Thomas J. Smith

List of Publications by Year
in descending order

124	7,711	34105 52	56724 83
papers	citations	h-index	g-index

132	132	132	7201
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Complex Glycan Catabolism by the Human Gut Microbiota: The Bacteroidetes Sus-like Paradigm. Journal of Biological Chemistry, 2009, 284, 24673-24677.	3.4	540
2	Nucleocapsid and glycoprotein organization in an enveloped virus. Cell, 1995, 80, 621-630.	28.9	342
3	Starch Catabolism by a Prominent Human Gut Symbiont Is Directed by the Recognition of Amylose Helices. Structure, 2008, 16, 1105-1115.	3.3	305
4	Antiviral agent blocks breathing of the common cold virus. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 6774-6778.	7.1	241
5	Crystal structure of human rhinovirus serotype 1A (HRV1A). Journal of Molecular Biology, 1989, 210, 91-111.	4.2	217
6	Differential Antifungal and Calcium Channel-Blocking Activity among Structurally Related Plant Defensins. Plant Physiology, 2004, 135, 2055-2067.	4.8	205
7	Neutralizing antibody to human rhinovirus 14 penetrates the receptor-binding canyon. Nature, 1996, 383, 350-354.	27.8	192
8	Structure-Activity Determinants in Antifungal Plant Defensins MsDef1 and MtDef4 with Different Modes of Action against Fusarium graminearum. PLoS ONE, 2011, 6, e18550.	2.5	159
9	Mechanism of Hyperinsulinism in Short-chain 3-Hydroxyacyl-CoA Dehydrogenase Deficiency Involves Activation of Glutamate Dehydrogenase. Journal of Biological Chemistry, 2010, 285, 31806-31818.	3.4	154
10	The structure of bovine glutamate dehydrogenase provides insights into the mechanism of allostery. Structure, 1999, 7, 769-782.	3.3	153
11	Green Tea Polyphenols Modulate Insulin Secretion by Inhibiting Glutamate Dehydrogenase. Journal of Biological Chemistry, 2006, 281, 10214-10221.	3.4	147
12	Structures of bovine glutamate dehydrogenase complexes elucidate the mechanism of purine regulation11Edited by I. A. Wilson. Journal of Molecular Biology, 2001, 307, 707-720.	4.2	146
13	Putative receptor binding sites on alphaviruses as visualized by cryoelectron microscopy.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 10648-10652.	7.1	134
14	Hyperinsulinism/Hyperammonemia Syndrome in Children with Regulatory Mutations in the Inhibitory Guanosine Triphosphate-Binding Domain of Glutamate Dehydrogenase1. Journal of Clinical Endocrinology and Metabolism, 2001, 86, 1782-1787.	3.6	131
15	The Structure of Cucumber Mosaic Virus and Comparison to Cowpea Chlorotic Mottle Virus. Journal of Virology, 2000, 74, 7578-7586.	3.4	124
16	Structural and Functional Studies of a Phosphatidic Acid-Binding Antifungal Plant Defensin MtDef4: Identification of an RGFRRR Motif Governing Fungal Cell Entry. PLoS ONE, 2013, 8, e82485.	2.5	120
17	The Structure of Apo Human Glutamate Dehydrogenase Details Subunit Communication and Allostery. Journal of Molecular Biology, 2002, 318, 765-777.	4.2	119
18	Structural Determinants of Metal Specificity in the Zinc Transport Protein ZnuA from Synechocystis 6803. Journal of Molecular Biology, 2003, 333, 1061-1069.	4.2	119

