Keith Brew

List of Publications by Year
in descending order

124 papers	12,156 citations	28274 55 h-index	24982 109 g-index
126 all docs	126 docs citations	126 times ranked	9305 citing authors

#	Article	IF	Citations
1	Tissue inhibitors of metalloproteinases: evolution, structure and function. BBA - Proteins and Proteomics, 2000, 1477, 267-283.	2.1	1,570
2	The tissue inhibitors of metalloproteinases (TIMPs): An ancient family with structural and functional diversity. Biochimica Et Biophysica Acta - Molecular Cell Research, 2010, 1803, 55-71.	4.1	1,026
3	Mechanism of inhibition of the human matrix metalloproteinase stromelysin-1 by TIMP-1. Nature, 1997, 389, 77-81.	27.8	572
4	A possible three-dimensional structure of bovine Î±-lactalbumin based on that of hen's egg-white lysozyme. Journal of Molecular Biology, 1969, 42, 65-86.	4.2	509
5	The role of alpha-lactalbumin and the A protein in lactose synthetase: a unique mechanism for the control of a biological reaction.. Proceedings of the National Academy of Sciences of the United States of America, 1968, 59, 491-497.	7.1	479
6	TIMP-3 Is a Potent Inhibitor of Aggrecanase 1 (ADAM-TS4) and Aggrecanase 2 (ADAM-TS5). Journal of Biological Chemistry, 2001, 276, 12501-12504.	3.4	438
7	The Complete Amino Acid Sequence of Bovine Î±-Lactalbumin. Journal of Biological Chemistry, 1970, 245, 4570-4582.	3.4	313
8	Comparison of the Amino Acid Sequence of Bovine Î±-Lactalbumin and Hens Egg White Lysozyme. Journal of Biological Chemistry, 1967, 242, 3747-3748.	3.4	295
9	TIMP-3 Binds to Sulfated Glycosaminoglycans of the Extracellular Matrix. Journal of Biological Chemistry, 2000, 275, 31226-31232.	3.4	288
10	Homology of beta-lactoglobulin, serum retinol-binding protein, and protein HC. Science, 1985, 228, 335-337.	12.6	273
11	Homology and structureâ€function correlations between Î± ₁ â€acid glycoprotein and serum retinolâ€binding protein and its relatives. FASEB Journal, 1987, 1, 209-214.	0.5	248
12	Crystal Structures of Apo- and Holo-bovine Î±-Lactalbumin at 2.2-Ã… Resolution Reveal an Effect of Calcium on Inter-lobe Interactions. Journal of Biological Chemistry, 2000, 275, 37021-37029.	3.4	224
13	Crystal structures of guinea-pig, goat and bovine Î±-lactalbumin highlight the enhanced conformational flexibility of regions that are significant for its action in lactose synthase. Structure, 1996, 4, 691-703.	3.3	200
14	Some Kinetic Properties of Human-Milk Galactosyl Transferase. FEBS Journal, 1974, 44, 537-560.	0.2	186
15	Cloning and sequencing of cDNA of bovine N-acetylglucosamine (beta 1-4)galactosyltransferase.. Proceedings of the National Academy of Sciences of the United States of America, 1986, 83, 4720-4724.	7.1	185
16	Protein Folding Monitored at Individual Residues During a Two-Dimensional NMR Experiment. Science, 1996, 274, 1161-1163.	12.6	161
17	The complete amino acid sequence of human serum transferrin.. Proceedings of the National Academy of Sciences of the United States of America, 1982, 79, 2504-2508.	7.1	156
18	Cloning and mapping of a testis-specific gene with sequence similarity to a sperm-coating glycoprotein gene. Genomics, 1989, 5, 527-534.	2.9	153

#	Article	IF	Citations
19	Rapid collapse and slow structural reorganisation during the refolding of bovine Î±-lactalbumin. Journal of Molecular Biology, 1999, 288, 673-688.	4.2	151
20	The Complete Amino-Acid Sequence of Human alpha-Lactalbumin. FEBS Journal, 1972, 27, 65-86.	0.2	146
21	Sequence of a full-length cDNA for rat lung .beta.-galactoside-binding protein: primary and secondary structure of the lectin. Biochemistry, 1988, 27, 692-699.	2.5	143
