Ronald E Viola

List of Publications by Year
in descending order

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110 papers	2,778 citations	186265 28 h-index	223800 46 g-index
112 all docs	112 docs citations	112 times ranked	2421 citing authors

#	Article	IF	Citations
1	Design and testing of selective inactivators against an antifungal enzyme target. Drug Development Research, 2022, 83, 447-460.	2.9	1
2	A Comprehensive Biological and Synthetic Perspective on 2-Deoxy-<scp>d</scp>-Glucose (2-DG), A Sweet Molecule with Therapeutic and Diagnostic Potentials. Journal of Medicinal Chemistry, 2022, 65, 3706-3728.	6.4	8
3	Engineering of a critical membrane-anchored enzyme for high solubility and catalytic activity. Archives of Biochemistry and Biophysics, 2021, 703, 108870.	3.0	1
4	Natural Products: A Rich Source of Antiviral Drug Lead Candidates for the Management of COVID-19. Current Pharmaceutical Design, 2021, 27, 3526-3550.	1.9	20
5	Development of bisubstrate analog inhibitors of aspartate N â€acetyltransferase, a critical brain enzyme. Chemical Biology and Drug Design, 2020, 95, 48-57.	3.2	3
6	Discovery of Novel Inhibitors of a Critical Brain Enzyme Using a Homology Model and a Deep Convolutional Neural Network. Journal of Medicinal Chemistry, 2020, 63, 8867-8875.	6.4	31
7	Aspartate semialdehyde dehydrogenase inhibition suppresses the growth of the pathogenic fungus <scp>Candida albicans</scp>. Drug Development Research, 2020, 81, 736-744.	2.9	6
8	Structure of a critical metabolic enzyme:S-adenosylmethionine synthetase fromCryptosporidium parvum. Acta Crystallographica Section F, Structural Biology Communications, 2019, 75, 290-298.	0.8	0
9	The ammonia-lyases: enzymes that use a wide range of approaches to catalyze the same type of reaction. Critical Reviews in Biochemistry and Molecular Biology, 2019, 54, 467-483.	5.2	5
10	A Fragment Library Screening Approach to Identify Selective Inhibitors against an Essential Fungal Enzyme. SLAS Discovery, 2018, 23, 520-531.	2.7	7
11	Structural insights into inhibitor binding to a fungal ortholog of aspartate semialdehyde dehydrogenase. Biochemical and Biophysical Research Communications, 2018, 503, 2848-2854.	2.1	9
12	Design and optimization of aspartate N -acetyltransferase inhibitors for the potential treatment of Canavan disease. Bioorganic and Medicinal Chemistry, 2017, 25, 870-885.	3.0	12
13	Structure of a fungal form of aspartate-semialdehyde dehydrogenase fromAspergillus fumigatus. Acta Crystallographica Section F, Structural Biology Communications, 2017, 73, 36-44.	0.8	9
14	Complementation of a metK-deficient E. coli strain with heterologous AdoMet synthetase genes. Microbiology (United Kingdom), 2017, 163, 1812-1821.	1.8	7
15	Effects of Extracellular Polymeric Substance Composition on Bacteria Disinfection by Monochloramine: Application of MALDI-TOF/TOFâ€“MS and Multivariate Analysis. Environmental Science & Technology, 2016, 50, 9197-9205.	10.0	21
16	Structural Insights into the Tetrameric State of Aspartate-Î²-semialdehyde Dehydrogenases from Fungal Species. Scientific Reports, 2016, 6, 21067.	3.3	9
17	Purification and characterization of aspartate N-acetyltransferase: A critical enzyme in brain metabolism. Protein Expression and Purification, 2016, 119, 11-18.	1.3	8
18	Structure of a fungal form of aspartate semialdehyde dehydrogenase fromCryptococcus neoformans. Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 1365-1371.	0.8	11

