Carol A Fierke

List of Publications by Year in Descending Order

173 papers	8,865 citations	53 h-index	86 g-index
178 ext. papers	9,647 ext. citations	6 avg, IF	5.99 L-index

#	Paper	IF	Citations
173	Structure-based prediction of HDAC6 substrates validated by enzymatic assay reveals determinants of promiscuity and detects new potential substrates.. *Scientific Reports*, **2022**, 12, 1788	4.9	1
172	Disease-associated mutations in mitochondrial precursor tRNAs affect binding, m1R9 methylation, and tRNA processing by mtRNase P. *Rna*, **2021**, 27, 420-432	5.8	3
171	A Quick Route to Multiple Highly Potent SARS-CoV-2 Main Protease Inhibitors*. *ChemMedChem*, **2021**, 16, 942-948	3.7	37
170	Combining Active Carbonic Anhydrase with Nanogels: Enzyme Protection and Zinc Sensing. *International Journal of Nanomedicine*, **2021**, 16, 6645-6660	7.3	0
169	Structural Interaction of Apolipoprotein A-I Mimetic Peptide with Amyloid-□Generates Toxic Hetero-oligomers. *Journal of Molecular Biology*, **2020**, 432, 1020-1034	6.5	18
168	Unexpected specificity within dynamic transcriptional protein-protein complexes. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 27346-27353	11.5	14
167	Pentatricopeptide repeats of protein-only RNase P use a distinct mode to recognize conserved bases and structural elements of pre-tRNA. *Nucleic Acids Research*, **2020**, 48, 11815-11826	20.1	11
166	The chaperone SmgGDS-607 has a dual role, both activating and inhibiting farnesylation of small GTPases. *Journal of Biological Chemistry*, **2019**, 294, 11793-11804	5.4	9
165	Mutations in RABL3 alter KRAS prenylation and are associated with hereditary pancreatic cancer. *Nature Genetics*, **2019**, 51, 1308-1314	36.3	31
164	Interplay between substrate recognition, 5Qend tRNA processing and methylation activity of human mitochondrial RNase P. *Rna*, **2019**, 25, 1646-1660	5.8	10
163	Phosphorylation of Histone Deacetylase 8: Structural and Mechanistic Analysis of the Phosphomimetic S39E Mutant. *Biochemistry*, **2019**, 58, 4480-4493	3.2	5
162	SmgGDS-607 Regulation of RhoA GTPase Prenylation Is Nucleotide-Dependent. *Biochemistry*, **2018**, 57, 4289-4298	3.2	6
161	Conservation of coactivator engagement mechanism enables small-molecule allosteric modulators. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 8960-8965	11.5	11
160	Ion Mobility-Mass Spectrometry Reveals Evidence of Specific Complex Formation between Human Histone Deacetylase 8 and Poly-r(C)-binding Protein 1. *International Journal of Mass Spectrometry*, **2017**, 420, 9-15	1.9	2
159	HDAC8 Substrates Identified by Genetically Encoded Active Site Photocrosslinking. *Journal of the American Chemical Society*, **2017**, 139, 16222-16227	16.4	14
158	Active Site Metal Identity Alters Histone Deacetylase 8 Substrate Selectivity: A Potential Novel Regulatory Mechanism. *Biochemistry*, **2017**, 56, 5663-5670	3.2	11
157	Molecular recognition of pre-tRNA by protein-only Ribonuclease P. *Rna*, **2017**, 23, 1860-1873	5.8	10

156	Inner-Sphere Coordination of Divalent Metal Ion with Nucleobase in Catalytic RNA. *Journal of the American Chemical Society*, **2017**, 139, 17457-17463	16.4	11
155	HDAC8 substrate selectivity is determined by long- and short-range interactions leading to enhanced reactivity for full-length histone substrates compared with peptides. *Journal of Biological Chemistry*, **2017**, 292, 21568-21577	5.4	20
154	Fluorescence-Based Real-Time Activity Assays to Identify RNase P Inhibitors. *Methods in Molecular Biology*, **2017**, 1520, 201-225	1.4	1