22	Tissue Inhibitor of Metalloproteinases-1 Promotes Liver Metastasis by Induction of Hepatocyte Growth Factor Signaling. Cancer Research, 2007, 67, 8615-8623.	0.9	133
23	Highly Efficient Chemoenzymatic Synthesis of Î±-Galactosyl Epitopes with a Recombinant Î±(1â†'3)-Galactosyltransferase. Journal of the American Chemical Society, 1998, 120, 6635-6638.	13.7	127
24	Structural Basis of Ordered Binding of Donor and Acceptor Substrates to the Retaining Glycosyltransferase, Î±-1,3-Galactosyltransferase. Journal of Biological Chemistry, 2002, 277, 28310-28318.	3.4	110
25	Mutational Analysis of the Catalytic Subunit of Muscle Protein Phosphatase-1â€. Biochemistry, 1996, 35, 6276-6282.	2.5	108
26	Folding and characterization of the amino-terminal domain of human tissue inhibitor of metalloproteinases-1 (TIMP-1) expressed at high yield inE. coli. FEBS Letters, 1996, 384, 155-161.	2.8	99
27	Characterization of Human Angiogenin Variants Implicated in Amyotrophic Lateral Sclerosis. Biochemistry, 2007, 46, 11810-11818.	2.5	98
28	Secretion of Î±-Lactalbumin into Milk and its Relevance to the Organization and Control of Lactose Synthetase. Nature, 1969, 222, 671-672.	27.8	94
29	The Disulfide Bonds of Bovine Î±-Lactalbumin. Journal of Biological Chemistry, 1970, 245, 4583-4590.	3.4	93
30	Characterization of 58-kilodalton human neutrophil collagenase: comparison with human fibroblast collagenase. Biochemistry, 1990, 29, 10628-10634.	2.5	91
31	The Roles of Substrate Thermal Stability and P2 and P1â€² Subsite Identity on Matrix Metalloproteinase Triple-helical Peptidase Activity and Collagen Specificity. Journal of Biological Chemistry, 2006, 281, 38302-38313.	3.4	87
32	Mutational Study of the Amino-terminal Domain of Human Tissue Inhibitor of Metalloproteinases 1 (TIMP-1) Locates an Inhibitory Region for Matrix Metalloproteinases. Journal of Biological Chemistry, 1997, 272, 22086-22091.	3.4	86
33	Structure of UDP Complex of UDP-galactose:Î²-Galactoside-Î±-1,3-galactosyltransferase at 1.53-Ã… Resolution Reveals a Conformational Change in the Catalytically Important C Terminus. Journal of Biological Chemistry, 2001, 276, 48608-48614.	3.4	82
34	Selective Modulation of Matrix Metalloproteinase 9 (MMP-9) Functions via Exosite Inhibition. Journal of Biological Chemistry, 2008, 283, 20087-20095.	3.4	81
35	Lactose biosynthesis. Reviews of Physiology, Biochemistry and Pharmacology, 1975, 72, 105-158.	1.6	78
36	Increased Backbone Mobility in Î²-Barrel Enhances Entropy Gain Driving Binding of N-TIMP-1 to MMP-3. Journal of Molecular Biology, 2003, 327, 719-734.	4.2	78

#	Article	IF	Citations
37	Designing TIMP (tissue inhibitor of metalloproteinases) variants that are selective metalloproteinase inhibitors. Biochemical Society Symposia, 2003, 70, 201-212.	2.7	78
38	Residue 2 of TIMP-1 Is a Major Determinant of Affinity and Specificity for Matrix Metalloproteinases but Effects of Substitutions Do Not Correlate with Those of the Corresponding P1â€² Residue of Substrate. Journal of Biological Chemistry, 1999, 274, 10184-10189.	3.4	73
39	The Complete Amino-Acid Sequence of Guinea-Pig alpha-Lactalbumin. FEBS Journal, 1972, 27, 341-353.	0.2	72
40	The Preparation and Characterization of Two Forms of Bovine Galactosyl Transferase. FEBS Journal, 1974, 48, 217-228.	0.2	72
41	Role of conserved residues in structure and stability: Tryptophans of human serum retinolâ€binding protein, a model for the lipocalin superfamily. Protein Science, 2001, 10, 2301-2316.	7.6	72