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19	A surprising range of modified-methionyl S-adenosylmethionine analogues support bacterial growth. Microbiology (United Kingdom), 2015, 161, 674-682.	1.8	8
20	Elaboration of a fragment library hit produces potent and selective aspartate semialdehyde dehydrogenase inhibitors. Bioorganic and Medicinal Chemistry, 2015, 23, 6622-6631.	3.0	13
21	Inhibitor Development Against Aspartateâ€Î²â€Semialdehyde Dehydrogenaseâ€•A Novel Target for Drug Development. FASEB Journal, 2015, 29, 721.5.	0.5	0
22	Structure of an unusualS-adenosylmethionine synthetase fromCampylobacter jejuni. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 442-450.	2.5	6
23	A cautionary tale of structure-guided inhibitor development against an essential enzyme in the aspartate-biosynthetic pathway. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 3244-3252.	2.5	8
24	Structure of homoserineO-acetyltransferase fromStaphylococcus aureus: the first Gram-positive ortholog structure. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 1340-1345.	0.8	11
25	Enhanced brain distribution of modified aspartoacylase. Molecular Genetics and Metabolism, 2014, 113, 219-224.	1.1	4
26	Aspartoacylase Catalytic Deficiency as the Cause of Canavan Disease: A Structural Perspective. Biochemistry, 2014, 53, 4970-4978.	2.5	22
27	Reexamination of aspartoacylase: Is this human enzyme really a glycoprotein?. Archives of Biochemistry and Biophysics, 2014, 548, 66-73.	3.0	3
28	Relationship between enzyme properties and disease progression in Canavan disease. Journal of Inherited Metabolic Disease, 2013, 36, 1-6.	3.6	22
29	Alternative substrates selective for S-adenosylmethionine synthetases from pathogenic bacteria. Archives of Biochemistry and Biophysics, 2013, 536, 64-71.	3.0	19
30	Detergent selection for enhanced extraction of membrane proteins. Protein Expression and Purification, 2012, 86, 12-20.	1.3	140
31	Early Stage Efficacy and Toxicology Screening for Antibiotics and Enzyme Inhibitors. Journal of Biomolecular Screening, 2012, 17, 673-682.	2.6	11
32	Structural Characterization of Inhibitors with Selectivity against Members of a Homologous Enzyme Family. Chemical Biology and Drug Design, 2012, 79, 128-136.	3.2	23
33	Molecular docking and enzymatic evaluation to identify selective inhibitors of aspartate semialdehyde dehydrogenase. Bioorganic and Medicinal Chemistry, 2012, 20, 2950-2956.	3.0	14
34	Modification of aspartoacylase for potential use in enzyme replacement therapy for the treatment of Canavan disease. Molecular Genetics and Metabolism, 2011, 102, 176-180.	1.1	21
35	The Catalytic Machinery of a Key Enzyme in Amino Acid Biosynthesis. Journal of Amino Acids, 2011, 2011, 1-11.	5.8	25
36	Expansion of the aspartate Î²-semialdehyde dehydrogenase family: the first structure of a fungal ortholog. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 205-212.	2.5	21

