

## 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 *Pseudomonas 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<sup>+</sup> 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 *Pseudomonas 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., Teplyakov, 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 NH<sub>3</sub>-dependent NAD<sup>+</sup> synthetase from *Bacillus subtilis*. *EMBO J.* **15**, 5125-5134.
20. **Mattevi, A.**, Fraaije, 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, W.J.H. (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<sup>+</sup> 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.* **D59**, 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 conformation 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 monotonically 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., Mattioli, 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., Mattioli, 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. Karytinis, 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 Å 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., Karytinis, 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<sub>2</sub>O<sub>2</sub> from C(4a)-hydroperoxyflavin. The Role of a Proton Shuttle Required for H<sub>2</sub>O<sub>2</sub> 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 tranlycypromine 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-tranlycypromine: 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.* **25**, 2578-2587

151. Savino, S., Ferrandi, E.E., Forneris, F., Rovida, S., Riva, S., Monti, D., **Mattevi A.\*** (2016) Structural and biochemical insights into 7 $\beta$ -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.
158. Rusconi, F., Grillo, B., Toffolo, E., **Mattevi, A.**, Battaglioli, E. (2017) NeuroLSD1: Splicing-Generated Epigenetic Enhancer of Neuroplasticity. *Trends Neurosci.* **40**, 28-38.
159. Nguyen, Q.T., Trinco, G., Binda, C., **Mattevi, A.\***, Fraaije, M.W. (2017) Discovery and characterization of an F(420)-dependent glucose-6-phosphate dehydrogenase (Rh-FGD1) from *Rhodococcus jostii* RHA1. *Appl. Microbiol. Biotechnol.* [Epub ahead of print].
160. Fürst, M.J., Savino, S., Dudek, H.M., Gómez Castellanos, J.R., Gutiérrez de Souza, C., Rovida, S., Fraaije, M.W., **Mattevi, A.\*** (2017) Polycyclic Ketone Monooxygenase from the Thermophilic Fungus *Thermothelomyces thermophila*: A Structurally Distinct Biocatalyst for Bulky Substrates. *J. Am. Chem. Soc.* **139**, 627-630
161. Vianello, P., Sartori, L., Amigoni, F., Cappa, A., Fagá, G., Fattori, R., Legnaghi, E., Ciossani, G., **Mattevi, A.**, Meroni, G., Moretti, L., Cecatiello, V., Pasqualato, S., Romussi, A., Thaler, F., Trifiró, P., Botrugno, O.A., Villa, M., Dessanti, P., Minucci, S., Vultaggio, S., Zagarrí, E., Varasi, M., Mercurio C. (2017) Thieno[3,2-b]pyrrole-5-

carboxamides as New Reversible Inhibitors of Histone Lysine Demethylase KDM1A/LSD1. Part 2: Structure Based Drug Design and Structure-Activity Relationship. *J. Med. Chem.* **60**, 1693-1715

162. Sartori, L., Mercurio, C., Amigoni, F., Cappa, A., Fagá, G., Fattori, R., Legnagli, E., Ciossani, G., **Mattevi, A.**, Meroni, G., Moretti, L., Cecatiello, V., Pasqualato, S., Romussi, A., Thaler, F., Trifiró, P., Villa, M., Vultaggio, S., Botrugno, O.A., Dessanti, P., Minucci, S., Zagarrí, E., Caretoni, D., Iuzzolino, L., Varasi, M., Vianello P. (2017) Thieno[3,2-b]pyrrole-5-carboxamides as New Reversible Inhibitors of Histone Lysine Demethylase KDM1A/LSD1. Part 1: High Throughput Screening and Preliminary Exploration. *J. Med. Chem.* **60**, 1673-1692
163. Forneris, F., **Mattevi, A.\*** (2017) Expanding the structural biology toolbox with single-molecule holography. *Proc. Natl. Acad. Sci. USA.* **114**, 1448-1450
164. Vetro, A., Savasta, S., Russo Raucci, A., Cerqua, C., Sartori, G., Limongelli, I., Forlino, A., Maruelli, S., Perucca, P., Vergani, D., Mazzini, G., **Mattevi, A.**, Stivala, L.A., Salviati, L., Zuffardi, O. (2017) MCM5: a new actor in the link between DNA replication and Meier-Gorlin syndrome. *Eur. J. Hum. Genet.* **25**, 646-650.
165. Piano, V., Palfey, B.A., **Mattevi, A.\*** (2017) Flavins as Covalent Catalysts: New Mechanisms Emerge. *Trends Biochem. Sci.* **42**, 457-469
166. Kumar, H, Nguyen, Q.T., Binda, C., **Mattevi A**, Fraaije, M.W. (2017) Isolation and characterization of a thermostable F(420):NADPH oxidoreductase from *Thermobifida fusca*. *J. Biol. Chem.* **292**, 10123-10130
167. Tavanti, M., Parmeggiani, F., Gómez Castellanos, J.R., **Mattevi, A.\***, Turner, N.J. (2017) One-pot Biocatalytic Double Oxidation of  $\alpha$ -Isophorone for the Synthesis of Ketoisophorone *ChemCatChem*, Accepted manuscript online.
168. Esposito, M., Szadocka, S., Degiacomi, G., Orena, B.S., Mori, G., Piano, V., Boldrin, F., Zemanova, J., Huszár, S., Barros, D., Ekins, S., Lelièvre, J., Manganelli, R., **Mattevi, A.**, Pasca, M.R., Riccardi, G., Ballell, L., Mikušová, K., Chiarelli, L.R. (2017) A phenotypic based target screening approach delivers new antitubercular CTP synthetase inhibitors. *ACS Infect. Dis.* **3**, 428-437
169. Magnani, F., Nenci, S., Millana Fananas, E., Ceccon, M., Romero, E., Fraaije, M.W., Mattevi, A. (2017) Crystal structures and atomic model of NADPH oxidase. *Proc. Natl. Acad. Sci. USA* **114**, 6764-6769.
170. Montersino, S., Te Poele, E., Orru, R., Westphal, A.H., Barendregt, A., Heck, A.J.R., van der Geize, R., Dijkhuizen, L., **Mattevi, A.**, van Berkel, W.J.H. (2017) 3-Hydroxybenzoate 6-Hydroxylase from *Rhodococcus jostii* RHA1 Contains a Phosphatidylinositol Cofactor. *Front. Microbiol.* doi: 10.3389/fmicb.2017.01110. eCollection 2017.
171. Ewing, T.A., Fraaije, M.W., **Mattevi, A.**, van Berkel, W.J.H. (2017) The VAO/PCMH flavoprotein family. *Arch. Biochem. Biophys.* pii: S0003-9861(17)30360-0.

172. Ewing, T.A., Nguyen, Q.T., Allan, R.C., Gygli, G., Romero, E., Binda, C., Fraaije, M.W., **Mattevi, A.**, van Berkel, W.JH. (2017) Two tyrosine residues, Tyr-108 and Tyr-503, are responsible for the deprotonation of phenolic substrates in vanillyl alcohol oxidase. *J. Biol. Chem.* pii: jbc.M117.778449.
173. Speranzini, V., Ciossani, G., Marabelli, C., **Mattevi, A.\*** (2017) Probing the interaction of the p53 C-terminal domain to the histone demethylase LSD1. *Arch. Biochem. Biophys.* pii: S0003-9861, 30403-30404.
174. Fiorentini, F., Romero, E., Fraaije, M.W., Faber, K., Hall, M., **Mattevi A.\*** Baeyer-Villiger Monooxygenase FMO5 as Entry Point in Drug Metabolism. *ACS Chem. Biol.* [Epub ahead of print]