-10568

98. Giovannozzi, A.M., Ferrero, V.E.V., Pennecchi, F., Sadeghi, S.J., Gilardi, G. and Rossi, A.M. "P450-based porous silicon biosensor for arachidonic acid detection". Biosensors and Bioelectronics (2011), 28, 320-325

99. Maurelli, S., Chiesa, M., Giamello, E., Di Nardo, G., Ferrero, V.E., Gilardi, G. van Doorslaer, S. "Direct Spectroscopic Evidence for Binding of Anastrozole to the Iron Heme of Human Aromatase. Peering into the Mechanism of Aromatase Inhibition". Chem Comm. (2011), 47, 10737–10739

100. Fantuzzi, A., Mak L.H., Capria E., Dodhia, V.R., Panicco, P., Collins. S. and Gilardi, G. "A new standardised electrochemical array for drug metabolic profiling with human cytochromes P450". Anal. Chem. (2011), 83, 3831–3839

101. Panicco, P., Dodhia, V.R., Fantuzzi, A. and Gilardi, G. "Enzyme-based amperometric platform to determine the polymorphic response in drug metabolism by cytochromes P450". Anal. Chem. (2011), 83, 2179-2186

102. Sadeghi, S.J., Fantuzzi, A. and Gilardi, G. "Breakthrough in P450 bioelectrochemistry and future perspectives", (2011), BBA - Proteins and Proteomics, 1814, 237-248

103. Degregorio, D., Sadeghi, S.J., Di Nardo, G., Gilardi, G. and Solinas, S.P. "Understanding uncoupling in the multi-redox centre P450 3A4-BMR model system", J Biol Inorg Chem. (2011), 16, 109-116

2010

104. Fantuzzi A., Capria E., Mak L.H., Dodhia V.R., Sadeghi S.J., Collins S., Somers G., Huq E., Gilardi G. "An electrochemical microfluidic platform for human P450 drug metabolism profiling" Anal. Chem., (2010) 82, 10222-10227

105. Castrignanò, S., Sadeghi, S.J. and Gilardi, G. "Electro-catalysis by immobilised human flavin-containing monooxygenase isoform 3 (hFMO3), Anal Bioanal Chem, (2010), 398 (3), 1403-1409

106. Mak, L.H., Sadeghi, S.J., Fantuzzi, A. and Gilardi, G. "Control of Human Cytochrome P450 2E1 Electrocatalytic Response as a Result of Unique Orientation on Gold Electrodes", Anal.Chem. (2010), 82 (12), 5357-5362

107. Sadeghi SJ, Meirinhos R, Catucci G, Dodhia VR, Di Nardo G and Gilardi G. "Direct electrochemistry of drug metabolizing human flavin-containing monooxygenase: electrochemical turnover of benzydamine and tamoxifen", J Am Chem Soc. (2010), 132(2), 458-9.

2009

108. Di Nardo, G., Roggero, C., Campolongo, S., Valetti, F., Trotta, F. and Gilardi, G. "Catalytic properties of catechol 1,2-dioxygenase from *Acinetobacter radioresistens* S13 immobilized on nanosponges", Dalton Transactions, (2009), 33, 6507 - 6512

109. Fantuzzi, A., Meharenna, Y.T., Briscoe, P.B., Guelesquin, F., Sadeghi, S.J. and Gilardl "Characterisation of the electron transfer and complex formation between Flavodoxin from *D. vulgaris* and the heam domain of Cytochrome P450 BM3 from *B. megaterium*", BBA – Bioenergetics (2009), 1787 (4), 234-241

110. Di Nardo, G., Di Venere, A., Mei, G., Sadeghi, S.J., Wilson, J.R., and Gilardi, G. "Engineering heme binding sites in monomeric rop", J Biol Inorg Chem (2009), 14 (4), 497-505

111. Fantuzzi, A., Artali, R., Bombieri. G., Marchini, M., Meneghetti, F., Gilardi, G., Sadeghi, S. J., Cavazzini, D., G.L. Rossi, "Redox properties and crystal structures of a D. vulgaris flavodoxin mutant in the monomeric and homodimeric forms" BBA - Proteins and Proteomics (2009) 1794 (3), 496-505

2008

112. Ferrero, V.E., Andolfi, L., Di Nardo, G., Sadeghi, S.J., Fantuzzi, A., Cannistraro, S. and Gilardi, G "Protein and electrode engineering for the covalent immobilization of P450 BMP on gold", Anal. Chem., (2008), 80, 8438-8446.

