Curriculum Vitae

Name	Andrea Mattevi
Gender	Male
Date of birth	14 July 1965
Nationality	Italian
Marital status	Married, father of two children

Education

High school (September 1979 – September 1984):
Liceo Scientifico "Leonardo da Vinci", Trento (Italy)
University (October 1984 – September 1988):
Bachelor in Biological Sciences at the University of Pavia (Italy)
Promotor Prof. M. Bolognesi.

PhD (September 1988 – November 1992)

Department of Biophysical Chemistry, University of Groningen, The Netherlands
Promotor: Prof. Dr. W.G.J. Hol
Thesis "Structure of the cubic core and of the E3 component of the pyruvate dehydrogenase multienzyme complex"

Post-doctoral EMBO-fellow (November 1992 – April 1993)

MRC Laboratory of Molecular Biology, Cambridge, UK
Groups of Dr. J.E. Walker and A.G.W. Leslie

Research Fellow (April 1993 - December 2000)

Department of Genetics and Microbiology,, University of Pavia, Italy

Present position

Full Professor in Molecular Biology
Department of Biology and Botechnology, University of Pavia, Italy

Awards

September 2001: selected as EMBO Young Investigator.
June 2005: "Premio Borgia" from Academia dei Lincei, Rome.
September 2009 Elected Member "Istituto Lombardo, Accademia di Scienze Lettere"

Recent Professional activities

Board member: Italian Association of Cancer Research (2012-present)
Dean of PhD school of Biotechnology in Pavia, 2007- present
Member of ESRF Review committee (in various occasions)
Member PDBe Scientific Advisory committee (2010-present)
Chair of GRC on Enzymes and Metabolic Pathways (2017)
Member of the Editorial Advisory Board of FEBS Journal
Member of the Editorial Advisory Board of Acta Crystallographica F
Ad hoc reviewer for various international journals including EMBO J, EMBO Reports, Science, Nature Structural Biology, Nature Chemical Biology, Biochemistry, Journal of Biological Chemistry, Proceedings of the National Academy of Sciences USA, Journal of Medicinal Chemistry, American Journal of Human Genetics, FEBS letters,

FEBS journal, Journal of Molecular Biology, Structure, Molecular Cell, Plant Cell, Journal of the American Chemical Society, Oncogene, Circulation, ChemMedChem.

List of Publications (*, Corresponding Author)

1. Eschrich, K., van Berkel, W.J.H., Westphal, A.H., deKok, A., **Mattevi, A**., Obmolova, G., Kalk, K.H. & Hol, W.G.J. (1990) Engineering of microheterogeneity-resistant p-hydroxybenzoate hydroxylase from *Pesudomonas fluorescens*. *FEBS lett.* **277**, 197-199.

2. **Mattevi, A**., Gatti, G, Coda, A., Rizzi, M., Ascenzi, P., Brunori, M. & Bolognesi, M. (1991). Binding mode of azide to ferric *Aplysia limacina* myoglobin. *J. Mol. Rec.* **4**, 1-6.

3. **Mattevi, A**., Schierbeek, A.J. & Hol, W.G.J. (1991). Refined crystal structure of lipoamide dehydrogenase from *Azotobacter vinelandii* at 2.2 Å resolution. *J. Mol. Biol.* **220**, 975-994.

4. Schulze, E., Westphal, A.H., Obmolova, G., **Mattevi, A**., Hol, W.G.J. & deKok., A. (1991). The catalytic domain of dihydrolipoyl transacetylase (E2) component of the pyruvate dehydrogenase complex from *Azotobacter vinelandii*. *Eur.J. Biochem.* **201**, 561-568.

5. **Mattevi, A**., Obmolova, G., Sokatch, J.R., Betzel, C . & Hol, W.G.J. (1992). The refined crystal structure of *Pseudomonas putida* lipoamide dehydrogenase complexed with NAD^+ at 2.45 Å resolution. *Proteins* **13**, 336-351.

6. **Mattevi, A**., Obmolova, G., Schulze, E., Kalk, K.H., Westphal, A.H., deKok, A. & Hol, W.G.J. (1992). Atomic structure of the cubic core of the pyruvate dehydrogenase multienzyme complex. *Science* **255**, 1544-1550.

7. **Mattevi, A**., deKok, A. & Perham, R.N. (1992).The pyruvate dehydrogenase multienzyme complex. *Curr. Opin. Struc. Biol.* **2**, *877-887.*

8. **Mattevi, A**., Obmolova, G., Kalk, K.H., Teplyakov, A. & Hol, W.G.J. (1993). Crystallographic analysis of substrate binding and catalysis in dihydrolipoyl transacetylase (E2p). *Biochemistry*, **32**, 3887-3901.

9. **Mattevi, A**., Obmolova, G., Kalk, K.H., Westphal, A.H., deKok., A. & Hol, W.G.J. (1993). Refined crystal structure of the catalytic domain of dihydrolipoyl transacetylase (E2p) from *Azotobacter vinelandii* at 2.6 Å resolution. *J. Mol. Biol.* **230**, 1183-1199.

10. **Mattevi, A**., Obmolova, G., Kalk, K.H., van Berkel, W.J.H. & Hol, W.G.J. (1993). Three-dimensional structure of lipoamide dehydrogenase from *Pesudomonas fluorescens* at 2.8 Å resolution: analysis of redox and thermostability properties. *J. Mol. Biol.* **230**, 1200-1215.

11. Conti, E., Moser, C., Rizzi, M., **Mattevi, A**., Lionetti, C., Coda, A., Ascenzi, P., Brunori, M. & Bolognesi, M. (1993). X-ray crystal structure of ferric *Aplysia limacina* myoglobin in different liganded states. *J. Mol. Biol.* **233**, 498-508.

12. Schreuder, H.A., **Mattevi, A**., Oblomova, G., Kalk, K.H., Hol, W.G.J., van der Bolt, F.J.T. & van Berker, W.J.H. (1994). Crystal Structures of Wild-Type p-Hydroxybenzoate Hydroxylase Complexed with 4-Aminobenzoate, 2,4-Dihydroxybenzoate, and 2-Hydroxy-4-aminobenzoate and of the Tyr222Ala Mutant Complexed with 2-Hydroxy-4-aminobenzoate. Evidence for a Proton Channel and a New Binding Mode of the Flavin Ring. *Biochemistry* **33**, *10161-10170.*

13. Hendle, J., **Mattevi, A**., Westphal, A.H., Spee, J., de Kok, A., Tepliakov, A., Hol, W.G.J. (1995). Crystallographic and enzymatic investigations on the role of Ser558, His610 and Asn 614 in the catalytic mechanism of Azotobacter vinelandii dihydrolipoamide acetyltransferase (E2p). *Biochemistry* **34**, 4287-4298

14. **Mattevi*, A.**, Valentini, G., Speranza, M.L., Sartori, P., Bolognesi, M., Coda, A. (1995). Crystallization and preliminary X-ray analysis of pyruvate kinase type-I from *Escherichia coli*. *Acta Cryst* **D51**, 1089-1091.

15. **Mattevi*, A**., Valentini, G., Speranza, M.L., Rizzi, M., Bolognesi, M., Coda, A. (1995). Crystal structure of the allosteric pyruvate kinase type-I from *Escherichia coli*. *Structure* **3**, 729-741.

16. **Mattevi*, A**., Vanoni, M.A., Todone, F., Rizzi, M., Teplyakov, A., Coda, A., Bolognesi, M., Curti, B. (1996). Crystal structure of D-amino acid oxidase: a case of active site mirror-image convergent evolution with flavocytochrome b2. *Proc. Natl. Acad. Sci. USA* **93,** 7496-7501.

17. **Mattevi*, A**., Bolognesi, M., Valentini, G. (1996) The allosteric regulation of pyruvate kinase. *FEBS Lett.* **389**, 15-19.

18. **Mattevi*, A**., Rizzi, M., Bolognesi, M. (1996) New structures of allosteric proteins revealing remarkable conformational changes. *Curr. Opin. Struc. Biol.* **6**, 824-829.

19. Rizzi, M., Nessi, C., **Mattevi, A**., Coda, A., Bolognesi, M., Galizzi, A. (1996) Crystal structure of NH3-dependent NAD+ synthetase from Bacillus subtilis. *EMBO J*. **15**, 5125-5134.