153	Measuring and Imaging Metal Ions With Fluorescence-Based Biosensors: Speciation, Selectivity, Kinetics, and Other Issues. *Methods in Enzymology*, **2017**, 589, 281-299	1.7	3
152	Exploration of GGTase-I substrate requirements. Part 1: Synthesis and biochemical evaluation of novel aryl-modified geranylgeranyl diphosphate analogs. *Bioorganic and Medicinal Chemistry Letters* , **2016**, 26, 3499-502	2.9	1
151	Synthesis of Non-natural, Frame-Shifted Isoprenoid Diphosphate Analogues. *Organic Letters*, **2016**, 18, 6038-6041	6.2	3
150	Exploration of GGTase-I substrate requirements. Part 2: Synthesis and biochemical analysis of novel saturated geranylgeranyl diphosphate analogs. *Bioorganic and Medicinal Chemistry Letters*, **2016**, 26, 3503-7	2.9	4
149	Nuclear Protein-Only Ribonuclease P2 Structure and Biochemical Characterization Provide Insight into the Conserved Properties of tRNA 5′-End Processing Enzymes. *Journal of Molecular Biology*, **2016**, 428, 26-40	6.5	19
148	Analogs of farnesyl diphosphate alter CaaX substrate specificity and reactions rates of protein farnesyltransferase. *Bioorganic and Medicinal Chemistry Letters*, **2016**, 26, 1333-6	2.9	12
147	General Base-General Acid Catalysis in Human Histone Deacetylase 8. *Biochemistry*, **2016**, 55, 820-32	3.2	47
146	Metal-dependent Deacetylases: Cancer and Epigenetic Regulators. *ACS Chemical Biology*, **2016**, 11, 706-16	4.9	27
145	Differential substrate recognition by isozymes of plant protein-only Ribonuclease P. *Rna*, **2016**, 22, 782-92	5.8	19
144	Influence of a curcumin derivative on hIAPP aggregation in the absence and presence of lipid membranes. *Chemical Communications*, **2016**, 52, 942-5	5.8	52
143	The Diversity of Ribonuclease P: Protein and RNA Catalysts with Analogous Biological Functions. *Biomolecules*, **2016**, 6,	5.9	43
142	The Tumor-suppressive Small GTPase DiRas1 Binds the Noncanonical Guanine Nucleotide Exchange Factor SmgGDS and Antagonizes SmgGDS Interactions with Oncogenic Small GTPases. *Journal of Biological Chemistry*, **2016**, 291, 6534-45	5.4	16
141	Structure-Based Identification of HDAC8 Non-histone Substrates. *Structure*, **2016**, 24, 458-68	5.2	31
140	Dual-Mode HDAC Prodrug for Covalent Modification and Subsequent Inhibitor Release. *Journal of Medicinal Chemistry*, **2015**, 58, 4812-21	8.3	30
139	Self-assembly of a nine-residue amyloid-forming peptide fragment of SARS corona virus E-protein: mechanism of self aggregation and amyloid-inhibition of hIAPP. *Biochemistry*, **2015**, 54, 2249-2261	3.2	23

138	Fibroblasts from long-lived rodent species exclude cadmium. *Journals of Gerontology - Series A Biological Sciences and Medical Sciences*, **2015**, 70, 10-9	6.4	12
137	Mechanistic Studies Reveal Similar Catalytic Strategies for Phosphodiester Bond Hydrolysis by Protein-only and RNA-dependent Ribonuclease P. *Journal of Biological Chemistry*, **2015**, 290, 13454-64	5.4	22
136	Kinetics and thermodynamics of metal-binding to histone deacetylase 8. *Protein Science*, **2015**, 24, 354-65	6.3	11
135	An unbiased approach to identify endogenous substrates of "histone" deacetylase 8. *ACS Chemical Biology*, **2014**, 9, 2210-6	4.9	59
134	Fluorescence lifetime imaging of physiological free Cu(II) levels in live cells with a Cu(II)-selective carbonic anhydrase-based biosensor. *Metallomics*, **2014**, 6, 1034-42	4.5	30
133	Ligand concentration regulates the pathways of coupled protein folding and binding. *Journal of the American Chemical Society*, **2014**, 136, 822-5	16.4	48