113. Panicco, P., Astuti, Y., Fantuzzi, A., Durrant, J.R., and Gilardi, G. "P450 versus P420: correlation between cyclic voltammetry and visible absorption spectroscopy of the immobilized heme domain of the cytochrome P450 BM3", J. Phys. Chem. B (2008), 112, 14063-14068.

114. Dodhia, V.R., Sassone, C., Fantuzzi, A., Di Nardo, G., Sadeghi, S.J. and Gilardi, G. "Modulating the coupling efficiency of human cytochrome P450 CYP3A4 at electrode surfaces through protein engineering" Electrochem.Commun. (2008), 10, 1744-1747

2007

115. Di Nardo, G., Fantuzzi, A., Sideri, A., Panicco, P., Sassone, C., Giunta, C. and Gilardi, G. "Wild type CYP102A1 as biocatalyst: turnover of drugs usually metabolised by human liver enzymes" J Biol Inorg Chem (2007), 12, 313-323.

2006

116. Dodhia, V.R., Fantuzzi, A. and Gilardi, G. "Engineering human cytochrome P450 enzymes into catalytically self-sufficient chimeras using molecular Lego" J Biol Inorg Chem (2006), 11(7), 903-916

117. Fantuzzi, A., Meharenna, Y.T., Briscoe, P.B., Sassone, C., Borgia, B. and Gilardi G. "Improving catalytic properties of P450 BM3 haem domain electrodes by molecular Lego" Chem Comm. (2006) 12, 1289-1291

118. Collins, S., Gilardi, G. and R. Garraway "High-Throughput Toxicology: An electrochemical P450 array technology means that P450 interactions can be determined with confidence in a matter of minutes – enabling ADME/Tox properties to be identified earlier in the drug development process" Drug Discovery & Development (2006), 24, 24-28.

119. Di Nardo, G. and Gilardi G. "Building Biocatalysts with Molecular Lego: Application to P450 Toxicity Screening" Biocatalysis Supplement – Chemistry Today (2006) 24 (5) 31-33

2005

120. Fairhead, M., Giannini, S., Gillam, E.M.J. and Gilardi, G. "Functional characterisation of an engineered multidomain human P450 2E1 by molecular Lego" J Biol Inorg Chem (2005), 10, 842–853

2004

121. Valetti, F. and Gilardi, G. "Directed Evolution of enzymes for product chemistry" Natural Product Reports (2004), 21 (4), 490 - 511 ,

122. Fantuzzi, A., Fairhead, M. and Gilardi, G., "Direct electrochemistry of immobilised human cytochrome P450 2E1", J. Am. Chem. Soc. (2004), 126 (16), 5040 – 5041

123. Astuti Y., Topoglidis E., Briscoe P., Fantuzzi A., Gilardi G., Durrant J.R "Proton Coupled Electron Transfer of Flavodoxin Immobilised on Nanostructured Tin Dioxide Electrodes: Thermodynamics versus Kinetics Control of Protein Redox Function" J. Am. Chem. Soc. (2004), 126 (25); 8001-8009.

124. Astuti Y., Topoglidis E., Gilardi G., Durrant J.R. "Cyclic voltammetry and voltabsorptometry studies of redox proteins immobilised on nanocrystalline tin dioxide electrodes" Bioelectrochemistry (2004). 63 (1-2): 55-59.

2003

125. Divari, S., Valetti, F., Caposio, P., Pessione, E., Cavaletto, M., Griva, E., Gribaudo, G., Gilardi, G. and Giunta, C., "The oxygenase component of phenol hydroxylase from Acinetobacter radioresistens S13", Eur. J. Biochem. (2003) 270, 2244-2253.

126. Wilson, J.R., D.J. Caruana and Gilardi, G., "Engineering redox functions in a nucleic acid binding protein" Chem. Commun., (2003), 356-357.