20. **Mattevi, A**., Fraajie, M.W., Coda, A., van Berkel, W.J.H. (1997) Crystallization and preliminary X-ray analysis of the flavoenzyme vanillyl-alcohol oxidase from Penicillium simplicissimum. *Proteins: structure, function & genetics* **27**, 601-603.

21. Vanoni, M.A., Cosma, A., Mazzeo, D., **Mattevi, A**., Todone, F., Curti, B. (1997) Limited proteolysis and X-ray crystallography reveal the origin of substrate specificity and of the rate limiting product release during oxidation of D-amino acids catalysed by mammalian D-amino acid oxidase. *Biochemistry* **36**, 5624-5632.

22. Fraaije, M.W., **Mattevi, A**., van Berkel, W.J.H. (1997) Mercuration of vanillyl-alcohol oxidase from *Penicillium simplicissimum* generates inactive dimers. *FEBS Lett*. **402,** 33-35.

23. Todone, F., Vanoni, M.A., Mozzarelli, A., Bolognesi, M., Coda, A., Curti, B., **Mattevi*, A**. (1997) Active site plasticity in D-amino acid oxidase: a crystallographic analysis. *Biochemistry* **36**, 5853-5860.

24. **Mattevi*, A**., Fraaije, M.W., Mozzarelli, A., Olivi, L., Coda, A., van Berkel, WJH. (1997) Crystal structures and inhibitor binding in the octameric flavoenzyme vanillyl-alcohol oxidase: the shape of the active site cavity controls substrate specificity. *Structure* **5**, 907-920.

25. Valentini, G., **Mattevi, A**., Barilla', D., Galizzi, A., Speranza, M.L. (1997) Recombinant pyruvate kinase type I from *Escherichia coli*: overproduction and revised C-terminus of the polypeptide. *Biol. Chem*. **378**, 719-721.

26. **Mattevi*, A**., A., Vanoni, M.A., Curti, B. (1997) Structure of D-amino acid oxidase: new insights from an old enzyme. *Curr. Opin. Struc. Biol.* **7**, 804-810.

27. **Mattevi*, A**. (1998) The PHBH fold: Not only flavoenzymes. *Biophysical Chemistry* **70**, 217-222.

28. Fraaije, M.W., Benen, J.A.E., Visser, J., van Berkel, W.J.H., **Mattevi, A**. (1998) A novel oxidoreductase family sharing a conserved FAD-binding domain. *Trends Biochem. Sci.* **23**, 206-207.

29. Binda, C., Coda, A., Aliverti, A., Zanetti, G., **Mattevi*, A**. (1998) Structure of the mutant E92K of [2Fe-2S] ferredoxin I from *Spinacia oleracea* at 1.7 Å resolution. *Acta Cryst*. D**54**, 1353-1358.

30. Binda, C., Coda, A., Angelini, R., Federico, R., Ascenzi, P., **Mattevi*, A**. (1998) Crystallization and preliminary X-ray analysis of polyamine oxidase from *Zea mays* L. *Acta Cryst*. D**54**, 1429-1431.

31. Bacchella, L., Lina, C., Todone, C., Negri, A., Tedeschi, G., Ronchi, S., **Mattevi*, A**. (1999). Crystallization of L-aspartate oxidase, the first enzyme in the bacterial de novo biosynthesis of NAD. *Acta Cryst*. D**55**, 549-551.

32. Binda, C., Coda, A., Angelini, R., Federico, R., Ascenzi, P., **Mattevi*, A**. (1999). A 30 Å long U-shaped catalytic tunnel in the crystal structure of polyamine oxidase. *Structure* **7**, 265-276.

33. **Mattevi*, A**., Tedeschi, G., Bacchella, L., Coda, L., Negri, A., Ronchi, S. (1999). Structure of L-aspartate oxidase: implications for the succinate dehydrogenase/fumarate reductase oxidoreductase family. *Structure* **7**, 745-756.

34. Tedeschi, G., Negri, A., Ceciliani, F., **Mattevi, A**., Ronchi, S. (1999). Structural characterization of l-aspartate oxidase and identification of an interdomain loop by limited proteolysis. *Eur. J. Biochem.* **260**, 896-903.

35. Fraaije, M.W., van den Heuvel, R.H.H., van Berkel, W.J.H., **Mattevi*, A**. (1999) Covalent flavinylation is essential for efficient redox catalysis in vanillyl-alcohol oxidase. *J. Biol. Chem*. **274**, 35514-35520.

36. Fraaije, M.W., **Mattevi*, A**. (2000) Flavoenzymes: diverse catalysts with recurrent features. *Trends Biochem. Sci.* **25**, 126-132.

37. Van der Heuvel, R.H.H., Fraaije, M., **Mattevi, A**., van Berkel, W.J.H. (2000) Asp-170 is crucial for the redox properties of vanillyl-alcohol oxidase. *J. Biol. Chem*. **275**, 14799-14808.

38. Valentini, G., Chiarelli, L., Fortin, R., Speranza, M.L., Galizzi, A., **Mattevi*, A**. (2000) The allosteric regulation of pyruvate kinase. *J. Biol. Chem*. **275**, 18145-18152.

39. Van der Heuvel, R.H.H., Fraaije, M., Ferrer Espinosa, M., **Mattevi, A.**, van Berkel, W.J.H. (2000) Inversion of stereospecificity and regain of covalent flavinylation of vanillyl-alcohol oxidase *Proc. Natl. Acad. Sci. USA* **97**, 9455-9460.

40. Fraaije, M.W., van Den Heuvel, R.H., van Berkel, W.J., **Mattevi*, A**. (2000) Structural analysis of flavinylation in vanillyl-alcohol oxidase. *J. Biol. Chem.* **275**, 38654-38658

41. Binda, C., Bossi, R.T., Wakatsuki, S., Arzt, S, Coda, A., Curti, B., Vanoni, M.A., **Mattevi*, A**. (2000) Cross-talk and ammonia channeling between active centres in the unexpected domain arrangement of glutamate synthase. *Structure* **8**, 1299-1308.

42. Tedeschi, G., Ronchi, S., Simonic, T., Treu, C., **Mattevi, A**., Negri, A. (2001) Probing the active site of l-aspartate oxidase by site-directed mutagenesis: role of basic residues in fumarate reduction. *Biochemistry* **40**, 4738-4744.

43. Binda, C., Angelini, R., Federico, R., Ascenzi, P., **Mattevi*, A**. (2001) Structural bases for inhibitor binding and catalysis in polyamine oxidase. *Biochemistry* **40**, 2766-2776.

44. Wang, C.Q., Chiarelli, L.R., Bianchi, P., Abraham, D.J., Galizzi, A., **Mattevi, A**., Zanella, A., Valentini, G. (2001) Human erythrocyte pyruvate kinase: characterization of the recombinant enzyme and a mutant form (R510Q) causing nonspherocytic hemolytic anemia. *Blood* **98**, 3113-3120.

45. Binda, C., Newton-Vinson, P., Hubalek, F., Edmondson, D.E., **Mattevi*, A**. (2002). Structure of human monoamine oxidase B, a drug target for the treatment of neurological disorders. *Nat. Struct. Biol*. **9**, 22-26.

46. Bossi, R.T., Negri, A., Tedeschi, G., **Mattevi*, A**. (2002) Structure of FAD-bound L-aspartate oxidase: insight into substrate specificity and catalysis. *Biochemistry* **41**, 3018-3024

47. Ravasio, S., Dossena, L., Martin-Figueroa, E., Florencio, F.J., **Mattevi, A**., Morandi, P., Curti, B., Vanoni, M.A. (2002) Properties of the recombinant ferredoxin-dependent

glutamate synthase of synechocystis PCC6803. comparison with the Azospirillum brasilense NADPH-dependent enzyme and its isolated alpha subunit. *Biochemistry* **41**, 8120-8133.

48. Binda, C., **Mattevi*, A**., Edmondson, D.E. (2002) Structure-Function Relationships in Flavoenzyme-dependent Amine Oxidations. A Comparison of Polyamine Oxidase and Monoamine Oxidase. *J. Biol. Chem*. **277**, 23973-23976.