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37	Structural characterization of tartrate dehydrogenase: a versatile enzyme catalyzing multiple reactions. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 673-684.	2.5	13
38	Identification of Selective Enzyme Inhibitors by Fragment Library Screening. Journal of Biomolecular Screening, 2010, 15, 1042-1050.	2.6	24
39	Structure of the First Fungal Enzyme Form of Aspartate Î²â€Semialdehyde Dehydrogenase. FASEB Journal, 2010, 24, 469.1.	0.5	0
40	Fully automated protein purification. Analytical Biochemistry, 2009, 393, 176-181.	2.4	29
41	Attenuated enzootic (pestoides) isolates of Yersinia pestis express active aspartase. Microbiology (United Kingdom), 2009, 155, 198-209.	1.8	26
42	Structural Insights into the Mechanism of Tartrate Dehydrogenase: A versatile enzyme catalyzing multiple reactions. FASEB Journal, 2009, 23, 504.10.	0.5	0
43	The structure of a redundant enzyme: a second isoform of aspartate Î²-semialdehyde dehydrogenase inVibrio cholerae. Acta Crystallographica Section D: Biological Crystallography, 2008, 64, 321-330.	2.5	19
44	Examination of the Mechanism of Human Brain Aspartoacylase through the Binding of an Intermediate Analogue[,]. Biochemistry, 2008, 47, 3484-3492.	2.5	35
45	The Structural Basis for Allosteric Inhibition of a Threonine-sensitive Aspartokinase. Journal of Biological Chemistry, 2008, 283, 16216-16225.	3.4	28
46	A missense mutation causes aspartase deficiency in Yersinia pestis. Microbiology (United Kingdom), 2008, 154, 1271-1280.	1.8	16
47	The impact of structural biology on neurobiology. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 399-400.	7.1	1
48	Assessing the roles of essential functional groups in the mechanism of homoserine succinyltransferase. Archives of Biochemistry and Biophysics, 2007, 461, 211-218.	3.0	6
49	Structural asymmetry and intersubunit communication in muscle creatine kinase. Acta Crystallographica Section D: Biological Crystallography, 2007, 63, 381-389.	2.5	25
50	The effect of deuteration on protein structure: a high-resolution comparison of hydrogenous and perdeuterated haloalkane dehalogenase. Acta Crystallographica Section D: Biological Crystallography, 2007, 63, 1000-1008.	2.5	42
51	Characterization of Homoserine Oâ€Succinyltransferase: A Key Branch Point Enzyme in an Essential Metabolic Pathway. FASEB Journal, 2007, 21, A274.	0.5	0
52	Characterization of Human Aspartoacylase:â€‰ The Brain Enzyme Responsible for Canavan Disease. Biochemistry, 2006, 45, 5878-5884.	2.5	39
53	A rapid method for the purification of methanol dehydrogenase from Methylobacterium extorquens. Protein Expression and Purification, 2006, 46, 316-320.	1.3	17
54	The initial step in the archaeal aspartate biosynthetic pathway catalyzed by a monofunctional aspartokinase. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 962-966.	0.7	24

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55	L-Aspartase: New Tricks from an Old Enzyme. Advances in Enzymology and Related Areas of Molecular Biology, 2006, 74, 295-341.	1.3	23
56	Examination of Key Intermediates in the Catalytic Cycle of Aspartate-Î²-semialdehyde Dehydrogenase from a Gram-positive Infectious Bacteria. Journal of Biological Chemistry, 2006, 281, 31031-31040.	3.4	38
57	A New Branch in the Family: Structure of Aspartate-Î²-semialdehyde Dehydrogenase from Methanococcus jannaschii. Journal of Molecular Biology, 2005, 353, 1055-1068.	4.2	35
58	Probing the role of the hyper-reactive histidine residue of arginase. Archives of Biochemistry and Biophysics, 2005, 444, 15-26.	3.0	15
59	The role of substrate-binding groups in the mechanism of aspartate-Î²-semialdehyde dehydrogenase. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 1388-1395.	2.5	18
60	Critical catalytic functional groups in the mechanism of aspartate-Î²-semialdehyde dehydrogenase. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 1808-1815.	2.5	17
61	Structural basis for discrimination between oxyanion substrates or inhibitors in aspartate-Î²-semialdehyde dehydrogenase. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 2320-2324.	2.5	13
62	Immunohistochemical localization of aspartoacylase in the rat central nervous system. Journal of Comparative Neurology, 2004, 472, 318-329.	1.6	135
63	Activation of carbonic anhydrase II by active-site incorporation of histidine analogs. Archives of Biochemistry and Biophysics, 2004, 421, 283-289.	3.0	18
64	A structural basis for the mechanism of aspartate-Â-semialdehyde dehydrogenase from Vibrio cholerae. Protein Science, 2003, 12, 27-33.	7.6	46
65	Purification and preliminary characterization of brain aspartoacylase. Archives of Biochemistry and Biophysics, 2003, 413, 1-8.	3.0	32
66	Capture of an intermediate in the catalytic cycle of L-aspartate-Â-semialdehyde dehydrogenase. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 12613-12617.	7.1	41
67	Expression and Purification of Aspartate Î²-Semialdehyde Dehydrogenase from Infectious Microorganisms. Protein Expression and Purification, 2002, 25, 189-194.	1.3	28
68	Synthesis and Evaluation of Alternative Substrates for Arginasease. Bioorganic Chemistry, 2002, 30, 81-94.	4.1	13
69	Purification, crystallization and preliminary X-ray analysis of aspartokinase III fromEscherichia coli. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 352-354.	2.5	4
70	The Central Enzymes of the Aspartate Family of Amino Acid Biosynthesis. Accounts of Chemical Research, 2001, 34, 339-349.	15.6	126
71	Active Site Analysis of the Potential Antimicrobial Target Aspartate Semialdehyde Dehydrogenase. Biochemistry, 2001, 40, 14475-14483.	2.5	51
72	A Spectrophotometric Assay of Arginase. Analytical Biochemistry, 2001, 295, 117-119.	2.4	16

