Vaclav Martinek

List of Publications by Year
in descending order

50 papers	1,690 citations	331670 21 h-index	289244 40 g-index
52 all docs	52 docs citations	52 times ranked	1759 citing authors

#	Article	IF	Citations
1	Homozygous missense mutation in UQCRC2 associated with severe encephalomyopathy, mitochondrial complex III assembly defect and activation of mitochondrial protein quality control. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2021, 1867, 166147.	3.8	11
2	<i>In Vivo</i> Metabolism of Aristolochic Acid I and II in Rats Is Influenced by Their Coexposure. Chemical Research in Toxicology, 2020, 33, 2804-2818.	3.3	10
3	Identification of Human Enzymes Oxidizing the Anti-Thyroid-Cancer Drug Vandetanib and Explanation of the High Efficiency of Cytochrome P450 3A4 in its Oxidation. International Journal of Molecular Sciences, 2019, 20, 3392.	4.1	13
4	Kinetic analysis of a globin-coupled diguanylate cyclase, YddV: Effects of heme iron redox state, axial ligands, and heme distal mutations on catalysis. Journal of Inorganic Biochemistry, 2019, 201, 110833.	3.5	4
5	Heme: emergent roles of heme in signal transduction, functional regulation and as catalytic centres. Chemical Society Reviews, 2019, 48, 5624-5657.	38.1	138
6	Cytochrome b 5 plays a dual role in the reaction cycle of cytochrome P450 3A4 during oxidation of the anticancer drug ellipticine. Monatshefte FÃ¼r Chemie, 2017, 148, 1983-1991.	1.8	15
7	Comparison of the oxidation of carcinogenic aristolochic acid I and II by microsomal cytochromes P450 in vitro: experimental and theoretical approaches. Monatshefte FÃ¼r Chemie, 2017, 148, 1971-1981.	1.8	14
8	Coordination and redox stateâ€“dependent structural changes of the heme-based oxygen sensor AfGcHK associated with intraprotein signal transduction. Journal of Biological Chemistry, 2017, 292, 20921-20935.	3.4	19
9	Active Site Mutations as a Suitable Tool Contributing to Explain a Mechanism of Aristolochic Acid I Nitroreduction by Cytochromes P450 1A1, 1A2 and 1B1. International Journal of Molecular Sciences, 2016, 17, 213.	4.1	15
10	Highly conserved nucleotide phosphatase essential for membrane lipid homeostasis in <i>Streptococcus pneumoniae</i>. Molecular Microbiology, 2016, 101, 12-26.	2.5	24
11	Structural characterization of the hemeâ€based oxygen sensor, <i>Af</i>GcHK, its interactions with the cognate response regulator, and their combined mechanism of action in a bacterial twoâ€component signaling system. Proteins: Structure, Function and Bioinformatics, 2016, 84, 1375-1389.	2.6	18
12	Lipid molecules can induce an opening of membrane-facing tunnels in cytochrome P450 1A2. Physical Chemistry Chemical Physics, 2016, 18, 30344-30356.	2.8	19
13	Induced expression of microsomal cytochrome b 5 determined at mRNA and protein levels in rats exposed to ellipticine, benzo[a]pyrene, and 1-phenylazo-2-naphthol (Sudan I). Monatshefte FÃ¼r Chemie, 2016, 147, 897-904.	1.8	3
14	Membrane-Anchored Cytochrome P450 1A2â€“Cytochrome <i>b</i>₅ Complex Features an X-Shaped Contact between Antiparallel Transmembrane Helices. Chemical Research in Toxicology, 2016, 29, 626-636.	3.3	12
15	A Mechanism of O-Demethylation of Aristolochic Acid I by Cytochromes P450 and Their Contributions to This Reaction in Human and Rat Livers: Experimental and Theoretical Approaches. International Journal of Molecular Sciences, 2015, 16, 27561-27575.	4.1	32
16	Enzymes Oxidizing the Azo Dye 1-Phenylazo-2-Naphthol (Sudan I) and their Contribution to its Genotoxicity and Carcinogenicity. Current Drug Metabolism, 2015, 15, 829-840.	1.2	11
17	Ferrous and ferric state of cytochromes P450 in intact Escherichia coli cells: a possible role of cytochrome P450-flavodoxin interactions. Neuroendocrinology Letters, 2015, 36 Suppl 1, 29-37.	0.2	1
18	Mechanisms of Enzyme-Catalyzed Reduction of Two Carcinogenic Nitro-Aromatics, 3-Nitrobenzanthrone and Aristolochic Acid I: Experimental and Theoretical Approaches. International Journal of Molecular Sciences, 2014, 15, 10271-10295.	4.1	34