132	An enzyme-coupled assay measuring acetate production for profiling histone deacetylase specificity. *Analytical Biochemistry*, **2014**, 456, 61-9	3.1	17
131	Dissecting allosteric effects of activator-coactivator complexes using a covalent small molecule ligand. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 12061-6	11.5	29
130	A real-time fluorescence polarization activity assay to screen for inhibitors of bacterial ribonuclease P. *Nucleic Acids Research*, **2014**, 42, e159	20.1	25
129	Discovering RNA-protein interactome by using chemical context profiling of the RNA-protein interface. *Cell Reports*, **2013**, 3, 1703-13	10.6	22
128	HDAC8 substrates: Histones and beyond. *Biopolymers*, **2013**, 99, 112-26	2.2	59
127	Long wavelength fluorescence ratiometric zinc biosensor. *Journal of Fluorescence*, **2013**, 23, 375-9	2.4	4
126	RNase P enzymes: divergent scaffolds for a conserved biological reaction. *RNA Biology*, **2013**, 10, 909-14	4.8	33
125	Recent advances in protein prenyltransferases: substrate identification, regulation, and disease interventions. *Current Opinion in Chemical Biology*, **2012**, 16, 544-52	9.7	41
124	Insights into the mechanistic dichotomy of the protein farnesyltransferase peptide substrates CVIM and CVLS. *Journal of the American Chemical Society*, **2012**, 134, 820-3	16.4	15
123	Farnesyl diphosphate analogues with aryl moieties are efficient alternate substrates for protein farnesyltransferase. *Biochemistry*, **2012**, 51, 8307-19	3.2	12
122	ZntR-mediated transcription of zntA responds to nanomolar intracellular free zinc. *Journal of Inorganic Biochemistry*, **2012**, 111, 173-81	4.2	74
121	Improving upon nature: active site remodeling produces highly efficient aldolase activity toward hydrophobic electrophilic substrates. *Biochemistry*, **2012**, 51, 1658-68	3.2	18

120	Quantitative imaging of mitochondrial and cytosolic free zinc levels in an in vitro model of ischemia/reperfusion. *Journal of Bioenergetics and Biomembranes*, **2012**, 44, 253-63	3.7	49
119	Expansion of protein farnesyltransferase specificity using "tunable" active site interactions: development of bioengineered prenylation pathways. *Journal of Biological Chemistry*, **2012**, 287, 38090-100	5.4	15
118	Mitochondrial ribonuclease P structure provides insight into the evolution of catalytic strategies for precursor-tRNA 5′ processing. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 16149-54	11.5	87
117	Global Identification of Protein Prenyltransferase Substrates: Defining the Prenylated Proteome. *The Enzymes*, **2011**, 29, 207-234	2.3	5
116	Directed evolution of a pyruvate aldolase to recognize a long chain acyl substrate. *Bioorganic and Medicinal Chemistry*, **2011**, 19, 6447-53	3.4	17
115	Understanding Protein Palmitoylation: Biological Significance and Enzymology. *Science China Chemistry*, **2011**, 54, 1888-1897	7.9	29
114	On the function of the internal cavity of histone deacetylase protein 8: R37 is a crucial residue for catalysis. *Bioorganic and Medicinal Chemistry Letters*, **2011**, 21, 2129-32	2.9	35
113	Transient-state kinetic analysis of transcriptional activator–DNA complexes interacting with a key coactivator. *Journal of Biological Chemistry*, **2011**, 286, 16238-45	5.4	14
112	Binding and cleavage of unstructured RNA by nuclear RNase P. *Rna*, **2011**, 17, 1429-40	5.8	14
111	The RNR motif of B. subtilis RNase P protein interacts with both PRNA and pre-tRNA to stabilize an active conformer. *Rna*, **2011**, 17, 1225-35	5.8	12