49. Van Den Heuvel, R.H., Ferrari, D., Bossi, R.T., Ravasio, S., Curti, B., Vanoni, M.A., Florencio, F.J., **Mattevi*, A**. (2002) Structural Studies on the Synchronization of Catalytic Centers in Glutamate Synthase. *J. Biol. Chem.* **277**, 24579-24583.

50. Valentini, G., Chiarelli, L.R., Fortin, R., Dolzan, M., Galizzi, A., Abraham, D.J., Wang, C., Bianchi, P., Zanella, A., **Mattevi*, A**. (2002) Structure and function of human erythrocyte pyruvate kinase. Molecular basis of nonspherocytic hemolytic anemia. *J. Biol. Chem.* **277**, 23807-23814.

51. Bossi, R.T., Aliverti, A., Raimondi, D., Fischer, F., Zanetti, G., Ferrari, D., Tahallah, N., Maier, C.S., Heck, A.J.R., Rizzi, M., **Mattevi*, A**. (2002) A Covalent Modification of NADP+ Revealed by the Atomic Resolution Structure of FprA, a *Mycobacterium tuberculosis*. Oxidoreductase *Biochemistry* **41**, 8807-8818

52. Anderson, K.S. **Mattevi*, A**. (2002) Bringing proteins to life *Curr. Opin. Struc. Biol.* **12**, 695-696

53. van den Heuvel, R.H.H., Svergun,D.I., Petoukhov, M.V. Coda, A., Curti, B., Ravasio, S., Vanoni, M.A., **Mattevi*, A**. (2003) The Active Conformation of Glutamate Synthase and its Binding to Ferredoxin. *J. Mol. Biol.* **330**, 113-128

54. Binda, C., Li, M., Hubálek, F., Restelli, N., Edmondson, D.E., **Mattevi*, A**. (2003) New insights into the mode of inhibition of human mitochondrial monoamine oxidase B from high resolution crystal structures. *Proc. Natl. Acad. Sci. USA* **100**, 9750-9755.

55. Terwilliger T.C., et al., **Mattevi, A**., et al., Rupp B. (2003) The TB structural genomics consortium: a resource for Mycobacterium tuberculosis biology, *Tuberculosis (Edinb)* **83**, 223-249.

56. Hubálek, F., Binda, C., Li, M., **Mattevi*, A**., Edmondson, D.E., (2003) Polystyrene micro-bridges used in sitting drop crystallisation release 1,4-diphenyl-2-butene, a novel inhibitor of human MAO B. *Acta Cryst. D***59**, 1874-1876.

57. Edmondson DE, Binda C, **Mattevi*, A**. (2004) The FAD Binding Sites of Human Monoamine Oxidases A and B. *Neurotoxicology* **25**, 63-72

58. Binda, C., Li, M., Hubálek, F., Herzig, Y., Sterling, J. Edmondson, D.E., **Mattevi*, A**. (2004) Crystal structures of MAO B in complex with four inhibitors of the N-propargylaminoindan class. *J. Med. Chem.* **47**, 1767-1774

59. Van Den Heuvel, R.H., Westphal, A.H., Heck, A.J., Walsh, M.A., Rovida, S., Van Berkel, W.J., **Mattevi*, A**. (2004) Structural studies on flavin reductase PheA2 reveal

binding of NAD in an unusual folded conformationan and support novel mechanism of action. *J. Biol. Chem*. **279**, 12860-12867

60. Hubálek, F., Binda, C., Li, M., Herzig, Y., Sterling, J., Youdim, M.B.H., **Mattevi*, A**., Edmondson, D.E., (2004) Inactivation of Purified Human Recombinant Monoamine Oxidases A and B by Rasagiline and Its Analogues *J. Med. Chem.* **47**, 1760-1766

61. van den Heuvel, R.H.H., Curti, B., Vanoni, M.A., **Mattevi*, A**. (2004) Glutamate Synthase: a Fascinating Pathway from L-Glutamine to L-Glutamate. *Cell Molecular Life Sciences,* **61**, 669 - 681

62. Binda, C., Li, M., Hubálek, F., Edmondson, D.E., **Mattevi*, A**. (2004) Crystal structure of human monoamine oxidase B, a drug target enzyme monotopically inserted into the mitochondrial outer membrane*. FEBS Lett.,* **564**, 225 – 228

63. Edmondson, D.E., **Mattevi, A**., Binda, C., Li, M., Hubálek, F. (2004) Structure and mechanism of monoamine oxidase *Curr. Med. Chem.,* **11**, 1983-1993.

64. Malito, E., Coda, A., Bilyeu, K., Fraaije, M.W., **Mattevi*, A**. (2004) Structures of Michaelis and Product Complexes of Plant Cytokinin Dehydrogenase: Implications for Flavoenzyme Catalysis. *J. Mol. Biol.,* **341**, 1237-1249.

65. Malito, E., Alfieri, A., Fraaije, M.W., **Mattevi*, A**. (2004) Crystal Structure of a Baeyer-Villiger Monooxygenase. *Proc. Natl. Acad. Sci. USA* **101**, 13157-13162.

66. Anderson, K., **Mattevi*, A**. (2004) Catalysis and regulation in the proteome. *Curr. Opin. Struct. Biol.*, **14**, 639-641.

67. Chiarelli, L.R., Bianchi, P., Fermo, E., Galizzi, A., Iadarola, P., **Mattevi, A**., Zanella, A., Valentini, G. (2005) Functional analysis of pyrimidine 5'-nucleotidase mutants causing nonspherocytic hemolytic anemia. *Blood* **105**, 3340-3345.

68. Hubálek, F., Binda, C., Khalil, A., Li, M., **Mattevi, A**., Castagnoli, N., Edmondson, D.E. (2005) Demonstration of Isoleucine 199 as a Structural Determinant for the Selective Inhibition of Human Monoamine Oxidase B by Specific Reversible Inhibitors. *J. Biol. Chem*. **280**, 15761-15766

69. Forneris, F., Binda, C., Vanoni, M.A., **Mattevi*, A**., Battaglioli, E. (2005) Histone Demethylation Catalysed by LSD1 is a Flavin-dependent Oxidative Process. *FEBS Lett*. **579**, 2203-2207

70. De Colibus, L., Li, M., Binda, C., Lustig, A., Edmondson, D.E., **Mattevi*, A**.. (2005). Three-dimensional structure of human monoamine oxidase A (MAO A): relation to the structures of rat MAO A and human MAO B. *Proc. Natl. Acad. Sci. USA* **102**, 12684-12689

71. Forneris, F., Binda, C., Vanoni, M.A., Battaglioli. E., **Mattevi*, A**. (2005). Human histone demethylase LSD1 reads the histone code. *J. Biol. Chem*. **280**, 41360-41365

72. Binda, C., Hubálek, F., Herzig, Y., Sterling, J. Edmondson, D.E., **Mattevi*, A**. (2005). Binding of Rasagiline-related Inhibitors to Human Monoamine Oxidases: A Kinetic and Crystallographic Analysis. *J. Med. Chem.* **48**, 8148-8154

73. **Mattevi*, A**. (2006) To be or not to be an oxidase: challenging the oxygen reactivity of flavoenzymes. *Trends Biochem. Sci.* **31**, 276-283

74. Li, M., Binda, C., **Mattevi*, A**., Edmondson, D.E. (2006) Functional Role of the "Aromatic Cage" in Human Monoamine Oxidase B: Structures and Catalytic Properties of Tyr435 Mutant Proteins. *Biochemistry* **45**, 4775-4784

75. Pennati, A., Razeto, A., de Rosa, M., Pandini, V., Vanoni, M.A., **Mattevi, A**., Coda, A., Aliverti, A., Zanetti, G. (2006) Role of the His57-Glu214 Ionic Couple Located in the Active-Site of *Mycobacterium tuberculosis* FprA. *Biochemistry* **45**, 8712-8720

76. **Mattevi*, A**. (2006) A monotopic membrane protein goes solo. *Structure* **14**, 628-649

77. **Mattevi*, A**. (2006) A close look at NAD biosynthesis. *Nature Struct. Mol. Biol.* **13**, 563-564

78. De Colibus, L., **Mattevi*, A**. (2006) New frontiers in flavoenzyme structure and mechanism. *Curr. Opin. Struc. Biol.* **16**, 722-728.