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19	Flexible Docking-Based Molecular Dynamics/Steered Molecular Dynamics Calculations of Proteinâ€“Protein Contacts in a Complex of Cytochrome P450 1A2 with Cytochrome <i>b</i>₅. Biochemistry, 2014, 53, 6695-6705.	2.5	17
20	Introduction of water into the heme distal side by Leu65 mutations of an oxygen sensor, YddV, generates verdoheme and carbon monoxide, exerting the heme oxygenase reaction. Journal of Inorganic Biochemistry, 2014, 140, 29-38.	3.5	11
21	Induced Expression of Cytochrome P450 1A and NAD(P)H:Quinone Oxidoreductase Determined at mRNA, Protein, and Enzyme Activity Levels in Rats Exposed to the Carcinogenic Azo Dye 1-Phenylazo-2-naphthol (Sudan I). Chemical Research in Toxicology, 2013, 26, 290-299.	3.3	23
22	Enzymes Metabolizing Aristolochic Acid and their Contribution to the Development of Aristolochic Acid Nephropathy and Urothelial Cancer. Current Drug Metabolism, 2013, 14, 695-705.	1.2	48
23	Cytochrome <i>b</i>₅ Increases Cytochrome P450 3A4-Mediated Activation of Anticancer Drug Ellipticine to 13-Hydroxyellipticine Whose Covalent Binding to DNA Is Elevated by Sulfotransferases and <i>N</i>,<i>O</i>-Acetyltransferases. Chemical Research in Toxicology, 2012, 25, 1075-1085.	3.3	34
24	Theoretical investigation of differences in nitroreduction of aristolochic acid I by cytochromes P450 1A1, 1A2 and 1B1. Neuroendocrinology Letters, 2012, 33 Suppl 3, 25-32.	0.2	10
25	Mapping of interaction between cytochrome P450 2B4 and cytochrome b5: the first evidence of two mutual orientations. Neuroendocrinology Letters, 2012, 33 Suppl 3, 41-7.	0.2	4
26	Cytochrome b5 shifts oxidation of the anticancer drug ellipticine by cytochromes P450 1A1 and 1A2 from its detoxication to activation, thereby modulating its pharmacological efficacy. Biochemical Pharmacology, 2011, 82, 669-680.	4.4	42
27	The human carcinogen aristolochic acid i is activated to form DNA adducts by human NAD(P)H:quinone oxidoreductase without the contribution of acetyltransferases or sulfotransferases. Environmental and Molecular Mutagenesis, 2011, 52, 448-459.	2.2	42
28	Comparison of activation of aristolochic acid I and II with NADPH:quinone oxidoreductase, sulphotransferases and N-acetyltranferases. Neuroendocrinology Letters, 2011, 32 Suppl 1, 57-70.	0.2	16
29	Glycosylation Protects Proteins against Free Radicals Generated from Toxic Xenobiotics. Toxicological Sciences, 2010, 117, 359-374.	3.1	19
30	DNA Duplex Stability: The Role of Preorganized Electrostatics. Journal of Physical Chemistry B, 2010, 114, 2876-2885.	2.6	32
31	Mechanisms of the Different DNA Adduct Forming Potentials of the Urban Air Pollutants 2-Nitrobenzanthrone and Carcinogenic 3-Nitrobenzanthrone. Chemical Research in Toxicology, 2010, 23, 1192-1201.	3.3	36
32	The mechanism of cytotoxicity and DNA adduct formation by the anticancer drug ellipticine in human neuroblastoma cells. Biochemical Pharmacology, 2009, 77, 1466-1479.	4.4	55
33	Linear Energy Relationships for the Octahedral Preference of Mg, Ca and Transition Metal Ions. Journal of Physical Chemistry A, 2009, 113, 3588-3593.	2.5	10
34	Mechanism of Formation of (Deoxy)guanosine Adducts Derived from Peroxidase-Catalyzed Oxidation of the Carcinogenic Nonaminoazo Dye 1-Phenylazo-2-hydroxynaphthalene (Sudan I). Chemical Research in Toxicology, 2009, 22, 1765-1773.	3.3	11
35	Preparation of a biologically active apo-cytochrome b5 via heterologous expression in Escherichia coli. Protein Expression and Purification, 2009, 66, 203-209.	1.3	15
36	Oxidation of the carcinogenic non-aminoazo dye 1-phenylazo-2-hydroxy-naphthalene (Sudan I) by cytochromes P450 and peroxidases: a comparative study. Interdisciplinary Toxicology, 2009, 2, 195-200.	1.0	10