110	Identification of a novel class of farnesylation targets by structure-based modeling of binding specificity. *PLoS Computational Biology*, **2011**, 7, e1002170	5	46
109	Genetically encoded ratiometric biosensors to measure intracellular exchangeable zinc in Escherichia coli. *Journal of Biomedical Optics*, **2011**, 16, 087011	3.5	47
108	Activation and inhibition of histone deacetylase 8 by monovalent cations. *Journal of Biological Chemistry*, **2010**, 285, 6036-43	5.4	66
107	Active site metal ion in UDP-3-O-((R)-3-hydroxymyristoyl)-N-acetylglucosamine deacetylase (LpxC) switches between Fe(II) and Zn(II) depending on cellular conditions. *Journal of Biological Chemistry*, **2010**, 285, 33788-96	5.4	25
106	Activation of Escherichia coli UDP-3-O-[(R)-3-hydroxymyristoyl]-N-acetylglucosamine deacetylase by Fe2+ yields a more efficient enzyme with altered ligand affinity. *Biochemistry*, **2010**, 49, 2246-55	3.2	27
105	Identification of novel peptide substrates for protein farnesyltransferase reveals two substrate classes with distinct sequence selectivities. *Journal of Molecular Biology*, **2010**, 395, 176-90	6.5	51
104	Protein-precursor tRNA contact leads to sequence-specific recognition of 5′ leaders by bacterial ribonuclease P. *Journal of Molecular Biology*, **2010**, 396, 195-208	6.5	36
103	A divalent cation stabilizes the active conformation of the B. subtilis RNase P x pre-tRNA complex: a role for an inner-sphere metal ion in RNase P. *Journal of Molecular Biology*, **2010**, 400, 38-51	6.5	24

102	Structures of metal-substituted human histone deacetylase 8 provide mechanistic inferences on biological function. *Biochemistry*, **2010**, 49, 5048-56	3.2	65
101	NMR and XAS reveal an inner-sphere metal binding site in the P4 helix of the metallo-ribozyme ribonuclease P. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 2479-84	11.5	29
100	Carbonic anhydrase II-based metal ion sensing: Advances and new perspectives. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2010**, 1804, 393-403	4	41
99	Synthesis and screening of a CaaL peptide library versus FTase reveals a surprising number of substrates. *Bioorganic and Medicinal Chemistry Letters*, **2010**, 20, 767-70	2.9	20
98	Kinetic Mechanism of Bacterial RNase P **2010**, 93-111		1
97	Investigating the catalytic mechanism of the yeast palmitoyltransferase Akr1p. *FASEB Journal*, **2010**, 24, 904.3	0.9	
96	Pre-tRNA turnover catalyzed by the yeast nuclear RNase P holoenzyme is limited by product release. *Rna*, **2009**, 15, 224-34	5.8	26
95	Conformational change in the Bacillus subtilis RNase P holoenzyme--pre-tRNA complex enhances substrate affinity and limits cleavage rate. *Rna*, **2009**, 15, 1565-77	5.8	43
94	Context-dependent substrate recognition by protein farnesyltransferase. *Biochemistry*, **2009**, 48, 1691-701	3.1	36
93	Structural studies of human histone deacetylase 8 and its site-specific variants complexed with substrate and inhibitors. *Biochemistry*, **2008**, 47, 13554-63	3.2	164
92	Residue ionization in LpxC directly observed by 67Zn NMR spectroscopy. *Journal of the American Chemical Society*, **2008**, 130, 12671-9	16.4	17
91	Determination of zinc using carbonic anhydrase-based fluorescence biosensors. *Methods in Enzymology*, **2008**, 450, 287-309	1.7	27
90	Characterization and crystal structure of Escherichia coli KDPGal aldolase. *Bioorganic and Medicinal Chemistry*, **2008**, 16, 710-20	3.4	22
89	Catalytic metal ion switching in zinc-dependent deacetylases. *FASEB Journal*, **2008**, 22, 611.14	0.9	