79. Forneris, F., Binda, C., Dall'Aglio, A., Fraaije, M.W., Battaglioli, E., **Mattevi*, A**. (2006) A highly specific mechanism of histone H3-K4 recognition by histone demethylase LSD1. *J. Biol. Chem.* **281**, 35289-35295.

80. Binda, C., Hubálek, F., Li, M., Castagnoli, N., Edmondson, D.E., **Mattevi*, A**. (2006) Structure of the human mitochondrial monoamine oxidase B: New chemical implications for neuroprotectant drug design. *Neurology* **67**, S5-S7.

81. Forneris, F., Rovida, S., Heuts, D.P.H.M., Fraaije, M.W., **Mattevi*, A**. (2006) Crystallization and preliminary X-ray analysis of an alditol oxidase from *Streptomyces coelicolor* A3(2). *Acta Crystallogr.* **F62**, 1298-1300.

82. Alfieri, A., Ferini, F., Ruangchan, N., Prongjit, M., Chaiyen, P., **Mattevi*, A**. (2007) Structure of a two-component monooxygenase. *Proc. Natl. Acad. Sci. USA* **104**, 1177-1182.

83. De Colibus, L., Speroni, S., Coutard, B. Forrester, N.L., Gould, E., Canard, B., **Mattevi*, A**. (2007) Purification and crystallization of Kokobera virus helicase. *Acta Crystallogr.* **F63**, 193-195.

84. Razeto, A., Mattiroli, F., Carpanelli, E. Aliverti, A., Pandini, V., Coda, A., **Mattevi*, A**. (2007) The crucial step in ether phospholipid biosynthesis: structural basis of a non-canonical reaction associated to a peroxisomal disorder. *Structure* **15**, 683-692.

85. Razeto, A., Mattiroli, F., Bossi, R., Coda, A., **Mattevi*, A**. (2007) Identifying a Recombinant Alkyldihydroxyacetonephosphate Synthase Suited for Crystallographic Studies. *Protein Express. & Purific.* **55**, 343-351.

86. Forneris, F., Binda, C., Adamo, A., Battaglioli, E., **Mattevi*, A**. (2007) Structural Basis of LSD1-CoREST Selectivity in Histone H3 Recognition. *J. Biol. Chem.* **282**, 20070-20074.

87. Edmondson, D.E., Binda, C., **Mattevi*, A**. (2007) Structural insights into the mechanism of amine oxidation by monoamine oxidases A and B. *Arch. Biochem. Biophys.* **464**, 269-276.

88. Binda, C., Wang., J., Pisani, L., Caccia, C., Carotti, A., Salvati, P., Edmondson, D.E., **Mattevi*, A**. (2007) Structures of Human Monoamine Oxidase B Complexes with Selective Noncovalent Inhibitors: Safinamide and Coumarin Analogs. *J. Med. Chem.* **50**, 5848-5852

89. Speroni, S., De Colibus, L., Mastrangelo, E., Gould, E., Coutard, B., Forrester, N.L., Blanc, S., Canard, B., **Mattevi*, A**. (2007) Structure and biochemical analysis of Kokobera virus helicase. *Proteins: Structure, Function, and Bioinformatics* **70**, 1120-1123

90. Forneris, F., Heuts, D.P., Delvecchio, M., Rovida, S., Fraaije, M.W., **Mattevi*, A**. (2008) Structural Analysis of the Catalytic Mechanism and Stereoselectivity in *Streptomyces coelicolor* Alditol Oxidase. *Biochemistry* **47**, 978-985

91. Forneris, F., Binda, C., Battaglioli, E., **Mattevi*, A**. (2008) LSD1: Oxidative Chemistry for Multifaceted Functions in Chromatin Regulation. *Trends Biochem. Sci.* **33**, 181-189.

92. Alfieri, A., Malito, E., Orru, R. Fraaije, M.W., **Mattevi*, A**. (2008) Revealing the moonlighting role of NADP in the structure of a flavin-containing monooxygenase. *Proc. Natl. Acad. Sci. USA* **195**, 6572-6577

93. Binda, C., Wang, J., Li, M., Hubalek, F., **Mattevi, A**., Edmondson, D.E. (2008) Structural and mechanistic studies of arylalkylhydrazine inhibition of human monoamine oxidases a and b. *Biochemistry* **47**, 5616-5625

94. Forneris F., Mattevi, A. (2008) Enzymes Without Borders: Mobilizing Substrates, Delivering Products. *Science* **321**, 213-216

95. Fraaije M.W., **Mattevi*, A**. (2008) Cyclization in concert. *Nature Chem. Biol*. **4**, 719-721

96. Milczek, E., Bonivento, D., Binda, C., **Mattevi, A**. Mcdonald, I., Edmondson, D.E. (2008) Structural and Mechanistic Studies of Mofegiline Inhibition of Recombinant Human Monoamine Oxidase B. *J. Med. Chem*, **51**, 8019-8026

97. Leferink, N.G., Fraaije, M.W., Joosten, H.J., Schaap, P.J., **Mattevi, A.**, van Berkel, W.J. (2009) Identification of a gatekeeper residue that prevents dehydrogenases to act as oxidases. *J. Biol. Chem.* **284**, 4392-4397

98. Forneris, F., Orru, R., Bonivento, D., Chiarelli, L.R., **Mattevi*, A**. (2009) ThermoFAD, a Thermofluor®-adapted flavin ad hoc detection system for protein folding and ligand binding *FEBS J.* **276**, 2833-2840

99. Karytinos, A., Forneris, F., Profumo, A., Ciossani, G., Battaglioli, E., Binda, C., **Mattevi*, A**. (2009) A novel mammalian flavin-dependent histone demethylase, *J. Biol. Chem.* **284**, 17775-17782

100. Speroni, S., Rohayem, J., Nenci, S., Bonivento, D., Robel, I., Barthel, J., Luzhkov, V.B., Coutard, B., Canard, B., **Mattevi*, A**. (2009) Structural and biochemical analysis of human pathogenic astrovirus serine protease at 2.0 A resolution. *J. Mol. Biol.* **387**, 1137-1152.

101. Edmondson, D.E., Binda. C., Wang, J., Upadhyay, A.K., **Mattevi*, A**. (2009) Molecular and Mechanistic Properties of the Membrane-Bound Mitochondrial Monoamine Oxidases. *Biochemistry* **48**, 4220-4230

102. Baron, R., Riley, C., Chenprakhon, P., Thotsaporn, K., Winter, R., Alfieri, A., Forneris, F., van Berkel, W., Chaiyen, P., Fraaije, M.W., **Mattevi*, A**., McCammon, J.A. (2009) Multiple pathways guide oxygen diffusion into flavoenzyme active sites. *Proc. Natl. Acad. Sci. USA* **106**, 10603-10608

103. Forneris, F., Battaglioli, E., **Mattevi, A**., Binda, C. (2009) New roles of flavoproteins in molecular cell biology: histone demethylase LSD1 and chromatin. *FEBS J.* **276**, 4304-4312

104. Baron, R, McCammon, J.A., **Mattevi*, A**. (2009) The oxygen-binding vs. oxygen-consuming paradigm in biocatalysis: structural biology and biomolecular simulation. *Curr. Opin. Struct. Biol.* **19**, 672-679

105. Villa, F., Capasso, P., Tortorici, M., Forneris, F., de Marco, A., **Mattevi, A**., Musacchio, A. (2009) Crystal structure of the catalytic domain of Haspin, an atypical kinase implicated in chromatin organization. *Proc. Natl. Acad. Sci. USA* **106**, 20204-20209

106. Bollati, M., Alvarez, K., Assenberg, R., Baronti, C., Canard, B., Cook, S., Coutard, B., Decroly, E., De Lambellerie, X., Gould, E.A., Grard, G., Grimes, J.M., Hilgenfeld, R., Jansson, A.M., Malet, H., Mancini, E.J., Mastrangelo, E., **Mattevi, A.**, Milani, M., Moureau, G., Neyts, J., Owens, R.J., Ren, J., Selisko, B., Speroni, S., Steuber, H., Stuart, D.I., Unge, T., Bolognesi, M. (2010) Structure and functionality in flavivirus NS-proteins: Perspectives for drug design. *Antiviral Res.* **87**, 125-148