2002

127. Artali, R., Bombieri, G., Meneghetti, F., Gilardi, G., Sadeghi, S.J., Cavazzini, D. and Rossi, G.L. "Comparison of the refined structures of wild type (1.34 Å) flavodoxin from *D. vulgaris* and the S35C mutant (1.44Å) at 100 K" Acta Cryst. D58 (2002), 1787-1792.

128. Fantuzzi, A., Sadeghi, S.J., Valetti, F., Rossi, G.L. and Gilardi, G., "Tuning the reduction potential of engineered cytochrome c-553" Biochemistry 41 (27), (2002), 8718-8724

129. Gilardi, G., Meharenna, Y.T., Tsotsou, G.E., Sadeghi, S.J., Fairhead, M., Giannini, S. "Molecular Lego: Design of molecular assemblies of P450 enzymes for nanobiotechnology" Biosensors and Bioelectronics, 17(1-2), (2002), 119-131.

130. Tsotsou, G.E., Cass, A.E.G. and Gilardi, G. "High-throughput assay for cytochrome P450 BM3 for screening libraries of substrates and combinatorial mutants", Biosensors and Bioelectronics, 17(1-2), (2002), 133-145.

2001

131. Gilardi, G., Fantuzzi, A. "Manipulating redox systems: applications to nanotechnology", Trends in Biotechnology 19 (11) (2001), 468-476.

132. Gilardi, G., Sadeghi, S.J., Fantuzzi, A. "Engineering and design in the bioelectrochemistry of metalloproteins", Current Opinion in Structural Biology", 11 (4), (2001) 491-499.

2000

133. Sadeghi, S.J., Meharenna, Y.T., Fantuzzi, A., Valetti, F. and Gilardi, G. "Engineering artificial redox chains by molecular lego", Faraday Discuss., 116, (2000) 135-153.

134. Sadeghi, S., Valetti, F., Cunha, C.A., Romao, M.J., Soares, C.M. and Gilardi, G. "Ionic strength dependence of the non-physiological electron transfer between flavodoxin and cytochrome c553 from D. vulgaris", J. Biol. Inorg. Chem. 5 (6), (2000) 730-737.

1999

135. Kalverda, A.P., Ubbink, M., Gilardi, G., Wijmenga, S.S., Crawford, A., Jeuken, L.J.C. and Canters, G.W. "Backbone dynamics of azurin in solution: Slow conformational change associated with deprotonation of histidine 35" Biochemistry 38, 39, (1999), 12690-12697

136. Mei, G., Di Venere, A., Malvezzi Campeggi, F., Gilardi, G., Rosato, N., De Matteis, F., and Finazzi-Agro', A. "The effect of pressure and guanidine hydrochloride on azurins mutated in the hydrophobic core" Eur, J. Biochem. 265, (1999), 619-626

137. Pessione, E., Divari, S. Griva, E., Cavaletto, M., Rossi, G.L., Gilardi, G., Giunta, C. "Phenolhydroxylase from *A. radioresistens* is a multi-component enzyme: Purification and characterisation of the reductase component" Eur, J. Biochem. 265, (1999), 549-555

138. Cunha, C.A., Romao, M.J., Sadeghi, S.J., Valetti, F., Gilardi, G., Soares, C.M. "Effects of protein-protein interactions on electron transfer: docking and electron transfer calculations for complexes between flavodoxin and c-type cytochromes", J. Biol. Inorg. Chem. 4, (1999), 360-374

139. Jarudilokkul, S., Poppenborg, L.H., Valetti, F., Gilardi, G. and Stuckey, D.C. "Separation and purification of periplasmic cytochrome c553 using reversed micelles", Biotech. Tech. 13, (1999), 159-163

1998

140. Valetti, F., Sadeghi, S.J., Meharenna, Y. and Gilardi, G. "Engineering multi-domain redox proteins containing flavodoxin as bio-transformer: preparatory studies by rational design", Biosensors and Bioelectronics 13, (1998), 675-685

141. Di Venere, A., Mei, G., Gilardi, G., Rosato, N., McKay, R., Gratton, E. and Finazzi-Agro', A. "Resolution of the heterogeneous fluorescence in multi-tryptophan proteins: ascorbate oxidase", Eur.J.Biochem. 257, (1998), 337-343

142. Kroes, S.J., Canters, G.W., Gilardi, G., Finazzi-Agro', A., van Hoek, A. and Visser, A.J.W.G. "A time-resolved polarised fluorescence study from *Pseudomonas aeruginosa* azurin and two of its mutants, Phe110Ser and Ile7Ser", Biophys. J. 75, (1998), 2441-2450.