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19	SusG: A Unique Cell-Membrane-Associated Î±-Amylase from a Prominent Human Gut Symbiont Targets Complex Starch Molecules. Structure, 2010, 18, 200-215.	3.3	115
20	Fungal Virus Capsids, Cytoplasmic Compartments for the Replication of Double-stranded RNA, Formed as Icosahedral Shells of Asymmetric Gag Dimers. Journal of Molecular Biology, 1994, 244, 255-258.	4.2	111
21	The structure and allosteric regulation of mammalian glutamate dehydrogenase. Archives of Biochemistry and Biophysics, 2012, 519, 69-80.	3.0	110
22	Hyperinsulinism/Hyperammonemia Syndrome in Children with Regulatory Mutations in the Inhibitory Guanosine Triphosphate-Binding Domain of Glutamate Dehydrogenase. Journal of Clinical Endocrinology and Metabolism, 2001, 86, 1782-1787.	3.6	109
23	Protruding Domain of Capsid Protein Is Necessary and Sufficient To Determine Murine Norovirus Replication and Pathogenesis In Vivo. Journal of Virology, 2012, 86, 2950-2958.	3.4	96
24	Low Temperature and Pressure Stability of Picornaviruses: Implications for Virus Uncoating. Biophysical Journal, 1999, 76, 1270-1279.	0.5	94
25	Untangling the glutamate dehydrogenase allosteric nightmare. Trends in Biochemical Sciences, 2008, 33, 557-564.	7.5	94
26	Multidomain Carbohydrate-binding Proteins Involved in Bacteroides thetaiotaomicron Starch Metabolism. Journal of Biological Chemistry, 2012, 287, 34614-34625.	3.4	93
27	Antibodies to the Buried N Terminus of Rhinovirus VP4 Exhibit Cross-Serotypic Neutralization. Journal of Virology, 2009, 83, 7040-7048.	3.4	91
28	Breast conservation in elderly women for clinically negative axillary lymph nodes without axillary dissection. Cancer, 1994, 74, 878-883.	4.1	90
29	Structure of Antibody-Neutralized Murine Norovirus and Unexpected Differences from Viruslike Particles. Journal of Virology, 2008, 82, 2079-2088.	3.4	90
30	MOLView: A program for analyzing and displaying atomic structures on the Macintosh personal computer. Journal of Molecular Graphics, 1995, 13, 122-125.	1.1	86
31	Structural Studies on ADP Activation of Mammalian Glutamate Dehydrogenase and the Evolution of Regulation,. Biochemistry, 2003, 42, 3446-3456.	2.5	86
32	Plant defensins and virally encoded fungal toxin KP4 inhibit plant root growth. Planta, 2007, 227, 331-339.	3.2	85
33	Structural basis for murine norovirus engagement of bile acids and the CD300lf receptor. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9201-E9210.	7.1	82
34	The Structure of a Cyanobacterial Bicarbonate Transport Protein, CmpA. Journal of Biological Chemistry, 2007, 282, 2606-2614.	3.4	78
35	High-Resolution X-Ray Structure and Functional Analysis of the Murine Norovirus 1 Capsid Protein Protruding Domain. Journal of Virology, 2010, 84, 5695-5705.	3.4	78
36	Antibody-Mediated Neutralization of Human Rhinovirus 14 Explored by Means of Cryoelectron Microscopy and X-Ray Crystallography of Virus-Fab Complexes. Journal of Virology, 1998, 72, 4610-4622.	3.4	78

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37	Expression, purification and characterization of human glutamate dehydrogenase (GDH) allosteric regulatory mutations. Biochemical Journal, 2002, 363, 81-87.	3.7	75
38	Structural Basis for Broad Detection of Genogroup II Noroviruses by a Monoclonal Antibody That Binds to a Site Occluded in the Viral Particle. Journal of Virology, 2012, 86, 3635-3646.	3.4	75
39	Possible Regulatory Role for the Histidine-Rich Loop in the Zinc Transport Protein, ZnuA,. Biochemistry, 2007, 46, 8734-8743.	2.5	72
40	Atomic structure of a nitrate-binding protein crucial for photosynthetic productivity. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9820-9825.	7.1	70
41	High-Resolution Cryo-Electron Microscopy Structures of Murine Norovirus 1 and Rabbit Hemorrhagic Disease Virus Reveal Marked Flexibility in the Receptor Binding Domains. Journal of Virology, 2010, 84, 5836-5841.	3.4	70
42	Human rhinovirus capsid dynamics is controlled by canyon flexibility. Virology, 2003, 314, 34-44.	2.4	66
43	Novel Inhibitors Complexed with Glutamate Dehydrogenase. Journal of Biological Chemistry, 2009, 284, 22988-23000.	3.4	66
44	Glutamate Dehydrogenase, a Complex Enzyme at a Crucial Metabolic Branch Point. Neurochemical Research, 2019, 44, 117-132.	3.3	64
45	The structure and allosteric regulation of glutamate dehydrogenase. Neurochemistry International, 2011, 59, 445-455.	3.8	62
46	Green Tea Polyphenols Control Dysregulated Glutamate Dehydrogenase in Transgenic Mice by Hijacking the ADP Activation Site. Journal of Biological Chemistry, 2011, 286, 34164-34174.	3.4	62
47	Structure Determination of an Fab Fragment that Neutralizes Human Rhinovirus 14 and Analysis of the Fab-Virus Complex. Journal of Molecular Biology, 1994, 240, 127-137.	4.2	57
48	Structure and function of a virally encoded fungal toxin from Ustilago maydis: a fungal and mammalian Ca2+ channel inhibitor. Structure, 1995, 3, 805-814.	3.3	57
49	KP4 fungal toxin inhibits growth in Ustilago maydis by blocking calcium uptake. Molecular Microbiology, 2002, 41, 775-785.	2.5	57
50	Expression, purification and characterization of human glutamate dehydrogenase (GDH) allosteric regulatory mutations. Biochemical Journal, 2002, 363, 81.	3.7	54
51	Viral capsid mobility: A dynamic conduit for inactivation. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 2274-2277.	7.1	53
52	An Antibody to the Putative Aphid Recognition Site on Cucumber Mosaic Virus Recognizes Pentons but Not Hexons. Journal of Virology, 2002, 76, 12250-12258.	3.4	53
53	Conformational variability of a picornavirus capsid: pH-dependent structural changes of mengo virus related to its host receptor attachment site and disassembly. Virology, 1990, 175, 176-190.	2.4	51
54	Structural analysis of antiviral agents that interact with the capsid of human rhinoviruses. Proteins: Structure, Function and Bioinformatics, 1989, 6, 1-19.	2.6	50