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73	Structural Analyses of a Malate Dehydrogenase with a Variable Active Site. Journal of Biological Chemistry, 2001, 276, 31156-31162.	3.4	25
74	Alteration of the Specificity of Malate Dehydrogenase by Chemical Modulation of an Active Site Arginine. Journal of Biological Chemistry, 2001, 276, 31151-31155.	3.4	17
75	From Malate Dehydrogenase to Phenyllactate Dehydrogenase. Journal of Biological Chemistry, 2000, 275, 31689-31694.	3.4	9
76	Oxyanion Specificity of Aspartate-Î²-semialdehyde Dehydrogenase. Inorganic Chemistry, 1999, 38, 818-820.	4.0	49
77	Introduction of Histidine Analogs Leads to Enhanced Proton Transfer in Carbonic Anhydrase V. Archives of Biochemistry and Biophysics, 1999, 361, 264-270.	3.0	20
78	The use of fluoro- and deoxy-substrate analogs to examine binding specificity and catalysis in the enzymes of the sorbitol pathway. Carbohydrate Research, 1998, 313, 247-253.	2.3	27
79	Evaluation of Methods for the Quantitation of Cysteines in Proteins. Analytical Biochemistry, 1998, 265, 8-14.	2.4	104
80	The Structure of l-Aspartate Ammonia-Lyase from Escherichia coli,. Biochemistry, 1997, 36, 9136-9144.	2.5	85
81	Evaluation of Functionally Important Amino Acids in l-Aspartate Ammonia-Lyase from Escherichia coli. Biochemistry, 1997, 36, 9145-9150.	2.5	39
82	Mapping the Mechanism-Based Modification Sites in l-Aspartase fromEscherichia coli. Archives of Biochemistry and Biophysics, 1997, 341, 329-336.	3.0	5
83	Enhancement of Catalytic Activity by Gene Truncation: Activation of L-Aspartase fromEscherichia coli. Biochemical and Biophysical Research Communications, 1997, 238, 411-414.	2.1	12
84	Functional Group Characterization of Homoserine Kinase fromEscherichia coli. Archives of Biochemistry and Biophysics, 1996, 330, 373-379.	3.0	21
85	Specificity of Aspartokinase III fromEscherichia coliand an Examination of Important Catalytic Residues. Archives of Biochemistry and Biophysics, 1996, 335, 73-81.	3.0	16
86	Substrate Specificity and Identification of Functional Groups of Homoserine Kinase fromEscherichia coliâ€. Biochemistry, 1996, 35, 16180-16185.	2.5	26
87	Conversion of cysteinyl residues to unnatural amino acid analogs. Examination in a model system. The Protein Journal, 1996, 15, 737-742.	1.1	7
88	Use of structural comparisons to select mutagenic targets in aspartate-.beta.-semialdehyde dehydrogenase. Biochemistry, 1995, 34, 6394-6399.	2.5	33
89	Inactivation of Yeast Alcohol Dehydrogenase by Nitrilopropionamides. Journal of Enzyme Inhibition and Medicinal Chemistry, 1994, 8, 133-146.	0.5	0
90	Crystallization and Preliminary X-ray Studies of l-Aspartase from Escherichia coli. Journal of Molecular Biology, 1993, 234, 1248-1249.	4.2	11