42	Proteins from the organic matrix of core-top and fossil planktonic foraminifera. Geochimica Et Cosmochimica Acta, 1990, 54, 2285-2292.	3.9	70
43	Triple-Helical Transition State Analogues:â€‰ A New Class of Selective Matrix Metalloproteinase Inhibitors. Journal of the American Chemical Society, 2007, 129, 10408-10417.	13.7	69
44	Structural Evidence for the Presence of a Secondary Calcium Binding Site in Human Î±-Lactalbumin,. Biochemistry, 1998, 37, 4767-4772.	2.5	68
45	E. coliExpression of TIMP-4 and Comparative Kinetic Studies with TIMP-1 and TIMP-2:Â Insights into the Interactions of TIMPs and Matrix Metalloproteinase 2 (Gelatinase A)â€. Biochemistry, 2002, 41, 15025-15035.	2.5	66
46	Sequences of Two Highly Divergent Canine Type c Lysozymes: Implications for the Evolutionary Origins of the Lysozyme/Î±-Lactalbumin Superfamily. Archives of Biochemistry and Biophysics, 1994, 313, 360-366.	3.0	64
47	Primary structure of the major isomorph of the crustacean hyperglycemic hormone (CHH-I) from the sinus gland of the Mexican crayfish Procambarus bouvieri (Ortmann): Interspecies comparison. Peptides, 1993, 14, 7-16.	2.4	63
48	Lactose Synthetase. Advances in Enzymology and Related Areas of Molecular Biology, 2006, 43, 411-490.	1.3	63
49	Urokinase directly activates matrix metalloproteinases-9: A potential role in glioblastoma invasion. Biochemical and Biophysical Research Communications, 2008, 369, 1215-1220.	2.1	63
50	Sequence homology in the metalloproteins; Purple acid phosphatase from beef spleen and uteroferrin from porcine uterus. Biochemical and Biophysical Research Communications, 1987, 144, 1154-1160.	2.1	61
51	Calcium regulates folding and disulfide-bond formation in Î±-lactalbumin. Biochemical and Biophysical Research Communications, 1989, 163, 1390-1396.	2.1	61
52	Constraining specificity in the Nâ€domain of tissue inhibitor of metalloproteinasesâ€1; gelatinaseâ€selective inhibitors. Protein Science, 2007, 16, 1905-1913.	7.6	61
53	Catalytic Properties of ADAM12 and Its Domain Deletion Mutants. Biochemistry, 2008, 47, 537-547.	2.5	59
54	Reactive-site mutants of N-TIMP-3 that selectively inhibit ADAMTS-4 and ADAMTS-5: biological and structural implications. Biochemical Journal, 2010, 431, 113-122.	3.7	59

#	Article	IF	Citations
55	Crystal Structure of the Catalytic Domain of Matrix Metalloproteinase-1 in Complex with the Inhibitory Domain of Tissue Inhibitor of Metalloproteinase-1. Journal of Biological Chemistry, 2007, 282, 364-371.	3.4	57
56	The Isolation and Characterization of the Tryptic, Chymotryptic, Peptic, and Cyanogen Bromide Peptides from Bovine Î±-Lactalbumin. Journal of Biological Chemistry, 1970, 245, 4559-4569.	3.4	57
57	Roles of Individual Enzymeâˆ'Substrate Interactions by Î±-1,3-Galactosyltransferase in Catalysis and Specificity,. Biochemistry, 2003, 42, 13512-13521.	2.5	56
58	DrosophilaTIMP Is a Potent Inhibitor of MMPs and TACE:Â Similarities in Structure and Function to TIMP-3â€. Biochemistry, 2003, 42, 12200-12207.	2.5	56
59	Protein Engineering of the Tissue Inhibitor of Metalloproteinase 1 (TIMP-1) Inhibitory Domain. Journal of Biological Chemistry, 2003, 278, 9831-9834.	3.4	55
60	Engineering of Selective TIMPs. Annals of the New York Academy of Sciences, 1999, 878, 1-11.	3.8	53
61	Reactive Site Mutations in Tissue Inhibitor of Metalloproteinase-3 Disrupt Inhibition of Matrix Metalloproteinases but Not Tumor Necrosis Factor-Î±-converting Enzyme. Journal of Biological Chemistry, 2005, 280, 32877-32882.	3.4	53