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55	The Structure of the Iron-binding Protein, FutA1, from Synechocystis 6803. Journal of Biological Chemistry, 2007, 282, 27468-27477.	3.4	50
56	Aggregation of TMV CP plays a role in CP functions and in coat-protein-mediated resistance. Virology, 2007, 366, 98-106.	2.4	49
57	Structure of a SusD Homologue, BT1043, Involved in Mucin O-Glycan Utilization in a Prominent Human Gut Symbiont[,]. Biochemistry, 2009, 48, 1532-1542.	2.5	49
58	Antibody-induced uncoating of human rhinovirus B14. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8017-8022.	7.1	49
59	Evolution of Glutamate Dehydrogenase Regulation of Insulin Homeostasis Is an Example of Molecular Exaptation. Biochemistry, 2004, 43, 14431-14443.	2.5	48
60	Phase II trial of 6-diazo-5-oxo-L-norleucine versus aclacinomycin-A in advanced sarcomas and mesotheliomas. Investigational New Drugs, 1990, 8, 113-9.	2.6	47
61	Preparation and crystallization of a human immunodeficiency virus p24-Fab complex.. Proceedings of the National Academy of Sciences of the United States of America, 1990, 87, 9980-9984.	7.1	46
62	Evolution on the Biophysical Fitness Landscape of an RNA Virus. Molecular Biology and Evolution, 2018, 35, 2390-2400.	8.9	45
63	Glutamate Dehydrogenase: Structure, Allosteric Regulation, and Role in Insulin Homeostasis. Neurochemical Research, 2014, 39, 433-445.	3.3	44
64	Transgenic maize plants expressing the Totivirus antifungal protein, KP4, are highly resistant to corn smut. Plant Biotechnology Journal, 2011, 9, 857-864.	8.3	40
65	The Virally Encoded Fungal Toxin KP4 Specifically Blocks L-Type Voltage-Gated Calcium Channels. Molecular Pharmacology, 2002, 61, 936-944.	2.3	39
66	Bile Salts Alter the Mouse Norovirus Capsid Conformation: Possible Implications for Cell Attachment and Immune Evasion. Journal of Virology, 2019, 93, .	3.4	39
67	High Throughput Screening Reveals Several New Classes of Glutamate Dehydrogenase Inhibitors. Biochemistry, 2007, 46, 15089-15102.	2.5	38
68	Green tea polyphenols in drug discovery: a success or failure?. Expert Opinion on Drug Discovery, 2011, 6, 589-595.	5.0	35
69	Identification of viral mutants by mass spectrometry. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 8596-8601.	7.1	34
70	Flexibility in Surface-Exposed Loops in a Virus Capsid Mediates Escape from Antibody Neutralization. Journal of Virology, 2014, 88, 4543-4557.	3.4	32
71	The Dynamic Capsid Structures of the Noroviruses. Viruses, 2019, 11, 235.	3.3	31
72	Picornaviruses: Epitopes, Canyons, and Pockets. Advances in Virus Research, 1999, 52, 1-23.	2.1	30