143. Topoglidis, E., Cass, A.E.G., Gilardi, G., Sadeghi, S.J., Beaumont, N. and Durrant, J.R. "Protein adsorption on nanocrystalline TiO films: a novel immobilisation strategy for bioanalytical devices", Anal.Chem. 70, (1998), 5111-5113

1997

144. Gilardi, G., Mei, G., Rosato, N., Finazzi-Agro', A. and Cass, A.E.G. "Spectroscopic properties of an engineered maltose binding protein", Protein Engineering 10, (1997), 479-486

145. Di Venere, A., Mei, G., Rosato, N., Finazzi-Agro', A. and Gilardi, G. "Structural complexity and fluorescence heterogeneous decays in proteins", Acta Physica Polonica A 91, (1997), 731-737

146. Sadeghi, S.J., Gilardi, G., Nicolosi, G. and Cass, A.E.G. "Chiral discrimination in the oxidation of ferrocenes by cytochrome c peroxidase", Chem. Commun. 6, (1997), 517-518

147. Sadeghi, S.J., Gilardi, G. and Cass, A.E.G. "Mediated electrochemistry of peroxidases. Effects of variations in protein and mediator structures", Biosensors and Bioelectronics 12, (1997), 1191-1198

1996

148. Mei, G., Gilardi, G., Venanzi, M., Rosato, N., Canters, G.W. and Finazzi-Agro', A. "Probing the structure and mobility of azurin from *Pseudomonas aeruginosa* by circular dichroism and dynamic fluorescence anisotropy", Protein Science 5, (1996), 2248-2254

149. Farver, O., Skov, L.K., Gilardi, G., vanPouderoyen, G., Canters, G.W., Wherland, S. and Pecht, I."Structure-function correlation of intramolecular electron transfer in single-site mutated azurins", Chem. Phys. 204, (1996), 271-277

150. Hammann, C., Messerschmidt, A., Huber, R., Nar, H., Gilardi, G. and Canters, G.W. (1996). "X-ray crystal structure of the two site-specific mutants Ile7Ser and Phe110Ser of azurin form *Pseudomonas aeruginosa*", J.Mol.Biol. 255, (1996), 362-366

1995

151. Gilardi, G., Abis, L. and Cass, A. E. G. "Carbon-13 CP/MAS solid state NMR and FT/IR spectroscopy of wood cell wall biodegradation", Enzyme Microb. Technol. 17, (1995), 286-275

1994

152. Gilardi, G., Zhou, L. Q., Hibbert, L. and Cass, A. E. G. "Engineering the maltose binding protein for reagentless fluorescence sensing", Anal. Chem. 66, (1994), 3840-3847

153. Gilardi, G., Abis, L. and Cass, A. E. G. "Wideline solid state NMR of wood. Proton relaxation time measurements on cell walls biodegraded by white-rot and brown-rot fungi", Enzyme Microb. Technol. 16, (1994), 676-682

154. Gilardi, G., den Blaauwen, T. and Canters, G. W. "Molecular recognition: design of a biosensor with genetically engineered azurin as redox mediator", J. Controlled Release 29, (1994), 231-238

155. Gilardi, G., Mei, G., Rosato, N., Canters, G. W. and Finazzi-Agro', A. "Unique environment of trp48 in *Pseudomonas aeruginosa* azurin as probed by site-directed mutagenesis and dynamic fluorescence spectroscopy", Biochemistry 33, (1994), 1425-1432

1993

156. Gilardi, G. and Cass, A. E. G. "Associative and colloidal behaviour of lignin and implications for its biodegradation", Langmuir 9, (1993), 1721-1726