62	Affinity labeling of bovine colostrum galactosyltransferase with a uridine 5'-diphosphate derivative. Biochemistry, 1976, 15, 3499-3505.	2.5	50
63	Differentiation of Secreted and Membrane-Type Matrix Metalloproteinase Activities Based on Substitutions and Interruptions of Triple-Helical Sequencesâ€. Biochemistry, 2007, 46, 3724-3733.	2.5	50
64	Mapping of the calpain proteolysis products of the junctional foot protein of the skeletal muscle triad junction. Journal of Membrane Biology, 1992, 127, 35-47.	2.1	49
65	A New Role for TIMP-1 in Modulating Neurite Outgrowth and Morphology of Cortical Neurons. PLoS ONE, 2009, 4, e8289.	2.5	49
66	Conformational Changes Induced by Binding UDP-2F-galactose to Î±-1,3 Galactosyltransferase- Implications for Catalysis. Journal of Molecular Biology, 2007, 369, 1270-1281.	4.2	48
67	Glycosyltransferases in the Golgi membranes of onion stem. Biochemical Journal, 1974, 142, 203-209.	3.1	47
68	Expression of Human Pro-Matrix Metalloproteinase 3 that Lacks the N-terminal 34 Residues in <i>Escherichia coli: </i>Autoactivation and Interaction with Tissue Inhibitor of Metalloproteinase 1 (TIMP-1). Biological Chemistry, 1998, 379, 185-192.	2.5	47
69	Specificity and Mechanism of Metal Ion Activation in UDP-galactose:Î²-Galactoside-Î±-1,3-galactosyltransferase. Journal of Biological Chemistry, 2001, 276, 11567-11574.	3.4	47
70	Engineering of tissue inhibitor of metalloproteinases mutants as potential therapeutics. Arthritis Research, 2002, 4, S51.	2.0	47
71	Enzymic characteristics of fat globule membranes from bovine colostrum and bovine milk.. Journal of Cell Biology, 1977, 72, 617-627.	5.2	46
72	The amino acid sequence of goat Î±-lactalbumin. Archives of Biochemistry and Biophysics, 1979, 197, 404-414.	3.0	46

#	Article	IF	Citations
73	Tissue inhibitor of metalloproteinases-1 protects human neurons from staurosporine and HIV-1-induced apoptosis: mechanisms and relevance to HIV-1-associated dementia. Cell Death and Disease, 2012, 3, e332-e332.	6.3	45
74	Phage Display of Tissue Inhibitor of Metalloproteinases-2 (TIMP-2). Journal of Biological Chemistry, 2011, 286, 31761-31770.	3.4	43
75	Effect of alloxan-diabetes on the glucose-ATP phosphotransferase activity of adipose tissue. Biochemical and Biophysical Research Communications, 1966, 23, 117-121.	2.1	41
76	NMR structure of tissue inhibitor of metalloproteinases-1 implicates localized induced fit in recognition of matrix metalloproteinases. Journal of Molecular Biology, 2000, 295, 257-268.	4.2	40
77	Energetics of Binding the Mammalian High Mobility Group Protein HMGA2 to poly(dA-dT)2 and poly(dA)-poly(dT). Journal of Molecular Biology, 2005, 352, 629-645.	4.2	36
78	Stability, activity and flexibility in Î±-lactalbumin. Protein Engineering, Design and Selection, 1999, 12, 581-587.	2.1	34
79	Adipose pyruvate carboxylase: amino acid sequence and domain structure deduced from cDNA sequencing.. Proceedings of the National Academy of Sciences of the United States of America, 1993, 90, 1766-1770.	7.1	33
80	Purification and characterization of the major whey proteins from the milks of the bottlenose dolphin (Tursiops truncatus), the Florida manatee (Trichechus manatus latirostris), and the beagle (Canis familiaris). Archives of Biochemistry and Biophysics, 1986, 246, 846-854.	3.0	32
81	Calcium effects on calmodulin lysine reactivities. Archives of Biochemistry and Biophysics, 1987, 252, 136-144.	3.0	31
82	Functional Site in Î±-Lactalbumin Encompasses a Region Corresponding to a Subsite in Lysozyme and Parts of Two Adjacent Flexible Substructures. Biochemistry, 1996, 35, 9710-9715.	2.5	31