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73	Norovirus Escape from Broadly Neutralizing Antibodies Is Limited to Allostery-Like Mechanisms. MSphere, 2017, 2, .	2.9	30
74	Crystallization and Characterization of Bovine Liver Glutamate Dehydrogenase. Journal of Structural Biology, 1997, 120, 73-77.	2.8	29
75	A high-throughput drop microfluidic system for virus culture and analysis. Journal of Virological Methods, 2015, 213, 111-117.	2.1	28
76	Preliminary investigation of the phage Ï†X174 crystal structure. Journal of Molecular Biology, 1990, 212, 345-350.	4.2	27
77	Low-Resolution Density Maps from Atomic Models: How Stepping â€œBackâ€•Can Be a Step â€œForwardâ€• Journal of Structural Biology, 1999, 125, 166-175.	2.8	27
78	Pocket Factors Are Unlikely To Play a Major Role in the Life Cycle of Human Rhinovirus. Journal of Virology, 2007, 81, 6307-6315.	3.4	26
79	Structures of T=1 and T=3 Particles of Cucumber Necrosis Virus: Evidence of Internal Scaffolding. Journal of Molecular Biology, 2007, 365, 502-512.	4.2	23
80	Enantiomeric effects of homologs of disoxaril on the inhibitory activity against human rhinovirus-14. Journal of Medicinal Chemistry, 1988, 31, 540-544.	6.4	22
81	Induction of Particle Polymorphism by Cucumber Necrosis Virus Coat Protein Mutants In Vivo. Journal of Virology, 2008, 82, 1547-1557.	3.4	22
82	Newly isolated mAbs broaden the neutralizing epitope in murine norovirus. Journal of General Virology, 2014, 95, 1958-1968.	2.9	22
83	Atomic Structure of Cucumber Necrosis Virus and the Role of the Capsid in Vector Transmission. Journal of Virology, 2013, 87, 12166-12175.	3.4	21
84	The Dynamic Life of Virus Capsids. Viruses, 2020, 12, 618.	3.3	20
85	VP4 Protein from Human Rhinovirus 14 Is Released by Pressure and Locked in the Capsid by the Antiviral Compound WIN. Journal of Molecular Biology, 2007, 366, 295-306.	4.2	19
86	Atomic Structure of Salutaridine Reductase from the Opium Poppy (Papaver somniferum). Journal of Biological Chemistry, 2011, 286, 6532-6541.	3.4	18
87	A novel mechanism of Vâ€¢type zinc inhibition of glutamate dehydrogenase results from disruption of subunit interactions necessary for efficient catalysis. FEBS Journal, 2011, 278, 3140-3151.	4.7	17
88	Structure of Cowpea mottle virus: a consensus in the genus Carmovirus. Virology, 2004, 321, 349-358.	2.4	15
89	A severe case of hyperinsulinism due to hemizygous activating mutation of glutamate dehydrogenase. Pediatric Diabetes, 2017, 18, 911-916.	2.9	15
90	The characterization and crystallization of a virally encoded Ustilago maydis KP4 toxin. Journal of Molecular Biology, 1994, 243, 792-795.	4.2	14

