Dmitri R Davydov

List of Publications by Year
in descending order

75	2,385	201575 27	214721 47
papers	citations	h-index	g-index

79	79	79	1776
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Exploring the Interactome of Cytochrome P450 2E1 in Human Liver Microsomes with Chemical Crosslinking Mass Spectrometry. Biomolecules, 2022, 12, 185.	1.8	3
2	Conformational Rearrangements in the Redox Cycling of NADPH-Cytochrome P450 Reductase from Sorghum bicolor Explored with FRET and Pressure-Perturbation Spectroscopy. Biology, 2022, 11, 510.	1.3	3
3	Functional and structural insight into the flexibility of cytochrome P450 reductases from Sorghum bicolor and its implications for lignin composition. Journal of Biological Chemistry, 2022, 298, 101761.	1.6	6
4	Effects of alcohol-induced increase in CYP2E1 content in human liver microsomes on the activity and cooperativity of CYP3A4. Archives of Biochemistry and Biophysics, 2021, 698, 108677.	1.4	11
5	A Pathfinder in High-Pressure Bioscience: In Memoriam of Gaston Hui Bon Hoa. Biology, 2021, 10, 778.	1.3	0
6	Assembling the P450 puzzle: on the sources of nonadditivity in drug metabolism. Trends in Pharmacological Sciences, 2021, 42, 988-997.	4.0	5
7	Probing functional interactions between cytochromes P450 with principal component analysis of substrate saturation profiles and targeted proteomics. Archives of Biochemistry and Biophysics, 2021, 708, 108937.	1.4	6
8	Nonadditivity in human microsomal drug metabolism revealed in a study with coumarin 152, a polyspecific cytochrome P450 substrate. Xenobiotica, 2020, 50, 1393-1405.	0.5	4
9	Pressure tolerance of deepâ€sea enzymes can be evolved through increasing volume changes in protein transitions: a study with lactate dehydrogenases from abyssal and hadal fishes. FEBS Journal, 2020, 287, 5394-5410.	2.2	9
10	Structure and Function of the Cytochrome P450 Monooxygenase Cinnamate 4-hydroxylase from Sorghum bicolor. Plant Physiology, 2020, 183, 957-973.	2.3	36
11	Crosstalk between CYP2E1 and CYP3A enzymes and its Possible Involvement in Alcoholâ€Drug Interactions.. FASEB Journal, 2020, 34, 1-1.	0.2	0
12	Toward a systems approach to cytochrome P450 ensemble: interactions of CYP2E1 with other P450 species and their impact on CYP1A2. Biochemical Journal, 2019, 476, 3661-3685.	1.7	18
13	Kinetic mechanism of time-dependent inhibition of CYP2D6 by 3,4-methylenedioxymethamphetamine (MDMA): Functional heterogeneity of the enzyme and the reversibility of its inactivation. Biochemical Pharmacology, 2018, 156, 86-98.	2.0	13
14	Towards a System Approach to the Human Cytochrome P450 Ensemble: A New Strategy for Studying the Network of P450â€P450 Interactions in Human Liver Microsomes. FASEB Journal, 2018, 32, 564.5.	0.2	0
15	Toward a systems approach to the human cytochrome P450 ensemble: interactions between CYP2D6 and CYP2E1 and their functional consequences. Biochemical Journal, 2017, 474, 3523-3542.	1.7	21
16	Conformational Mobility in Cytochrome P450 3A4 Explored by Pressure-Perturbation EPR Spectroscopy. Biophysical Journal, 2016, 110, 1485-1498.	0.2	25
17	Molecular organization of the microsomal oxidative system: a new connotation for an old term. Biochemistry (Moscow) Supplement Series B: Biomedical Chemistry, 2016, 10, 10-21.	0.2	11
18	Interactions among Cytochromes P450 in Microsomal Membranes. Journal of Biological Chemistry, 2015, 290, 3850-3864.	1.6	60