83	Presence of tear lipocalin and other major proteins in lacrimal fluid of rabbits. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2004, 138, 111-117.	1.6	31
84	Transferrin: internal homology in the amino acid sequence. Science, 1975, 190, 1306-1307.	12.6	30
85	Structure of human ACE gives new insights into inhibitor binding and design. Trends in Pharmacological Sciences, 2003, 24, 391-394.	8.7	30
86	A Partial Amino Acid Sequence of Î±-Lactalbumin-I of the Grey Kangaroo (Macropus giganteus). Journal of Biological Chemistry, 1973, 248, 4739-4742.	3.4	29
87	Role of a conserved acidic cluster in bovine Â1,4 galactosyltransferase-1 probed by mutagenesis of a bacterially expressed recombinant enzyme. Glycobiology, 1999, 9, 815-822.	2.5	23
88	Synthesis of 4-deoxy-d-xylo-hexose and 4-azido-4-deoxy-d-glucose and their effects on lactose synthase. Carbohydrate Research, 1980, 81, 239-247.	2.3	22
89	Conserved signature proposed for folding in the lipocalin superfamily. FEBS Letters, 2003, 553, 39-44.	2.8	22
90	Chemical and enzymatic synthesis of glycoconjugates 1. Enzymatic galactosylation of conduritol B. Tetrahedron Letters, 1995, 36, 2897-2900.	1.4	20

#	Article	IF	Citations
91	Roles of active site tryptophans in substrate binding and catalysis by Â-1,3 galactosyltransferase. Glycobiology, 2004, 14, 1295-1302.	2.5	20
92	Family 6 Glycosyltransferases in Vertebrates and Bacteria: Inactivation and Horizontal Gene Transfer May Enhance Mutualism between Vertebrates and Bacteria. Journal of Biological Chemistry, 2010, 285, 37121-37127.	3.4	20
93	Composition of the milks of the bottlenose dolphin (Tursiops truncatus) and the florida manatee (Trichechus manatus latirostris). Comparative Biochemistry and Physiology A, Comparative Physiology, 1986, 84, 357-360.	0.6	18
94	Molecular conformation and fluorescence properties of Î± lactalbumin from four animal species. Biochemical and Biophysical Research Communications, 1973, 52, 98-105.	2.1	17
95	Engineered Sarafotoxins as Tissue Inhibitor of Metalloproteinases-like Matrix Metalloproteinase Inhibitors. Journal of Biological Chemistry, 2007, 282, 26948-26955.	3.4	17
96	Structural Basis of UDP-galactose Binding by Î±-1,3-Galactosyltransferase (Î±3GT): Role of Negative Charge on Aspartic Acid 316 in Structure and Activity. Biochemistry, 2008, 47, 8711-8718.	2.5	17
97	Inactivation of Nâ€TIMPâ€1 by Nâ€terminal acetylation when expressed in bacteria. Biopolymers, 2008, 89, 960-968.	2.4	16
98	Structure of a metal-independent bacterial glycosyltransferase that catalyzes the synthesis of histo-blood group A antigen. Scientific Reports, 2012, 2, 940.	3.3	15
99	Structures of Complexes of a Metal-independent Glycosyltransferase GT6 from Bacteroides ovatus with UDP-N-Acetylgalactosamine (UDP-GalNAc) and Its Hydrolysis Products. Journal of Biological Chemistry, 2014, 289, 8041-8050.	3.4	15
100	The sequence of residues 1-26 of human serum transferrin. FEBS Letters, 1974, 40, 146-148.	2.8	14
101	Association of calmodulin and smooth muscle myosin light chain kinase: Application of a lable selection technique with trace acetylated calmodulin. Proteins: Structure, Function and Bioinformatics, 1987, 2, 202-209.	2.6	14
102	Screening a limited structure-based library identifies UDP-GalNAc-specific mutants of Â-1,3-galactosyltransferase. Glycobiology, 2008, 18, 1036-1043.	2.5	14
103	Reflections on the evolution of the vertebrate tissue inhibitors of metalloproteinases. FASEB Journal, 2019, 33, 71-87.	0.5	12