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91	Characterization of platinum(II)-phosphato complexes of uridine nucleotides. Inorganic Chemistry, 1993, 32, 1795-1802.	4.0	12
92	Reversal of enzyme regiospecificity with alternative substrates for aspartokinase I from Escherichia coli. Biochemistry, 1992, 31, 799-805.	2.5	9
93	Identification of an essential cysteine in the reaction catalyzed by aspartate-Î²-semialdehyde dehydrogenase from Escherichia coli. BBA - Proteins and Proteomics, 1992, 1121, 234-238.	2.1	32
94	Kinetic studies of l-aspartase from Escherichia coli: pH-dependent activity changes. Archives of Biochemistry and Biophysics, 1991, 287, 60-67.	3.0	33
95	Chemical and kinetic mechanisms of aspartate-Î²-semialdehyde dehydrogenase from Escherichia coli. BBA - Proteins and Proteomics, 1991, 1077, 209-219.	2.1	47
96	The kinetic mechanisms of the bifunctional enzyme aspartokinase-homoserine dehydrogenase I from Escherichia coli. Archives of Biochemistry and Biophysics, 1990, 283, 96-101.	3.0	22
97	Aspartokinase-homoserine dehydrogenase I from Escherichia coli: pH and chemical modification studies of the kinase activity. Biochemistry, 1989, 28, 8771-8777.	2.5	22
98	L-Aspartase from Escherichia coli: substrate specificity and role of divalent metal ions. Biochemistry, 1988, 27, 9089-9093.	2.5	61
99	Multinuclear NMR studies and the kinetics of formation of platinum(II)-adenine nucleotide complexes. Journal of the American Chemical Society, 1986, 108, 4403-4408.	13.7	42
100	Purification of aspartase and aspartokinase-homoserine dehydrogenase I from Escherichia coli by dye-ligand chromatography. Analytical Biochemistry, 1985, 147, 336-341.	2.4	44
101	Kinetics and mechanisms of platinum(II)-promoted hydrolysis of inorganic polyphosphates. Inorganic Chemistry, 1985, 24, 3989-3996.	4.0	27
102	A multinuclear nmr relaxation study of the interaction of divalent metal ions with l-aspartic acid. Journal of Inorganic Biochemistry, 1984, 22, 33-42.	3.5	12
103	Platinum(II)-catalyzed hydrolysis of pyrophosphate and triphosphate: phosphorus-31 NMR characterization of kinetic intermediates. Inorganic Chemistry, 1984, 23, 1181-1182.	4.0	12
104	Phosphorus-31 NMR and kinetic studies of the formation of ortho-, pyro-, and triphosphato complexes of cis-dichlorodiammineplatinum(II). Journal of the American Chemical Society, 1984, 106, 3336-3343.	13.7	65
105	Kinetic studies of the reactions catalyzed by glucose-6-phosphate dehydrogenase from Leuconostoc mesenteroides: pH variation of kinetic parameters. Archives of Biochemistry and Biophysics, 1984, 228, 415-424.	3.0	25
106	[19] Initial velocity analysis for terreactant mechanisms. Methods in Enzymology, 1982, 87, 353-366.	1.0	31
107	Stereoselective preparation of deuterated reduced nicotinamide adenine nucleotides and substrates by enzymatic synthesis. Analytical Biochemistry, 1979, 96, 334-340.	2.4	133
108	Spectroscopic studies on the copper(II) complexes of carnosine. Journal of Inorganic Biochemistry, 1979, 10, 281-292.	3.5	28

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109	Copper(II) complexes of carnosine, glycylglycine, and glycylglycine-imidazole mixtures. Journal of Inorganic Biochemistry, 1979, 10, 293-307.	3.5	17
110	The use of 13C spin lattice relaxation times to study the interaction of Î±-methyl-d-glucopyranoside with concanavalin A. Archives of Biochemistry and Biophysics, 1974, 160, 465-468.	3.0	44