88	Combinatorial modulation of protein prenylation. *ACS Chemical Biology*, **2007**, 2, 385-9	4.9	40
87	Importance of RNA-protein interactions in bacterial ribonuclease P structure and catalysis. *Biopolymers*, **2007**, 87, 329-38	2.2	37
86	Evaluation of protein farnesyltransferase substrate specificity using synthetic peptide libraries. *Bioorganic and Medicinal Chemistry Letters*, **2007**, 17, 5548-51	2.9	18
85	Mutagenesis of the phosphate-binding pocket of KDPG aldolase enhances selectivity for hydrophobic substrates. *Protein Science*, **2007**, 16, 2368-77	6.3	30

84	Structural plasticity and Mg2+ binding properties of RNase P P4 from combined analysis of NMR residual dipolar couplings and motionally decoupled spin relaxation. *Rna*, **2007**, 13, 251-66	5.8	40
83	Probing the architecture of the B. subtilis RNase P holoenzyme active site by cross-linking and affinity cleavage. *Rna*, **2007**, 13, 521-35	5.8	32
82	Investigating the functional basis for specificity in protein farnesyltransferase. *FASEB Journal*, **2007**, 21, A1015	0.9	1
81	Fluorescent Metal Ion Biosensing: A Tool for Measuring Zn(II) at The Molecular Level. *FASEB Journal* , **2007**, 21, A999	0.9	
80	Measurement of kinetic isotope effects to probe the reaction mechanism catalyzed by mammalian protein farnesyltransferase. *FASEB Journal*, **2007**, 21, A275	0.9	1
79	Catalytic activity and inhibition of human histone deacetylase 8 is dependent on the identity of the active site metal ion. *Biochemistry*, **2006**, 45, 6170-8	3.2	122
78	Measuring picomolar intracellular exchangeable zinc in PC-12 cells using a ratiometric fluorescence biosensor. *ACS Chemical Biology*, **2006**, 1, 103-11	4.9	205
77	Catalytic mechanism and molecular recognition of E. coli UDP-3-O-(R-3-hydroxymyristoyl)-N-acetylglucosamine deacetylase probed by mutagenesis. *Biochemistry*, **2006**, 45, 15240-8	3.2	25
76	Measurement of the alpha-secondary kinetic isotope effect for the reaction catalyzed by mammalian protein farnesyltransferase. *Journal of the American Chemical Society*, **2006**, 128, 15086-7	16.4	29
75	DsRed as a highly sensitive, selective, and reversible fluorescence-based biosensor for both Cu(+) and Cu(2+) ions. *Biosensors and Bioelectronics*, **2006**, 21, 1302-8	11.8	55
74	Mechanism of the Class I KDPG aldolase. *Bioorganic and Medicinal Chemistry*, **2006**, 14, 3002-10	3.4	44
73	Cu+- and Cu2+-sensitive PEBBLE fluorescent nanosensors using DsRed as the recognition element. *Sensors and Actuators B: Chemical*, **2006**, 113, 760-767	8.5	62
72	Mechanistic inferences from the binding of ligands to LpxC, a metal-dependent deacetylase. *Biochemistry*, **2006**, 45, 7940-8	3.2	45
71	Interplay of isoprenoid and peptide substrate specificity in protein farnesyltransferase. *Biochemistry*, **2005**, 44, 11214-23	3.2	23
70	The 5Qeader of precursor tRNAAsp bound to the Bacillus subtilis RNase P holoenzyme has an extended conformation. *Biochemistry*, **2005**, 44, 16130-9	3.2	50
69	Peptide specificity of protein prenyltransferases is determined mainly by reactivity rather than binding affinity. *Biochemistry*, **2005**, 44, 15314-24	3.2	37
68	Upstream polybasic region in peptides enhances dual specificity for prenylation by both farnesyltransferase and geranylgeranyltransferase type I. *Biochemistry*, **2005**, 44, 15325-33	3.2	25
67	Zinc hydrolases: the mechanisms of zinc-dependent deacetylases. *Archives of Biochemistry and Biophysics*, **2005**, 433, 71-84	4.1	147