107. Zibetti, C., Adamo, A., Binda, C., Forneris, F., Toffolo, E., Verpelli, C., Ginelli, E., **Mattevi, A**., Sala, C., Elena Battaglioli, E. (2010) Alternative splicing of the histone demethylase LSD1/KDM1 contributes to the modulation of neurite morphogenesis in the mammalian nervous system. *J. Neuroscience* **30**, 2521-2532

108. Binda, C., Valente, S., Romanenghi, M., Pilotto, S., Cirilli, R., Karytinos, A., Ciossani, G., Botrugno, O.A., Forneris, F., Tardugno, M., Edmondson, D.E., Minucci, S., **Mattevi*, A**. , Mai, A. (2010) Biochemical, Structural, and Biological

Evaluation of Tranylcypromine Derivatives as Inhibitors of Histone Demethylases LSD1 and LSD2. *J. Am. Chem. Soc.* **132**, 6827-6833

109. Rohayem, J., Bergmann, M., Gebhardt, J., Gould, E., Tucker, P., **Mattevi, A**., Unge, T., Hilgenfeld, R., Neyts, J. (2010) Antiviral strategies to control calicivirus infections. *Antiviral Res*. **87**, 162-178

110. Orru, R., Torres Pazmiño, D.E., Fraaije, M.W., **Mattevi*, A**. (2010) Joint-functions of protein residues and NADP(H) in oxygen-activation by flavin-containing monooxygenase. *J. Biol. Chem.* **285**, 35021-35028

111. Bonivento, D., Milczek, E.M., McDonald, G.R., Binda, C., Holt, A., Edmondson, D.E., **Mattevi*, A**. (2010) Potentiation of ligand binding through cooperative effects in monoamine oxidase B. *J. Biol. Chem.* **285**, 36849-36856

112. Baron, R., Binda, C., Tortorici, M., McCammon, J.A., **Mattevi*, A**. (2011) Molecular Mimicry and Ligand Recognition in Binding and Catalysis by the Histone Demethylase LSD1 – CoREST Complex. *Structure* **19**, 212-220

113. Binda, C., Aldeco, M., **Mattevi*, A**., Edmondson DE. (2011) Interactions of Monoamine Oxidases with the Antiepileptic Drug Zonisamide: Specificity of Inhibition and Structure of the Human Monoamine Oxidase B Complex. *J. Med. Chem.*, **54**, 909-912.

114. Kopacz, M.M., Rovida, S., van Duijn, E., Fraaije, M.W., **Mattevi*, A**. (2011) Structure-based redesign of cofactor binding in putrescine oxidase. *Biochemistry* **50**, 4209-4217.

115. Thotsaporn, K., Chenprakhon, P., Sucharitakul, J., **Mattevi, A**., Chaiyen, P., (2011) Stabilization of C4A-hydroperoxy-flavin in a two-component flavin-dependent monooxygenase is achieved through interactions at flavin N5 and C4a atoms. *J. Biol. Chem.* **286**, 28170-28180

116. Orru, R., Dudek, H.M., Martinoli, C., Torres Pazmino, D.E., Royant, A., Weik, M., Fraaije, M.W., **Mattevi*, A**. (2011) Snapshots of enzymatic baeyer-villiger catalysis: oxygen activation and intermediate stabilization. *J. Biol. Chem.* **286**, 29284-29291

117. Binda, C., **Mattevi, A**., Edmondson, DE. (2011) Structural properties of human monoamine oxidases A and B. *Int. Rev. Neurobiol*. **100**, 1-11.

118. Binda, C., Milczek, E.M., Bonivento, D., Wang, J., **Mattevi, A**., Edmondson, D.E. (2011) Lights and shadows on monoamine oxidase inhibition in neuroprotective pharmacological therapies. *Curr. Top. Med. Chem*. **11**, 2788-2796

119. Milczek, E.M., Binda, C., Rovida, S., **Mattevi, A**., Edmondson, D.E. (2011) The "gating" residues Ile199 and Tyr326 in human monoamine oxidase B function in substrate and inhibitor recognition. *FEBS J*., **278**, 4860-4869

120. Binda, C., Aldeco, M., Geldenhuys, W.J., Tortorici, M., **Mattevi*, A**., Edmondson, D.E. (2012) Molecular Insights into Human Monoamine Oxidase B Inhibition by the Glitazone Antidiabetes Drugs. *ACS Med. Chem. Letters*, **3**, 39-42.

121. Franceschini, S. ,van Beek, H.L., Pennetta, A., Martinoli, C., Fraaije, M..W., **Mattevi*, A**. (2012) Exploring the structural basis of substrate preferences in Baeyer-Villiger monooxygenases: Insight from steroid monooxygenase. *J. Biol. Chem.* **287**, 22626-22634

122. Neres, J., Pojer, F., Molteni, E., Chiarelli, L.R. Dhar, N., Boy-Röttger, S., Buroni, S., Fullam, E. Degiacomi, G., Lucarelli, A., Read, R.J., Zanoni, G., Edmondson, D.E., De Rossi, E., Pasca, M., McKinney, J.D., Dyson, P.J., Riccardi, G., **Mattevi, A**., Cole, S.T., Binda, C. Structural basis for benzothiazinone-mediated killing of *Mycobacterium tuberculosis*. *Science Trans. Medicine* **4**, 150ra121

123. Chaiyen, P., Fraaije, M.W., **Mattevi*, A**. (2012) The enigmatic reaction of flavins with oxygen. *Trends Biochem. Sci.* **37**, 373-380

124. Franceschini, S., Fedkenheuer, M., Vogelaar, N.J., Robinson, H.H., Sobrado, P., **Mattevi*, A**.. (2012) Structural Insight into the Mechanism of Oxygen Activation and Substrate Selectivity of Flavin-Dependent N-Hydroxylating Monooxygenases. *Biochemistry* **51**, 7043-7045.

125. Nenci, S., Piano, V., Rosati, S., Alverti, A., Pandini, V., Fraaije, M.W., Heck, A.J.R., Edmondson, D.E., **Mattevi*, A**. (2012) The precursor of ether phospholipids is synthesized by a flavoenzyme through covalent catalysis. *Proc. Natl. Acad. Sci. USA*, **109**, 18791-18796

126. Dijkman, W.P., de Gonzalo, G., **Mattevi, A**., Fraaije, M.W. (2013) Flavoprotein oxidases: classification and applications. *Appl. Microbiol. Biotechnol*. **97**, 5177-5188

127. Tortorici, M., Borrello, M.T., Tardugno, M., Chiarelli, L.R., Pilotto, S., Ciossani G., Vellore, N.A., Bailey, S.G., Cowan, J., O'Connell, M., Crabb, S.J., Packham, G., Mai, A., Baron, R., Ganesan, A., **Mattevi*, A**. (2013) Protein recognition by small peptide reversible inhibitors of the chromatin-modifying LSD1/CoREST lysine demethylase. *ACS Chem. Biol.* **8**, 1677-1682

128. Montersino, S., Orru, R., Barendregt, A., Westphal, A.H., van Duijn, E., **Mattevi, A**., van Berkel, W.J. (2013) Crystal structure of 3-hydroxybenzoate 6-hydroxylase uncovers lipid-assisted flavoprotein strategy for regioselective aromatic hydroxylation. *J. Biol. Chem*. **288**, 26235-26245

129. Robertson, J.C., Hurley, N.C., Tortorici, M., Ciossani, G., Borrello, M.T., Vellore, N.A.,Ganesan, A., **Mattevi*, A**.., Baron, R. (2013) Expanding the Druggable Space of the LSD1/CoREST Epigenetic Target: New Potential Binding Regions for Drug-Like Molecules, Peptides, Protein Partners, and Chromatin. *PLoS Comput. Biol*. **9**, e1003158

130. Bach, R.D., **Mattevi*, A**. (2013) Mechanistic Aspects Regarding the Elimination of H_2O_2 from C(4a)-hydroperoxyflavin. The Role of a Proton Shuttle Required for H_2O_2 Elimination. *J. Org. Chem*. **78**, 8585-8593

131. Riccardi, G., Pasca, M.R., Chiarelli, L.R., Manina, G., **Mattevi, A**., Binda C. (2013) The DprE1 enzyme, one of the most vulnerable targets of *Mycobacterium tuberculosis*. *Appl. Microbiol. Biotechnol*. **97**, 8841-8848

132. Toffolo, E., Rusconi, F., Paganini, L., Tortorici, M., Pilotto, S., Heise, C., Verpelli, C., Tedeschi, G., Maffioli, E., Sala, C., **Mattevi, A**., Battaglioli, E. (2013) Phosphorylation of neuronal Lysine-Specific Demethylase 1LSD1/KDM1A impairs transcriptional repression by regulating interaction with CoREST and histone deacetylases HDAC1/2. *J. Neurochem.* **128**, 603-616.