157. Canters, G. W. and Gilardi, G. "Engineering type-1 copper sites in proteins", FEBS Letters 325, (1993), 39-48

158. Harvey, P. J., Gilardi, G., Goble, M. L. and Palmer, J. M. "Charge transfer reactions and feedback control of lignin peroxidase by phenolic compounds: significance in lignin degradation", J. Biotechnology 30, (1993), 57-69

1990

159. Gilardi, G., Harvey, P. J., Cass, A. E. G. and Palmer, J. M. "Production of radical intermediates in the oxidation of veratryl alcohol by ligninase. NMR evidence.", Biochim. Biophys. Acta 1041, (1990), 129-132

CAPITOLI DI LIBRO CON REFEREE:

160. Catucci, G., G Gilardi, G. and SJ Sadeghi, S.J. "Drug Metabolism: Other Phase I Enzymes" (2022), Elsevier, 509-562

161. Di Nardo, G. and Gilardi, G. (2020) "Conversion of Natural Products from Renewable Resources in Pharmaceuticals by Cytochromes P450", in Pharmaceutical Biocatalysis – Chemoenzymatic Synthesis of Active Pharmaceutical Ingredients", P.Grunwald (ed.), Vol. 5, pages 603-642, Jenny Stanford Publishing Pte. Ltd, Singapore, ISBN: 978-981-4800-80-8

162. Gilardi, G. (2019) "Capitolo 6: Tecniche Spettorscopiche" in "Metodologie biochimiche e biomolecolari" M.Maccarrone (ed.), pages 45-67, Zanichelli, Bologna, Italy, ISBN: 978-880-8520-55-5

163. Gilardi, G. (2015) "Structural basis of cytochrome P450 function in cell defense and sexual development", in "Quaderni dell'Accademia delle Scienze di Torino" n.21, Ferraris, G. (ed.), pages 29-42, ISSN: 1125-0402

164. Gilardi, G. (2012) "Protein Design for Biosensors", in "Encyclopedia of Biophysics", Roberts, G.C.K. (ed.), pages 1979-1987, ISBN 978-3-642-16711-9.

165. Di Nardo G., Breitner M., Sadeghi S.J., Gilardi G. (2011) "Purification of a stable form of human aromatase in the absence of substrate: Effect of neuronal physiological pH changes on its substrate binding and activity", in "Cytochrome P450 Biochemistry,Biophysics and Structure", 11-15, ISBN 978-88-7587-616-6

166. Catucci G., Sadeghi S. J., Gilardi G. (2011) "Engineering a C-terminally modified human flavin containing monooxygenase" in "17th International Conference on Cytochrome P450 Biochemistry, Biophysics and Structure" Munro A.W. and Leys D. eds., Medimond Publishers, Bologna, Italy, 51-55, ISBN 978-88-7587-616-6

167. Catucci G., Sadeghi S. J. and Gilardi G. (2011) "Molecular modelling of human flavin-containing monooxygenase 3", in "Flavins and Flavoproteins 2011", Miller, S., Hille, R. and Palfey B. eds., Lulu Publishers, North Carolina, USA, 347-352, ISBN 978-1-300-78640-5.

168. Castrignano' S., Sadeghi S. J. and Gilardi G. (2011) "Electrochemical investigation of human flavin-containing monooxygenase 3 on nanostructured electrodes: direct electron transfer with stabilised gold nanoparticles" in "Flavins and Flavoproteins 2011", Miller, S., Hille, R. and Palfey B. eds., Lulu Publishers, North Carolina, USA, 353-358, ISBN 978-1-300-78640-5.

169. Zgrablic I., Sadeghi S. J., Minerdi D. and Gilardi G. (2011) "In silico analysis of possible substrates of a novel bacterial BVMO" in "Flavins and Flavoproteins 2011", Miller, S., Hille, R. and Palfey B. eds., Lulu Publishers, North Carolina, USA, 359-364, ISBN 978-1-300-78640-5.