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19	Concurrent Cooperativity and Substrate Inhibition in the Epoxidation of Carbamazepine by Cytochrome P450 3A4 Active Site Mutants Inspired by Molecular Dynamics Simulations. Biochemistry, 2015, 54, 711-721.	1.2	42
20	The role of cytochrome P450 2B6 and 2B4 substrate access channel residues predicted based on crystal structures of the amlodipine complexes. Archives of Biochemistry and Biophysics, 2014, 545, 100-107.	1.4	15
21	Exploring enzyme conformational landscape with pressureâ€perturbation: allosteric rearrangements in P450 3A4 revealed with FRET and SDSLâ€EPR (769.16). FASEB Journal, 2014, 28, 769.16.	0.2	0
22	Pivotal role of P450â€“P450 interactions in CYP3A4 allostery: the case of Î±-naphthoflavone. Biochemical Journal, 2013, 453, 219-230.	1.7	60
23	CYP261 enzymes from deep sea bacteria: A clue to conformational heterogeneity in cytochromes P450. Biotechnology and Applied Biochemistry, 2013, 60, 30-40.	1.4	7
24	Aluminumâ€substituted heme domain of P450BMâ€3 (<scp>BMP</scp>): Introducing a hemeâ€derived fluorescent probe for studies of substrate binding and proteinâ€protein interactions in cytochromes P450. Biotechnology and Applied Biochemistry, 2013, 60, 41-51.	1.4	6
25	A Large-Scale Allosteric Transition in Cytochrome P450 3A4 Revealed by Luminescence Resonance Energy Transfer (LRET). PLoS ONE, 2013, 8, e83898.	1.1	26
26	Peripheral Ligand-binding Site in Cytochrome P450 3A4 Located with Fluorescence Resonance Energy Transfer (FRET). Journal of Biological Chemistry, 2012, 287, 6797-6809.	1.6	65
27	Merging Thermodynamics and Evolution: How the Studies of High-Pressure Adaptation may Help to Understand Enzymatic Mechanisms. Journal of Thermodynamics & Catalysis, 2012, 03, .	0.2	3
28	Peripheral Ligand Binding and Allostery in Cytochrome P450 3A4. FASEB Journal, 2012, 26, 784.7.	0.2	0
29	Ligandâ€induced conformational changes in cytochrome P450 3A4 detected by luminescence resonance energy transfer (LRET). FASEB Journal, 2012, 26, 784.4.	0.2	0
30	Highâ€pressure Adaptation in Piezotolerant Enzymes Studied with Cytochromes P450 from Deepâ€Sea Bacteria. FASEB Journal, 2012, 26, 959.4.	0.2	0
31	Multiple substrate-binding sites are retained in cytochrome P450 3A4 mutants with decreased cooperativity. Xenobiotica, 2011, 41, 281-289.	0.5	15
32	Microsomal monooxygenase as a multienzyme system: the role of P450-P450 interactions. Expert Opinion on Drug Metabolism and Toxicology, 2011, 7, 543-558.	1.5	68
33	Electron transfer in the complex of membrane-bound human cytochrome P450 3A4 with the flavin domain of P450BM-3: The effect of oligomerization of the heme protein and intermittent modulation of the spin equilibrium. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 378-390.	0.5	47
34	Constrained water access to the active site of cytochrome P450 from the piezophilic bacteriumPhotobacterium profundum. High Pressure Research, 2010, 30, 466-474.	0.4	6
35	Cytochrome P450 fromPhotobacterium profundumSS9, a Piezophilic Bacterium, Exhibits a Tightened Control of Water Access to the Active Site. Biochemistry, 2010, 49, 10636-10646.	1.2	13
36	Rational engineering of cytochromes P450 2B6 and 2B11 for enhanced stability: Insights into structural importance of residue 334. Archives of Biochemistry and Biophysics, 2010, 494, 151-158.	1.4	23