66	A continuous fluorescent assay for protein prenyltransferases measuring diphosphate release. *Analytical Biochemistry*, **2005**, 345, 302-11	3.1	24
65	UDP-3-O-((R)-3-hydroxymyristoyl)-N-acetylglucosamine deacetylase functions through a general acid-base catalyst pair mechanism. *Journal of Biological Chemistry*, **2005**, 280, 16969-78	5.4	53
64	Ionic interactions between PRNA and P protein in Bacillus subtilis RNase P characterized using a magnetocapture-based assay. *Rna*, **2004**, 10, 1595-608	5.8	24
63	Lysine beta311 of protein geranylgeranyltransferase type I partially replaces magnesium. *Journal of Biological Chemistry*, **2004**, 279, 30546-53	5.4	21
62	Roles of protein subunits in RNA-protein complexes: lessons from ribonuclease P. *Biopolymers*, **2004**, 73, 79-89	2.2	66
61	A bacterial selection for the directed evolution of pyruvate aldolases. *Bioorganic and Medicinal Chemistry*, **2004**, 12, 4067-74	3.4	29
60	Probing determinants of the metal ion selectivity in carbonic anhydrase using mutagenesis. *Biochemistry*, **2004**, 43, 3979-86	3.2	61
59	Positively charged side chains in protein farnesyltransferase enhance catalysis by stabilizing the formation of the diphosphate leaving group. *Biochemistry*, **2004**, 43, 5256-65	3.2	26
58	Crystal structure of LpxC, a zinc-dependent deacetylase essential for endotoxin biosynthesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 8146-50	11.5	136
57	EXAFS studies of the zinc sites of UDP-(3-O-acyl)-N-acetylglucosamine deacetylase (LpxC). *Journal of Inorganic Biochemistry*, **2003**, 94, 78-85	4.2	34
56	Structural characterization of the zinc site in protein farnesyltransferase. *Journal of the American Chemical Society*, **2003**, 125, 9962-9	16.4	64
55	Kinetic studies of protein farnesyltransferase mutants establish active substrate conformation. *Biochemistry*, **2003**, 42, 9741-8	3.2	51
54	Real-time determination of picomolar free Cu(II) in seawater using a fluorescence-based fiber optic biosensor. *Analytical Chemistry*, **2003**, 75, 6807-12	7.8	85
53	Cloning, isolation and characterization of the Thermotoga maritima KDPG aldolase. *Bioorganic and Medicinal Chemistry*, **2002**, 10, 545-50	3.4	30
52	Excitation ratiometric fluorescent biosensor for zinc ion at picomolar levels. *Journal of Biomedical Optics*, **2002**, 7, 555-60	3.5	39
51	Specific phosphorothioate substitutions probe the active site of Bacillus subtilis ribonuclease P. *Rna*, **2002**, 8, 933-47	5.8	47
50	Photoaffinity analogues of farnesyl pyrophosphate transferable by protein farnesyl transferase. *Journal of the American Chemical Society*, **2002**, 124, 8206-19	16.4	53
49	Inhibition of the antibacterial target UDP-(3-O-acyl)-N-acetylglucosamine deacetylase (LpxC): isoxazoline zinc amidase inhibitors bearing diverse metal binding groups. *Journal of Medicinal Chemistry*, **2002**, 45, 4359-70	8.3	90

48	Eukaryotic ribonuclease P: a plurality of ribonucleoprotein enzymes. *Annual Review of Biochemistry*, **2002**, 71, 165-89	29.1	116
47	The affinity of magnesium binding sites in the Bacillus subtilis RNase P x pre-tRNA complex is enhanced by the protein subunit. *Biochemistry*, **2002**, 41, 9545-58	3.2	84
46	Fluorescence-based biosensing of zinc using carbonic anhydrase. *BioMetals*, **2001**, 14, 205-22	3.4	73
45	Directed evolution of a new catalytic site in 2-keto-3-deoxy-6-phosphogluconate aldolase from Escherichia coli. *Structure*, **2001**, 9, 1-9	5.2	67
44	Site-directed mutagenesis of the bacterial metalloamidase UDP-(3-O-acyl)-N-acetylglucosamine deacetylase (LpxC). Identification of the zinc binding site. *Biochemistry*, **2001**, 40, 514-23	3.2	42