170. Dodhia, V.R. and Gilardi, G. (2009) "Cytochromes P450: Tayloring a class of enzymes for biosensing" in "Engineering the bioelectronic interface" Davis, J. (ed.), RSC Publishing, London, UK, 154-193, ISBN: 978-0-85404-165-7

171. Sadeghi, S.J., Meirinhos, R. and Gilardi, G. (2008) "Bioelectrochemistry of drug metabolising human Flavin-containing monooxygenase" in: "Flavins and Flavoproteins: 16th International Symposium on Flavins and Flavoproteins", Fargo, S., Gomez-Moreno, C. and Medina, M. (eds.), Prensas Universitarias de Zaragoza Academic Publisher, Spain, 571-574, ISBN/ISSN: 978-84-7733-017-2.

172. Gilardi, G. (2004) "Protein engineering for biosensors" in "Biosensors 2nd Edition" J. Cooper and A.E.G. Cass (eds.), Oxford University Press, Oxford, UK – New York, US, 185-240, ISBN: 0199638454

173. Sadeghi, S.J., Tsotsou, G.E., Fairhead, M., Meharenna, Y.T. and Gilardi, G. (2001) "Rational design of P450 enzymes for biotechnology", in "Focus in Biotechnology, Volume VI" Physics and Chemistry Basis of Biotechnology", Bulte, J. and De Cuyper, M. (eds.), Kluwer Academic Publisher, Dordrecht, The Netherlands, 71-104, ISBN: 0792370910

174. Sadeghi, S.J. Meharenna, Y.T. and Gilardi, G. (1999) "Flavodoxin as a module for transferring electrons to different c-type and P450 cytochromes in artificial redox chains", in "Flavins and Flavoproteins 1999", Ghisla S, Kroneck P, Macheroux P, Sund H (ed.), Rudolf Weber Publ., Berlin, Germany 125-129 - ISBN 3000051287

175. Lelivel, S.R. and Gilardi, G. (1997). "Designing an artificial flavocytochrome by building blocks: preliminary studies", in "Perspectives on Protein Engineering 1997", Geisow, M.J. (ed.), Biodigm Ltd, UK, - ISBN 0951573527

176. Gilardi, G., Harvey, P. J., Cass, A. E. G. and Palmer, J. M., (1990). "NMR studies on lignin degradation" in : "Applications of biotechnology in pulp and paper industry", Kirk T. K. and Chang H. (ed.); Butterworth Publishers, Stonenham, USA, 363-367, ISBN 040990192X

177. Harvey, P. J., Gilardi, G. and Palmer, J. M., (1989), "Importance of charge transfer reactions in lignin degradation", in "Enzyme systems for lignocellulose degradation", Coughlan, M.P. (ed.); Elsevier Press, London, 111-120, ISBN 1-85166-411-4

BREVETTI:

178. Luganini, 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)

179. Gilardi, G., Di Nardo, G., Trotta F., Tumiatti, V., Cavalli, R., Ferruti, P., Ranucci, E. (2008) "Cyclodextrin nanosponges as a carrier for biocatalysts, and in the delivery and release of enzymes, proteins, vaccines and antibodies", MI2008A001056 - WO/2009/149883 (17/12/2009) and PCT/EP2009/004098 (8/6/2009)

180. Gilardi, G., Fantuzzi, A., Dodhia, V.R., Mak, L.H. (2007) "P450 electrode array", GB 0723000.6

181. Gilardi, G. and Cass, A.E.G (2007) "A method of carrying out an electrochemical process comprising a chimeric protein with an electrode transferring electrons directly between the electrode and the electron transfer domain and directly between the electron transfer domain and the redox catalytic domain", US 11/862,954

182. Gilardi, G. and Cass, A.E.G (2006) "An electrode for carrying out an electrochemical process comprising a chimeric protein immobilised on the electrode, wherein the chimeric protein comprises a redox catalytic domain derived from a first source and an electron transfer domain derived from a second source different to the first source", US 11/642,847, US 2007-0117174, JP 2007-167687

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

184. Gilardi, G. (2003) " Engineering redox proteins: Redox rop", GB 0228301.8, PCT/GB02/05256

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 monoxygenases for biotechnology – delivered ay 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 Monoxygenases 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 biomolecule – 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 20th 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 monoxygenases and electrode interfaces – delivered at the 58th 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, Leidein, 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. Contruction 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 Engineerd 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 Ledein 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 - delevered at the International Symposium on Advances in Bioinorganic Chemistry, November 2000, Mombai, 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, Firbush, 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