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37	Displaced Conformational Equilibrium in a Piezophilic Cytochrome P450. FASEB Journal, 2010, 24, 512.6.	0.2	0
38	Structural importance of residue 334 in the stability of cytochromes P450 2B6 and 2B11. FASEB Journal, 2010, 24, 967.14.	0.2	0
39	Kinetics of substrate binding to human Cytochrome P450 3A4: A study with Fluorolâ€7GA, a fluorescent allosteric ligand. FASEB Journal, 2010, 24, 512.5.	0.2	0
40	Allosteric P450 mechanisms: multiple binding sites, multiple conformers or both?. Expert Opinion on Drug Metabolism and Toxicology, 2008, 4, 1523-1535.	1.5	116
41	Kinetics of electron transfer in the complex of cytochrome P450 3A4 with the flavin domain of cytochrome P450BM-3 as evidence of functional heterogeneity of the heme protein. Archives of Biochemistry and Biophysics, 2008, 471, 20-31.	1.4	22
42	Effect of glutathione on homo- and heterotropic cooperativity in cytochrome P450 3A4. Archives of Biochemistry and Biophysics, 2008, 471, 134-145.	1.4	23
43	Allosteric Transitions in Cytochrome P450eryF Explored with Pressure-Perturbation Spectroscopy, Lifetime FRET, and a Novel Fluorescent Substrate, Fluorol-7GA. Biochemistry, 2008, 47, 11348-11359.	1.2	23
44	Allosteric mechanisms of substrate binding in cytochrome P450eryF studied by lifetime FRET and pressureâ€perturbation spectroscopy. FASEB Journal, 2008, 22, 234-234.	0.2	0
45	Role of subunit interactions in P450 oligomers in the loss of homotropic cooperativity in the cytochrome P450 3A4 mutant L211F/D214E/F304W. Archives of Biochemistry and Biophysics, 2007, 460, 129-140.	1.4	27
46	Allosteric Mechanisms in Cytochrome P450 3A4 Studied by High-Pressure Spectroscopy:â€‰ Pivotal Role of Substrate-Induced Changes in the Accessibility and Degree of Hydration of the Heme Pocket. Biochemistry, 2007, 46, 7852-7864.	1.2	39
47	Mechanism of Interactions of Î±-Naphthoflavone with Cytochrome P450 3A4 Explored with an Engineered Enzyme Bearing a Fluorescent Probeâ€. Biochemistry, 2007, 46, 106-119.	1.2	59
48	Resolution of Multiple Substrate Binding Sites in Cytochrome P450 3A4:Â The Stoichiometry of the Enzymeâ^'Substrate Complexes Probed by FRET and Job's Titrationâ€. Biochemistry, 2006, 45, 4199-4209.	1.2	51
49	Variable path length and counter-flow continuous variation methods for the study of the formation of high-affinity complexes by absorbance spectroscopy. An application to the studies of substrate binding in cytochrome P450. Biophysical Chemistry, 2006, 123, 95-101.	1.5	21
50	Dynamics of P450 3A4 Oligomers in Solution. FASEB Journal, 2006, 20, A458.	0.2	0
51	ROLE OF CYTOCHROME B5 IN MODULATING PEROXIDE-SUPPORTED CYP3A4 ACTIVITY: EVIDENCE FOR A CONFORMATIONAL TRANSITION AND CYTOCHROME P450 HETEROGENEITY. Drug Metabolism and Disposition, 2005, 33, 1131-1136.	1.7	38
52	Kinetics of Dithionite-Dependent Reduction of Cytochrome P450 3A4:Â Heterogeneity of the Enzyme Caused by Its Oligomerizationâ€. Biochemistry, 2005, 44, 13902-13913.	1.2	87
53	Resolution of Two Substrate-Binding Sites in an Engineered Cytochrome P450eryF Bearing a Fluorescent Probe. Biophysical Journal, 2005, 89, 418-432.	0.2	30
54	Mechanisms that regulate production of reactive oxygen species by cytochrome P450. Toxicology and Applied Pharmacology, 2004, 199, 316-331.	1.3	457