43	Linked folding and anion binding of the Bacillus subtilis ribonuclease P protein. *Biochemistry*, **2001**, 40, 2777-89	3.2	85
42	Thermodynamics of metal ion binding. 1. Metal ion binding by wild-type carbonic anhydrase. *Biochemistry*, **2001**, 40, 5338-44	3.2	68
41	Thermodynamics of metal ion binding. 2. Metal ion binding by carbonic anhydrase variants. *Biochemistry*, **2001**, 40, 5345-51	3.2	41
40	The Bacillus subtilis RNase P holoenzyme contains two RNase P RNA and two RNase P protein subunits. *Rna*, **2001**, 7, 233-41	5.8	50
39	Function and mechanism of zinc metalloenzymes. *Journal of Nutrition*, **2000**, 130, 1437S-46S	4.1	614
38	Colorimetric and fluorimetric assays to quantitate micromolar concentrations of transition metals. *Analytical Biochemistry*, **2000**, 284, 307-15	3.1	118
37	Ribonuclease P: a ribonucleoprotein enzyme. *Current Opinion in Chemical Biology*, **2000**, 4, 553-8	9.7	66
36	Fluorescence microscopy of stimulated Zn(II) release from organotypic cultures of mammalian hippocampus using a carbonic anhydrase-based biosensor system. *Journal of Neuroscience Methods*, **2000**, 96, 35-45	3	77
35	Mechanistic studies of rat protein farnesyltransferase indicate an associative transition state. *Biochemistry*, **2000**, 39, 2593-602	3.2	77
34	Contribution of Fluorine to Protein□ligand Affinity in the Binding of Fluoroaromatic Inhibitors to Carbonic Anhydrase II. *Journal of the American Chemical Society*, **2000**, 122, 12125-12134	16.4	124
33	Antibacterial agents that target lipid A biosynthesis in gram-negative bacteria. Inhibition of diverse UDP-3-O-(r-3-hydroxymyristoyl)-n-acetylglucosamine deacetylases by substrate analogs containing zinc binding motifs. *Journal of Biological Chemistry*, **2000**, 275, 11002-9	5.4	149
32	Role of metals in the reaction catalyzed by protein farnesyltransferase. *Biochemistry*, **2000**, 39, 12398-405	3.2	53
31	Conversion of Tyr361 beta to Leu in mammalian protein farnesyltransferase impairs product release but not substrate recognition. *Biochemistry*, **2000**, 39, 13651-9	3.2	10

30	Structural influence of hydrophobic core residues on metal binding and specificity in carbonic anhydrase II. *Biochemistry*, **2000**, 39, 13687-94	3.2	43
29	Effects of 5′-leader and 3′-trailer structures on pre-tRNA processing by nuclear RNase P. *Biochemistry*, **2000**, 39, 9909-16	3.2	34
28	Balanced biosynthesis of major membrane components through regulated degradation of the committed enzyme of lipid A biosynthesis by the AAA protease FtsH (HflB) in Escherichia coli. *Molecular Microbiology*, **1999**, 31, 833-44	4.1	191
27	Selectivity and sensitivity of fluorescence lifetime-based metal ion biosensing using a carbonic anhydrase transducer. *Analytical Biochemistry*, **1999**, 267, 185-95	3.1	37
26	Metal binding specificity in carbonic anhydrase is influenced by conserved hydrophobic core residues. *Biochemistry*, **1999**, 38, 9054-62	3.2	105
25	UDP-3-O-(R-3-hydroxymyristoyl)-N-acetylglucosamine deacetylase of Escherichia coli is a zinc metalloenzyme. *Biochemistry*, **1999**, 38, 1902-11	3.2	113
24	Determination of picomolar concentrations of metal ions using fluorescence anisotropy: biosensing with a "reagentless" enzyme transducer. *Analytical Chemistry*, **1998**, 70, 4717-23	7.8	78
23	Recognition of a pre-tRNA substrate by the Bacillus subtilis RNase P holoenzyme. *Biochemistry*, **1998**, 37, 15466-73	3.2	65