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37	Mutagenic potential of nitrenium ions of nitrobenzanthrones: Correlation between theory and experiment. Environmental and Molecular Mutagenesis, 2008, 49, 659-667.	2.2	21
38	Optimalization of preparation of apocytochrome b5 utilizing apo-myoglobin. Interdisciplinary Toxicology, 2008, 1, 190-2.	1.0	5
39	Mapping of cytochrome P450 2B4 substrate binding sites by photolabile probe 3-azidiamantane: Identification of putative substrate access regions. Archives of Biochemistry and Biophysics, 2007, 468, 82-91.	3.0	7
40	Ceramide kinase regulates growth and survival of A549 human lung adenocarcinoma cells. FEBS Letters, 2007, 581, 735-740.	2.8	110
41	DNA polymerase Î² catalytic efficiency mirrors the Asn279-dCTP H-bonding strength. FEBS Letters, 2007, 581, 775-780.	2.8	25
42	Modifying the Î²,Î³ Leaving-Group Bridging Oxygen Alters Nucleotide Incorporation Efficiency, Fidelity, and the Catalytic Mechanism of DNA Polymerase Î²â€. Biochemistry, 2007, 46, 461-471.	2.5	99
43	Free Energy Simulations of Uncatalyzed DNA Replication Fidelity:Â Structure and Stability of TÂ·G and dTTPÂ·G Terminal DNA Mismatches Flanked by a Single Dangling Nucleotide. Journal of Physical Chemistry B, 2006, 110, 10557-10566.	2.6	62
44	Decomposition of the Solvation Free Energies of Deoxyribonucleoside Triphosphates Using the Free Energy Perturbation Method. Journal of Physical Chemistry B, 2006, 110, 12782-12788.	2.6	75
45	Modulation of CYP1A1-mediated oxidation of carcinogenic azo dye Sudan I and its binding to DNA by cytochrome b5. Neuroendocrinology Letters, 2006, 27 Suppl 2, 35-9.	0.2	10
46	Environmental Pollutant and Potent Mutagen 3-Nitrobenzanthrone Forms DNA Adducts after Reduction by NAD(P)H:Quinone Oxidoreductase and Conjugation by Acetyltransferases and Sulfotransferases in Human Hepatic Cytosols. Cancer Research, 2005, 65, 2644-2652.	0.9	118
47	Expression of cytochrome P450 1A1 and its contribution to oxidation of a potential human carcinogen 1-phenylazo-2-naphthol (Sudan I) in human livers. Cancer Letters, 2005, 220, 145-154.	7.2	95
48	Metabolism of Carcinogenic Azo Dye Sudan I by Rat, Rabbit, Minipig and Human Hepatic Microsomes. Collection of Czechoslovak Chemical Communications, 2002, 67, 1883-1898.	1.0	14
49	Sudan I is a potential carcinogen for humans: evidence for its metabolic activation and detoxication by human recombinant cytochrome P450 1A1 and liver microsomes. Cancer Research, 2002, 62, 5678-84.	0.9	200
50	Heme Peroxidases: Structure, Function, Mechanism and Involvement in Activation of Carcinogens. A Review. Collection of Czechoslovak Chemical Communications, 2000, 65, 297-325.	1.0	21