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55	An Electrostatically Driven Conformational Transition Is Involved in the Mechanisms of Substrate Binding and Cooperativity in Cytochrome P450eryFâ€. Biochemistry, 2004, 43, 6475-6485.	1.2	31
56	Conformational heterogeneity of cytochrome P450 3A4 revealed by high pressure spectroscopy. Biochemical and Biophysical Research Communications, 2003, 312, 121-130.	1.0	76
57	Allosteric mechanisms in P450eryF probed with 1-pyrenebutanol, a novel fluorescent substrate. Biochemical and Biophysical Research Communications, 2002, 294, 806-812.	1.0	33
58	A New Approach to the Study of Proteinâ^'Protein Interaction by FTIR:â€‰ Complex Formation between Cytochrome P450BM-3 Heme Domain and FMN Reductase Domain. Biochemistry, 2002, 41, 13514-13525.	1.2	18
59	Microsomal monooxygenase in apoptosis: another target for cytochrome c signaling?. Trends in Biochemical Sciences, 2001, 26, 155-160.	3.7	62
60	Association of Cytochromes P450 1A2 and 2B4: are the Interactions between Different p450 Species Involved in the Control of the Monooxygenase Activity and Coupling?. Advances in Experimental Medicine and Biology, 2001, 500, 335-338.	0.8	24
61	Stabilization of P450 2B4 by Its Association with P450 1A2 Revealed by High-Pressure Spectroscopy. Biochemical and Biophysical Research Communications, 2000, 276, 1005-1012.	1.0	31
62	Association of Cytochromes P450 with Their Reductases:Â Opposite Sign of the Electrostatic Interactions in P450BM-3 As Compared with the Microsomal 2B4 System. Biochemistry, 2000, 39, 6489-6497.	1.2	58
63	Dynamics of Protein-Bound Water in the Heme Domain of P450BM3 Studied by High-Pressure Spectroscopy:â€‰ Comparison with P450cam and P450 2B4. Biochemistry, 1999, 38, 751-761.	1.2	46
64	Interactions of cytochrome P450 2B4 with NADPH-cytochrome P450 reductase studied by fluorescent probe. Biochimie, 1996, 78, 734-743.	1.3	35
65	Thermodynamic studies of substrate binding and spin transitions in human cytochrome P-450 3A4 expressed in yeast microsomes. Biochemical Journal, 1996, 319, 675-681.	1.7	49
66	Compressibility of the Heme Pocket of Substrate Analogue Complexes of Cytochrome P -450cam-CO. The Effect of Hydrostatic Pressure on the Soret Band. FEBS Journal, 1995, 233, 600-606.	0.2	38
67	High-pressure-induced transitions in microsomal cytochrome P450 2B4 in solution: Evidence for conformational inhomogeneity in the oligomers. Archives of Biochemistry and Biophysics, 1995, 320, 330-344.	1.4	105
68	High pressure induced inactivation of ferrous cytochrome P-450 LM2 (11B4) CO complex: Evidence for the presence of two conformers in the oligomer. Biochemical and Biophysical Research Communications, 1992, 188, 216-221.	1.0	33
69	Comparative study of monomeric reconstituted and membrane microsomal monooxygenase systems of the rabbit liver. Archives of Biochemistry and Biophysics, 1992, 298, 403-412.	1.4	26
70	Cytochrome C (Fe2+) as a competitive inhibitor of NADPH-dependent reduction of cytochrome P450 LM2: Locating protein-protein interaction sites in microsomal electron carriers. Archives of Biochemistry and Biophysics, 1992, 297, 304-313.	1.4	22
71	Interaction of flavin mononucleotide with dimeric and tetrameric forms of muscle phosphorylase Î². Biochimie, 1991, 73, 1339-1343.	1.3	10
72	Kinetics of soybean lipoxygenase reaction in hydrated reversed micelles. Biochimie, 1989, 71, 573-578.	1.3	19

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73	Reduction and catalytic properties of cytochrome P-450 LM2 in reconstituted system containing monomeric carriers. Biochemical and Biophysical Research Communications, 1987, 147, 1295-1299.	1.0	9
74	Kinetic studies on reduction of cytochromes P-450 and b5 by dithionite. FEBS Journal, 1985, 150, 155-159.	0.2	23
75	Random distribution of NADPH-specific flavoprotein and cytochrome P-450 in liver microsomes. Biochemical and Biophysical Research Communications, 1982, 109, 832-840.	1.0	15