22	H-Ras peptide and protein substrates bind protein farnesyltransferase as an ionized thiolate. *Biochemistry*, **1998**, 37, 15555-62	3.2	96
21	The protein component of Bacillus subtilis ribonuclease P increases catalytic efficiency by enhancing interactions with the 5′-leader sequence of pre-tRNAAsp. *Biochemistry*, **1998**, 37, 9409-16	3.2	125
20	Protein component of Bacillus subtilis RNase P specifically enhances the affinity for precursor-tRNAAsp. *Biochemistry*, **1998**, 37, 2393-400	3.2	152
19	High-level expression of rat farnesyl:protein transferase in Escherichia coli as a translationally coupled heterodimer. *Protein Expression and Purification*, **1998**, 14, 395-402	2	22
18	Expanded dynamic range of free zinc ion determination by fluorescence anisotropy. *Analytical Chemistry*, **1998**, 70, 1749-54	7.8	57
17	Ribonuclease P protein structure: evolutionary origins in the translational apparatus. *Science*, **1998**, 280, 752-5	33.3	148
16	Selection of carbonic anhydrase variants displayed on phage. Aromatic residues in zinc binding site enhance metal affinity and equilibration kinetics. *Journal of Biological Chemistry*, **1997**, 272, 20364-72	5.4	52
15	Histidine --> carboxamide ligand substitutions in the zinc binding site of carbonic anhydrase II alter metal coordination geometry but retain catalytic activity. *Biochemistry*, **1997**, 36, 15780-91	3.2	87
14	Reversal of the hydrogen bond to zinc ligand histidine-119 dramatically diminishes catalysis and enhances metal equilibration kinetics in carbonic anhydrase II. *Biochemistry*, **1996**, 35, 3439-46	3.2	98
13	Magnesium ions are required by Bacillus subtilis ribonuclease P RNA for both binding and cleaving precursor tRNAAsp. *Biochemistry*, **1996**, 35, 10493-505	3.2	117

12	Carbonic Anhydrase: Evolution of the Zinc Binding Site by Nature and by Design. *Accounts of Chemical Research*, **1996**, 29, 331-339	24.3	422
11	Fiber optic biosensor for Co(II) and Cu(II) based on fluorescence energy transfer with an enzyme transducer. *Biosensors and Bioelectronics*, **1996**, 11, 557-564	11.8	49
10	Hydrogen bond network in the metal binding site of carbonic anhydrase enhances zinc affinity and catalytic efficiency. *Journal of the American Chemical Society*, **1995**, 117, 6831-6837	16.4	164
9	Structural basis of inhibitor affinity to variants of human carbonic anhydrase II. *Biochemistry*, **1995**, 34, 3981-9	3.2	66
8	A kinetic mechanism for cleavage of precursor tRNA(Asp) catalyzed by the RNA component of Bacillus subtilis ribonuclease P. *Biochemistry*, **1994**, 33, 10294-304	3.2	143
7	Functional characterization of human carbonic anhydrase II variants with altered zinc binding sites. *Biochemistry*, **1994**, 33, 15233-40	3.2	119
6	Engineering a cysteine ligand into the zinc binding site of human carbonic anhydrase II. *Biochemistry* , **1993**, 32, 9896-900	3.2	63
5	Engineering the zinc binding site of human carbonic anhydrase II: structure of the His-94-->Cys apoenzyme in a new crystalline form. *Biochemistry*, **1993**, 32, 1510-8	3.2	68
4	Redesigning the zinc binding site of human carbonic anhydrase II: structure of a His2Asp-Zn2+ metal coordination polyhedron. *Journal of the American Chemical Society*, **1993**, 115, 12581-12582	16.4	41
3	Insights into Enzymic Catalysis from Studies on Dihydrofolate Reductases. *Pteridines*, **1989**, 1, 37-43	0.6	2
2	Kinetic mechanism of human mitochondrial RNase P		3
1	Structure-based prediction of KDAC6 substrates validated by enzymatic assay reveals determinants of promiscuity and detects new potential substrates		1