133. Martinoli, C., Dudek, H.M., Orru, R., Edmondson, D.E., Fraaije, M.W., **Mattevi*, A**. (2013) Beyond the Protein Matrix: Probing Cofactor Variants in a Baeyer–Villiger Oxygenation Reaction *ACS Catal*. **3**, 3058−3062

134. Rotili, D., Tomassi, S., Conte, M., Benedetti, R., Tortorici, M., Ciossani, G., Valente, S., Marrocco, B., Labella, D., Novellino, E., **Mattevi, A**., Altucci, L., Tumber, A., Yapp, C., King, O.N., Hopkinson, R.J., Kawamura, A., Schofield, C.J., Mai, A. (2014) Pan-Histone Demethylase Inhibitors Simultaneously Targeting Jumonji C and Lysine Specific Demethylases Display High Anticancer Activities. *J. Med. Chem*. 2014 **57**, 42-55

135. Esteban, G., Allan, J., Samadi, A., **Mattevi, A**., Unzeta, M., Marco-Contelles, J., Binda, C., Ramsay, R.R. (2014) Kinetic and structural analysis of the irreversible inhibition of human monoamine oxidases by ASS234, a multi-target compound designed for use in Alzheimer's disease. *Biochim. Biophys. Acta* **1844**, 1104-1110

136. Barrios, A.P., Gómez, A.G., Sáez, J.E., Ciossani, G., Toffolo, E., Battaglioli, E., **Mattevi*, A**., Andres, M.E. (2014) Differential properties of transcriptional complexes formed by the CoREST family. *Mol. Cell. Biol*. **34**, 142760-142770

137. Vianello, P., Botrugno, O., Cappa, A., Ciossani, G., Dessanti, P., Mai, A., **Mattevi, A.**, Meroni, G., Minucci, S., Thaler, F., Tortorici, M., Trifiró, P., Valente, S., Villa, M., Varasi, M., Mercurio, C. (2014) Synthesis, Biological Activity and Mechanistic Insights of 1-Substituted Cyclopropylamine Derivatives: a Novel Class of Irreversible Inhibitors of Histone Demethylase KDM1A. *Eur. J. Med*. **86**, 352-363

138. Brondani, P.B., Dudek, H.M., Martinoli, C., **Mattevi*, A**., Fraaije, M.W. (2014) Finding the Switch: Turning a Baeyer-Villiger Monooxygenase into a NADPH Oxidase. *J. Am. Chem. Soc*. **136**, 16966-169966

139. Valente, S., Rodriguez, V., Mercurio, C., Vianello, P., Saponara, B., Cirilli, R., Ciossani, G., Labella, D., Marrocco, B., Ruoppolo, G., Botrugno, O.A., Dessanti, P., Minucci, S., **Mattevi, A**., Varasi, M., Mai A. (2015) Pure Diastereomers of a Tranylcypromine-based LSD1 Inhibitor: Enzyme Selectivity and In Cell Studies *ACS Med. Chem. Lett*. **6**, 173–177

140. Pilotto, S., Speranzini, V., Tortorici, M., Durand, D., Fish, A., Valente, S., Forneris, F. , Mai, A., Sixma T.K., Vachette, P., **Mattevi*, A**. (2015) Interplay between nucleosomal DNA, histone tails and CoREST underlies LSD1-mediated H3 demethylation *Proc. Natl. Acad. Sci. USA* **112**, 2752-2757

141. Dijkman, W.P., Binda, C., Fraaije, M.W., **Mattevi*, A**. (2015) Structure-based enzyme tailoring of 5-hydroxymethylfurfural oxidase. *ACS Catal.* **5**, 1833–1839

142. Rodriguez, V., Valente, S., Rovida, S., Rotili, D., Stazi, G., Lucidi, A., Ciossani, G., **Mattevi, A**., Botrugno, O.A., Dessanti, P., Mercurio, C., Vianello, P., Minucci, S., Varasi, M., Mai, A. (2015) Pyrrole- and indole-containing tranylcypromine derivatives as novel lysine-specific demethylase 1 inhibitors active on cancer cells *Med. Chem. Comm*. **6**, 665–670

143. Valente, S., Rodriguez, V., Mercurio, C., Vianello, P., Saponara, B., Cirilli, R., Ciossani, G., Labella, D., Marrocco, B., Monaldi, D., Ruoppolo, G., Tilset, M., Botrugno, O.A., Dessanti, P., Minucci, S., **Mattevi, A**., Varasi, M., Mai, A. (2015) Pure enantiomers of benzoylamino-tranylcypromine: LSD1 inhibition, gene modulation in human leukemia cells and effects on clonogenic potential of murine promyelocytic blasts. *Eur. J. Med*. **94**, 163-174.

144. Binda, C., Robinson, R.M., Martin Del Campo J.S., Keul, N.D., Rodriguez, P.J., Robinson, H.H., **Mattevi*, A**., Sobrado, P. (2015) An Unprecedented NADPH Domain Conformation in Lysine Monooxygenase NbtG Provides Insights Into Uncoupling of Oxygen Consumption From Substrate Hydroxylation. *J. Biol. Chem*. **290**, 12676-12688

145. **Mattevi, A***. (2015) Dealing with oxygen using bare hands. *FEBS J*. **282**, 3259-3261

146. Piano, V., Benjamin, D.I., Valente, S., Nenci, S., Marrocco, B., Mai, A., Aliverti, A., Nomura, D.K., **Mattevi, A*** (2015). Discovery of Inhibitors for the Ether Lipid-Generating Enzyme AGPS as Anti-Cancer Agents. *ACS Chem Biol*. **10**, 2589-2597.

147. Vianello, P., Botrugno, O.A., Cappa, A., Dal Zuffo, R., Dessanti, P., Mai, A., Marrocco, B., **Mattevi, A**., Meroni, G., Minucci, S., Stazi, G., Thaler, F., Trifiró, P., Valente, S., Villa, M., Varasi, M., Mercurio, C. (2016) Discovery of a Novel Inhibitor of Histone Lysine-Specific Demethylase 1A (KDM1A/LSD1) as Orally Active Antitumor Agent. *J. Med. Chem*. **59**, 1501-17.

148. Speranzini, V., Pilotto, S., Sixma, T.K., **Mattevi A**.* (2016) Touch, act and go: landing and operating on nucleosomes. *EMBO J*. **35**, 376-88.

149. Fiorentini, F., Geier, M., Binda, C., Winkler, M., Faber, K., Hall, M., **Mattevi A**.* (2016) Biocatalytic Characterization of Human FMO5: Unearthing Baeyer-Villiger Reactions in Humans. *ACS Chem. Biol*. **11**, 1039-1048

150. Pilotto, S., Speranzini, V., Marabelli, C., Rusconi, F., Toffolo, E., Grillo, B., Battaglioli, E., **Mattevi, A.*** (2016) LSD1/KDM1A mutations associated to a newly described form of intellectual disability impair demethylase activity and binding to transcription factors. *Hum. Mol. Genet*. [Epub ahead of print]

151. Savino, S., Ferrandi, E.E., Forneris, F., Rovida, S., Riva, S., Monti, D., **Mattevi A.*** (2016) Structural and biochemical insights into 7β-hydroxysteroid dehydrogenase stereoselectivity. *Proteins* **84**, 859-65

152. Nguyen, Q.T., de Gonzalo, G., Binda, C., Rioz-Martínez, A., **Mattevi, A.*,** Fraaije, M.W. (2016) Biocatalytic Properties and Structural Analysis of Eugenol Oxidase from Rhodococcus jostii RHA1: A Versatile Oxidative Biocatalyst. *Chembiochem* **17**, 1359-66

153. Rotili, D., **Mattevi, A**.* (2016) At Long Last Potent and Selective KDM5 Inhibitors. *Cell Chem. Biol*. **23**, 749-51

154. Marabelli, C., Marrocco, B., **Mattevi, A.*** (2016) The growing structural and functional complexity of the LSD1/KDM1A histone demethylase. *Curr. Opin. Struct. Biol*. **41**, 135-144.