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91	Structural studies on the mechanisms of antibody-mediated neutralization of human rhinovirus. Seminars in Virology, 1995, 6, 233-242.	3.9	14
92	Identification of a Novel Activator of Mammalian Glutamate Dehydrogenase. Biochemistry, 2016, 55, 6568-6576.	2.5	14
93	A Norovirus Uses Bile Salts To Escape Antibody Recognition While Enhancing Receptor Binding. Journal of Virology, 2021, 95, e0017621.	3.4	14
94	The Atomic Structure of the Virally Encoded Antifungal Protein, KP6. Journal of Molecular Biology, 2013, 425, 609-621.	4.2	13
95	The virally encoded killer proteins from Ustilago maydis. Fungal Biology Reviews, 2013, 26, 166-173.	4.7	12
96	Common cold viruses. Trends in Biochemical Sciences, 1987, 12, 313-318.	7.5	11
97	Chapter 4 Purification of Mouse Antibodies and Fab Fragments. Methods in Cell Biology, 1993, 37, 75-93.	1.1	11
98	Structural studies of virus-antibody complexes by electron cryomicroscopy and X-ray crystallography. Current Opinion in Structural Biology, 1994, 4, 219-224.	5.7	11
99	Near-Atomic-Resolution Cryo-Electron Microscopy Structures of Cucumber Leaf Spot Virus and Red Clover Necrotic Mosaic Virus: Evolutionary Divergence at the Icosahedral Three-Fold Axes. Journal of Virology, 2020, 94, .	3.4	10
100	Sindbis virus core protein crystals. Journal of Molecular Biology, 1989, 208, 79-82.	4.2	9
101	Structural Studies on Antibodyâ€“Virus Complexes. Advances in Protein Chemistry, 2003, 64, 409-453.	4.4	9
102	Structural Studies on the Shapeshifting Murine Norovirus. Viruses, 2021, 13, 2162.	3.3	9
103	Investigation of the effects of crosslinking glutamate dehydrogenase with dimethyl pimelimidate. Archives of Biochemistry and Biophysics, 1985, 239, 63-73.	3.0	8
104	The isolation of the two electrophoretic forms of cowpea mosaic virus using fast protein liquid chromatography. Journal of Virological Methods, 1987, 16, 263-269.	2.1	8
105	An exponential gradient maker for use with minigel polyacrylamide electrophoresis systems. Analytical Biochemistry, 1986, 152, 74-77.	2.4	7
106	Fungal Secretome Analysis via PepSAVI-MS: Identification of the Bioactive Peptide KP4 from Ustilago maydis. Journal of the American Society for Mass Spectrometry, 2018, 29, 859-865.	2.8	7
107	Multiple Signals in the Gut Contract the Mouse Norovirus Capsid To Block Antibody Binding While Enhancing Receptor Affinity. Journal of Virology, 2021, 95, e0147121.	3.4	7
108	MolViewX: a molecular visualization program for the Macintosh OS X system. Journal of Applied Crystallography, 2004, 37, 654-657.	4.5	6

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109	Crystallization and preliminary X-ray diffraction analysis of salutaridine reductase from the opium poppyPapaver somniferum. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 163-166.	0.7	6
110	Allosteric discrimination at the NADH/ADP regulatory site of glutamate dehydrogenase. Protein Science, 2019, 28, 2080-2088.	7.6	6
111	Glutamate dehydrogenase: Structure of a hyperinsulinism mutant, corrections to the atomic model, and insights into a regulatory site. Proteins: Structure, Function and Bioinformatics, 2019, 87, 41-50.	2.6	6
112	Glutamate dehydrogenase in Reye's syndrome Evidence for the presence of an altered enzyme in serum with increased susceptibility to inhibition by GTP. BBA - Proteins and Proteomics, 1983, 749, 42-46.	2.1	5
113	Structural studies on antibody recognition and neutralization of viruses. Current Opinion in Virology, 2011, 1, 150-156.	5.4	5
114	Stability of Cucumber Necrosis Virus at the Quasi-6-Fold Axis Affects Zoospore Transmission. Journal of Virology, 2017, 91, .	3.4	5
115	Antibody Interactions with Rhinovirus. , 0, , 39-49.		5
116	Purification and crystallization of intact human rhinovirus complexed with a neutralizing fab. Virology, 1992, 191, 600-606.	2.4	4
117	Developing a new interdisciplinary lab course for undergraduate and graduate students: Plant cells and proteins. Biochemistry and Molecular Biology Education, 2007, 35, 410-415.	1.2	4
118	Dissecting the Antenna in Human Glutamate Dehydrogenase: Understanding Its Role in Subunit Communication and Allosteric Regulation. Biochemistry, 2019, 58, 4195-4206.	2.5	4
119	Distinct dissociation rates of murine and human norovirus P-domain dimers suggest a role of dimer stability in virus-host interactions. Communications Biology, 2022, 5, .	4.4	4
120	The Caliciviruses. Current Topics in Microbiology and Immunology, 2010, 343, 23-41.	1.1	2
121	The Structure of a Virally Encoded Fungal Toxin from Ustilago Maydis that Inhibits Fungal and Mammalian Calcium Channels. Molecular Biology Intelligence Unit, 1996, , 291-303.	0.2	1
122	Glutamate Dehydrogenase: Structure, Regulation, and Its Role in Insulin Homeostasis. Frontiers in Diabetes, 2012, , 87-99.	0.4	0
123	Green Tea and Control of Glutamate Dehydrogenase Activity. , 2013, , 1029-1038.		0
124	Ustilago maydis Viruses and Their Killer Toxins. , 2021, , 513-519.		0