104	The Amino-Acid Sequences of Three Cystine-Free Cyanogen-Bromide Fragments of Human Serum Transferrin. FEBS Journal, 1975, 51, 43-48.	0.2	11
105	Spectroscopic characterization by photodiode array detection of human urinary and amniotic protein HC subpopulations fractionated by anion-exchange and size-exclusion high-performance liquid chromatography. Journal of Chromatography A, 1996, 719, 149-157.	3.7	11
106	Nitration of Tyrosyl Residues in Human alpha-Lactalbumin. Effect on Lactose Synthase Specifier Activity. FEBS Journal, 1975, 60, 533-539.	0.2	10
107	Isolation of a calcium-sensitive, 35,000-dalton microfilament- and liposome-binding protein from ascites tumor cell microvilli: Identification as monomeric calpactin. Journal of Cellular Biochemistry, 1987, 35, 185-204.	2.6	10
108	Characterization of a Metal-independent CAZy Family 6 Glycosyltransferase from Bacteroides ovatus. Journal of Biological Chemistry, 2009, 284, 25126-25134.	3.4	8

#	Article	IF	Citations
109	Entropy Increases from Different Sources Support the High-affinity Binding of the N-terminal Inhibitory Domains of Tissue Inhibitors of Metalloproteinases to the Catalytic Domains of Matrix Metalloproteinases-1 and -3. Journal of Biological Chemistry, 2011, 286, 16891-16899.	3.4	8
110	Thermodynamic Basis of Selectivity in the Interactions of Tissue Inhibitors of Metalloproteinases N-domains with Matrix Metalloproteinases-1, -3, and -14. Journal of Biological Chemistry, 2016, 291, 11348-11358.	3.4	7
111	Puromycin does not inactivate the galactosyltransferase of golgi membranes. Biochemical and Biophysical Research Communications, 1975, 62, 621-626.	2.1	5
112	Peptide maps at picomolar levels obtained by reversed-phase high-performance liquid chromatography and pre-column derivatization with phenyl isothiocyanate. Journal of Chromatography A, 1991, 548, 303-310.	3.7	5
113	1H, 13C and 15N resonance assignments and secondary structure of the N-terminal domain of human tissue inhibitor of metalloproteinases-1. Journal of Biomolecular NMR, 1999, 14, 289-290.	2.8	5
114	Crystal structure of Î±-1,3-galactosyltransferase (Î±3GT) in a complex with p-nitrophenyl-Î²-galactoside (pNPÎ²Gal). Biochemical and Biophysical Research Communications, 2009, 385, 601-604.	2.1	4
115	Hypothesis. Journal of Cardiovascular Pharmacology and Therapeutics, 2016, 21, 368-371.	2.0	4
116	Thermodynamic and Mechanistic Insights into Coupled Binding and Unwinding of Collagen by Matrix Metalloproteinase 1. Journal of Molecular Biology, 2020, 432, 5985-5993.	4.2	4
117	Comparison of the Structures of Alpha-Lactalbumin and Lysozyme. , 1974, , 55-62.		4
118	Amino acid sequence of a 32-residue region around the thiol ester site in duck ovostatin. FEBS Letters, 1987, 222, 83-88.	2.8	3
119	Development of a convenient peptideâ€based assay for lysyl hydroxylase. Biopolymers, 2008, 90, 330-338.	2.4	2
120	Thermodynamic profiles of the interactions of suramin, chondroitin sulfate, and pentosan polysulfate with the inhibitory domain of TIMP â€3. FEBS Letters, 2020, 594, 94-103.	2.8	2
121	Holoprotein formation of human chorionic gonadotropin: differential trace labeling with acetic anhydride. Molecular Endocrinology, 1994, 8, 1547-1558.	3.7	2
122	STRUCTURAL BASIS OF THE REGULATION OF GALACTOSYLTRANSFERASE. , 1979, , 433-447.		1
123	Dm1 and Dm2 Matrix Metallopeptidases. , 2013, , 850-854.		0
124	STUDIES OF THE MOLECULAR LOCALIZATION OF PROTEIN-PROTEIN INTERACTION SITES IN THE LACTOSE SYNTHASE SYSTEM. , 1982, , 379-393.		0