155. Speranzini, V., Rotili, D., Ciossani, G., Pilotto, S., Marrocco, B., Forgione, M., Lucidi, A., Forneris, F., Mehdipour, P., Velankar, S., Mai, A., **Mattevi, A**.* (2016) Polymyxins and quinazolines are LSD1/KDM1A inhibitors with unusual structural features *Science Adv.* **2**, e1601017

156. Romero, E., Castellanos, J.R., **Mattevi, A**.*, Fraaije, M.W. (2016) Characterization and Crystal Structure of a Robust Cyclohexanone Monooxygenase. *Angew. Chem. Int. Ed. Engl.* [Epub ahead of print]

157. Piano, V., Nenci, S., Magnani, F., Aliverti, A., **Mattevi, A**.* (2016) Recombinant human dihydroxyacetonephosphate acyl-transferase characterization as an integral monotopic membrane protein. *Biochem. Biophys. Res. Commun*. **481**, 51-58.

INVITED LECTURES AND SEMINARS

-"The structure of human monoamine oxidase B", at the "14th International Symposium on Flavins and Flavoproteins", Cambridge 14-18 July 2002
-"Structure of human monoamine oxidase B, a neurological drug-target", at the "XIX Congress of the International Uninion of Crystallography", Geneva 6-15 August 2002
-"Structural Biology", at "Molecole e malattie", Accademia Nazionale Dei Lincei - Rome, 20-22 February 2003
-"Dissecting the structure of monoamine oxidase, a target in the treatment of neurological disorders", EMBL Heidelberg, 26 March 2003
-"Dissecting the structure of monoamine oxidase, a target in the treatment of neurological disorders", at the "9th Bijvoet Tutorial Symposium", Utrecht, 27-27 March 2003
-"Structural studies on membrane-bound human monoamine oxidase", at the "European Workshop on Crystallography of Biological Macromolecules", Como, 12-15 May 2003

-“Dissecting the three-dimensional structure of human monoamine oxidase B”, Emory University, Atlanta, 31 July 2003
-“Dissecting the three-dimensional structure of human monoamine oxidase B”, Pfizer Research Institute, Groton (CT), 5 August 2003
-“From structure to enzyme function” at “EMBO YIP PhD Course 2003”, EMBL Heidelberg, 3-9 September 2003
-“Structure of human outer-mitochondrial monoamine oxidase B at 1.7 A resolution” at “5° Congresso FISV, Rimini 10-13 September 2003.
-“Structural studies on monoamine oxidases”, University of Freiburg, 28 November 2003.
-“Dissecting the structure of monoamine oxidase, a target in the treatment of neurological disorders”, at ESRF Grenoble, 18 December 2003
-"Enzymes acting on biogenic amines", EMBL-Hamburg, 22 April 2004
-"Enzymes acting on biogenic amines", IRBM-Rome, 19 May 2004
-"Membrane and drug binding of human monoamine oxidases", at "Structural biology workshop", ETH Zurich, 15-16 June 2004
-"Monoamine Oxidases", Virginia Tech, Blaksburg USA, 15 July 2004.
-"Structural studies on human monoamine oxidases", at "Amine oxidases: function and dysfunction", University of St Andrews, Scotland 25-29 July 2004
-"Structural studies on human monoamine oxidases" at "22nd European Crystallographic Meeting", Budapest, Hungary, 26-31 August 2004
-"Structural studies on human monoamine oxidases" at "From Structural Genomics to Drug Discovery", University of Parma, September 27-28, 2004.
-“Medicial Chemistry of monoamine oxidases” at Biotechnology Center, University of Madrid, November 30, 2004.
-“Structure of the Human Outer-Mitochondrial Membrane Monoamine Oxidase B: New Chemical Implications” at “7th International Conference AD/PD 2005”, Sorrento Italy, March 9-12 2005
-"Structural studies on human monoamine oxidases" at "15th International Symposium on Flavins and Flavoproteins", Yokohama (Japan), April 17-22 2005
-“Amine oxidase, from neurotransmitter metabolism to chromatin remodelling”, University of Padova Italy, 1 June 2005
-“Amine oxidase, from neurotransmitter metabolism to chromatin remodelling”, 18 National Meeting of PhD students in Biochemistry and related disciplines, Brallo (Italy) 7-10 June 2005.
-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, 12 July 2005. Wake Forest University, Winston-Salem, North Carolina (USA).
-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, 15 July 2005. Dept. Biochemistry, University of Toronto (Canada).
-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, 23 September 2005. Dept. Biochemistry, University of Uppsala (Sweden).
-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, Annual Meeting of the Italian Society for Biochemistry, Riccione (Italy) 28-30 September 2005.
-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, Annual Meeting of the Dutch Society for Biochemistry (Protein Group), Lunteren (NL) 10-12 December 2005.
-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, 13 December 2005. Dept. of Chemistry, University of Leipzig (Germany).
-“Biologia strutturale, enzimi e farmaci”, 23 February, Accademia dei Lincei, Rome (Italy)”
-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, 9 March 2006. Max Planck Institute Frankfurt (Germany)

-“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, 2 June 2006. Meeting “Proteine2006”, Novara (Italy) -“Amine oxidases, from neurotransmitter metabolism to chromatin remodelling”, 14 July 2006. Dept. of Biochemistry Michigan University, Milwaukee (USA)
-“Oxygen reactivity in flavoenzymes: oxidases vs monooxygenases”, 15-21 July 2006 Gordon Conference on Enzymes, Coenzymes and Metabolic Pathways
-“Oxygen reactivity in flavoenzymes: oxidases vs monooxygenases”, 6 October 2006 Meeting in honour of Prof. B. Curti, University of Milano (Italy).
-“Biomedically relevant flavin-dependent oxidases”, 28 January 2007. Dept. of Biochemistry, Emory University, Atlanta (USA).
-“Amine Oxidases: From Neurotransmitter Metabolism to Chromatin Remodelling”, 24 March 2007, ZMBH, University of Heidelberg (Germany).
-“Amine Oxidases: From Neurotransmitter Metabolism to Chromatin Remodelling”, 30 May 2007, MRC Unit, Cambridge (UK).
-“Amine Oxidases: From Neurotransmitter Metabolism to Chromatin Remodelling”, 7 May 2008, Mahidol University, Bangkok (Thailand).
-“Lysine-specific histone demethylase (LSD1): oxidative chemistry for chromatin remodelling”, SIBBM Meeting, 16 May 2008, Milano (Italy)
-“The problem of oxygen reactivity in flavoenzymes”, 16th Symposium on Flavins and Flavoproteins, 8-13 May 2008, Jaca (Spain)
-“The problem of oxygen reactivity in flavoenzymes”, Dept. of Biochemistry, Georgia State University, Atlanta (USA), 22 July 2008
-“Monoamine Oxidases and LSD1: similar chemistry for neutroansmitter metabolism and chromatin remodelling” XXI Congress of the International Union of Crystallography” Osaka (Japan) 23-31 August 2008
-“The biotechnological potential of structural biology” 1st Joint AIC-SIMP meeting, Sestri Levante (Italy) 7-12 September 2008
-“Monoamine oxidases and LSD1: Similar chemistry for neurotransmitter metabolism and chromatin remodeling”, Ann Arbor – Michigan University (USA), 24 October 2008
-“Investigating the oxygen reactivity of flavoenymes”, 2nd International Interdisciplinary Conference on Vitamins, Coenzymes, and Biofactors, Athens (USA), 26-31 October 2008
-“Monoamine oxidases and LSD1: Similar chemistry for neurotransmitter metabolism and chromatin remodeling”, University of Groningen (NL), 19 December 2008
-“Monoamine oxidases and LSD1: Similar chemistry for neurotransmitter metabolism and chromatin remodeling”, University “La Sapienza” of Rome (I), 13 March 2009
-“Monoamine oxidases and LSD1: Similar chemistry for neurotransmitter metabolism and chromatin remodeling”, Karolinksa Institute Stockholm, (Sweden), 24 September 2009
- “Una reazione chimica al servizio di processi biologici diversi”, Istituto Lombardo, Accademia di Scienze e di Lettere Milano, 8 Ottobre 2009
-“Tackling the oxygen reactivity in oxidase and monooxygenases: a structural analysis and its relevance in biocatalytic applications” Padova (Italy)19 February 2010
–“Oxygen reactivity in flavoenzymes” at Trends in Enzymology, Ascona (CH) 13-17 June 2010
–“Oxygen reactivity in enzymes” at the European Congress of Crystallography, Darmstadt (D) 29 August -3 September 2010
-“Monoamine oxidases and LSD1: Similar chemistry for neurotransmitter metabolism and chromatin remodeling”, Abano Terme (Italy) XX National Meeting on Medicinal Chemistry, 12-16 September 2010
-“ L’organismo vivente: un laboratorio chimico” at Istituto Lombardo Accademia di Scienze e Lettere Milano (I) 16 December 2010

-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes”, Blacksburg – Virginia Tech (USA) 1 April 2011
-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes”, University of California San Diego (USA) 4 April 2011
-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes”, University of Nebraska at Lincoln (USA) 6 April 2011
-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes”, University of Gottingen/Max Plank Institute for Biophysics (Germany) 19 May 2011
- “Catalysis and combinatorial assembly of histone demethylase LSD1 complexes”, World International Congress of Crystallography, Madrid (Spain) 23-31 August 2011
-“Structural Biochemistry of Chromatin Protein Complexes and Epigenetic Therapies”, From Elementary Chemical Processes to Complex Biological Structures for the Benefit of Life and Human Health - A Scientific Day for the International Council for Science, Florence (Italy), 23 September 2011
-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes” University of Salerno (Italy), 24 October 2011
-“ L’organismo vivente: un laboratorio chimico” at Festival delle Scienze, Cagliari (Italy) 12 November 2011
-“The oxygen reactivity of flavoenzymes”, Zing Conference on Enzymes, Coenzymes, and Metabolic pathways (Mexico), 17-21 November 2011
-“The oxygen reactivity of flavoenzymes”, Politecnico di Milano (Italy), 30 November 2011
-“The oxygen reactivity of flavoenzymes”, Zing Conference on Enzymes, Coenzymes, and Metabolic pathways (Mexico), 17-21 November 2011
-"Structural and spectroscopic observation of an enzyme at work", ESRF (Grenoble, France) 8 February 2012
-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes” DIBIT (Milano-Italy), 26 March 2012
-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes” COST-EU Meeting “Epigenetics: Bench to Bedside” (Riga-Latvia), 26 April 2012
-“Catalysis and combinatorial assembly of histone demethylase LSD1 complexes” University Vita e Salute (Milano-Italy), 3 May 2012
-“Structure and function of LSD1” University “La Sapienza” (Rome-Italy), 29 May 2012
-“Monoamine oxidase inhibitors” at “Present and Future Methods for Biomolecluar crystallography” Erice (Italy) 2-10 June 2012
-“Structural studies in Pavia” at “Protein structures: from methods via structure to drug-design” Royal Society, Amsterdam (NL), 4-5 September 2012
-“Reactivity of flavoenzymes with oxygen” at EMBO Workshop on “Catalytic Mechanisms by Biological Systems, Groningen (NL), 7-11 October 2012
-“Reactivity of flavoenzymes with oxygen” Austrian Consortium of Biocatalysis, Wien (A), 15 November 2012
-“A journey from neurotransmitter metabolism to epigenetics” Technical University, Graz (A), 6 December 2012
-“A journey from neurotransmitter metabolism to epigenetics” Huntsman Cancer Institute, University of Utah. 19 February 2013
-“Flavins, oxyges, and drugs in biological processes” Department of Medicinal Chemistry, University of Utah. 20 February 2013
-“A journey from neurotransmitter metabolism to epigenetics” Centre for Biotechnological and Agricultural Research, University of Olomouc (CZ) 28 February 2013
-“Structural biology and medicinal chemistry of LSD1”, European Epigen School - Rome, 23 May 2013

-“The biocatalytic potential of oxygen reactivity in enzymes”, BIOTRANS2013 – Manchester (UK), 21-25 July 2013
-“Protein-protein interactions in the chromatin and drug-design: the case if LSD1” Institute of Cancer Research (London, UK), 4 September 2013
-“The biocatalytic potential of oxygen reactivity in enzymes“, Italian Forum on Industrial Biotechnology and Bioeconomy – IFIB – Naples, 22 October 2013
-“Flavins, oxyges, and drugs in biological processes” School of Pharmacy, Qatar University (Doha, QA), 7 November 2013
-“Cristallografia e Molecole della Vita” (“Crystallography and Molecules of Life”), Istituto Lombardo – Accademia di Scienze e Lettere, 20 March 2014
-"Catalysis and combinatorial assembly of histone-modifying protein complexes", University “La Sapienza” Rome, 16 May 2014
-“The biocatalytic potential of oxygen-reacting enzymes” Plenary lecture at Oxizyme Meeting - Wien 1-4 July 2014
-“Progress on LSD1 Histone demethylases” Plenary closing lecture at the 18th International Symposium on Flavins and Flavoproteins - Thailand July 27 – August 1 2014
-"Ideas for drug targeting histone-modifying protein complexes", Astex Cambridge (UK), 15 September 2014
-"Catalysis and combinatorial assembly of histone-modifying protein complexes", Max Planck Institute for Molecular Physiology Dortmund (D), 23 September 2014
-“Frontiers in cancer research” I giorni della ricerca (Research Days of the Italian Association of Cancer Research), University of Trento (I), November 6 2014
-"Catalysis and combinatorial assembly of histone-modifying protein complexes", II° Workshop on Structural Biology and Nanophysiology, Santiago de Chile (CL), 11 December 2014
-“Mechanisms of oxidative histone demethylation and nucleosome recognition by histone demethylases” First International ROS meeting, Munich (D), 23-25 April 2015
-“On the molecular mechanisms of chromatin modification" Plenary lecture at the 6th European Conference on Chemistry in Life Sciences. Lisbon (Pt) 9-13 June 2015
-“The biocatalytic (and drug design) potential of oxygen reactivity in enzymes“, Emory University Dept. of Chemistry, Atlanta (USA), 10 July 2015
-“Molecular recognition by flavoenzymes” Lecture at the Gordon Research Conference on “Enzymes, Coenzymes, and Metabolic Pathways”, NH USA, 19-24 July 2015
-“The biocatalytic potential of oxygen reactivity in enzymes“, Merck Research Center, Rahway, New Jersey (USA), 20 July 2015
-“Molecular mechanisms of nucleosome recognition and drug design”, Nerviano Biomedical Center, Nerviano (I), 18 October 2015
-“Molecular mechanisms of nucleosome recognition”, Karolinska Institute, Stockholm (S), 18 December 2015
-“From epigenetics to biocatalysis: stuctural biology in drug design and biotechnology”, Scuola Superiore SantAnna, Pisa (I), 3 Febbraio 2016.
-Stucture, molecules, epi-drugs” EU-school on “Chromatin, Epigenome and Drug Discovery”, Naples (I), 21-23 March 2016.
-“On the mechanisms of chromatin modification”, University of Milan (I), 12 April 2016
-“On the mechanisms of chromatin modification”, CNR Institute, Naples (I), 27 April 2016
-“From epigenetics to biocatalysis: stuctural biology in drug design and biotechnology”, University of Modena (I), 8 June 2016
-“Nucleosome recognition and inhibitor targeting of histone demethylase complexes”, Columbia University, New York (USA), 22 July 2016

-“From epigenetics to biocatalysis: structural biology in drug design and biotechnology”, Symposium in the occasion of the awarding of the honoris causa doctorate in biochemistry to Wayne Hendrickson, Rome, 19 September 2016
-“The biocatalytic and drug-discovery potential of the oxygen reactivity”, Aachen Symposium in Protein Engineering, Aachen (D), 21-23 September 2016.