Brian L Mark

List of Publications by Year
in descending order

59 papers	2,923 citations	159585 30 h-index	168389 53 g-index
60 all docs	60 docs citations	60 times ranked	3261 citing authors

#	Article	IF	Citations
1	Crystallographic Evidence for Substrate-assisted Catalysis in a Bacterial Î²-Hexosaminidase. Journal of Biological Chemistry, 2001, 276, 10330-10337.	3.4	239
2	Crystal Structure of Human Î²-Hexosaminidase B: Understanding the Molecular Basis of Sandhoff and Tayâ€“Sachs Disease. Journal of Molecular Biology, 2003, 327, 1093-1109.	4.2	209
3	Crystallographic Structure of Human Î²-Hexosaminidase A: Interpretation of Tay-Sachs Mutations and Loss of GM2 Ganglioside Hydrolysis. Journal of Molecular Biology, 2006, 359, 913-929.	4.2	169
4	Crystal Structure of the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) Papain-like Protease Bound to Ubiquitin Facilitates Targeted Disruption of Deubiquitinating Activity to Demonstrate Its Role in Innate Immune Suppression. Journal of Biological Chemistry, 2014, 289, 34667-34682.	3.4	155
5	Aspartate 313 in the Streptomyces plicatusHexosaminidase Plays a Critical Role in Substrate-assisted Catalysis by Orienting the 2-Acetamido Group and Stabilizing the Transition State. Journal of Biological Chemistry, 2002, 277, 40055-40065.	3.4	126
6	Transactivation of programmed ribosomal frameshifting by a viral protein. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2172-81.	7.1	113
7	Deubiquitinase function of arterivirus papain-like protease 2 suppresses the innate immune response in infected host cells. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E838-47.	7.1	108
8	Small Molecule Inhibitors of a Glycoside Hydrolase Attenuate Inducible AmpC-mediated Î²-Lactam Resistance. Journal of Biological Chemistry, 2007, 282, 21382-21391.	3.4	103
9	Mutation of a Gene Essential for Ribosome Biogenesis, EMG1, Causes Bowen-Conradi Syndrome. American Journal of Human Genetics, 2009, 84, 728-739.	6.2	103
10	Synthesis and Use of Mechanism-Based Protein-Profiling Probes for Retaining Î²-<scp>d</scp>-Glucosaminidases Facilitate Identification of Pseudomonas aeruginosa NagZ. Journal of the American Chemical Society, 2008, 130, 327-335.	13.7	95
11	Structural basis for the removal of ubiquitin and interferon-stimulated gene 15 by a viral ovarian tumor domain-containing protease. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 2222-2227.	7.1	90
12	The Î²-Lactamase Gene Regulator AmpR Is a Tetramer That Recognizes and Binds the d-Ala-d-Ala Motif of Its Repressor UDP-N-acetylmuramic Acid (MurNAc)-pentapeptide. Journal of Biological Chemistry, 2015, 290, 2630-2643.	3.4	77
13	Structural and Functional Characterization of Streptomyces plicatus Î²-N-Acetylhexosaminidase by Comparative Molecular Modeling and Site-directed Mutagenesis. Journal of Biological Chemistry, 1998, 273, 19618-19624.	3.4	72
14	Structure of Arterivirus nsp4. Journal of Biological Chemistry, 2002, 277, 39960-39966.	3.4	71
15	Active Site Plasticity within the Glycoside Hydrolase NagZ Underlies a Dynamic Mechanism of Substrate Distortion. Chemistry and Biology, 2012, 19, 1471-1482.	6.0	67
16	Structure and Function of Viral Deubiquitinating Enzymes. Journal of Molecular Biology, 2017, 429, 3441-3470.	4.2	66
17	Recent Advances in GFP Folding Reporter and Split-GFP Solubility Reporter Technologies. Application to Improving the Folding and Solubility of Recalcitrant Proteins from Mycobacterium tuberculosis. Journal of Structural and Functional Genomics, 2005, 6, 113-119.	1.2	65
18	Inactivation of the Glycoside Hydrolase NagZ Attenuates Antipseudomonal Î²-Lactam Resistance in Pseudomonas aeruginosa. Antimicrobial Agents and Chemotherapy, 2009, 53, 2274-2282.	3.2	65

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19	NagZ Inactivation Prevents and Reverts Î²-Lactam Resistance, Driven by AmpD and PBP 4 Mutations, in Pseudomonas aeruginosa. Antimicrobial Agents and Chemotherapy, 2010, 54, 3557-3563.	3.2	61
20	Providing Î²-lactams a helping hand: targeting the AmpC Î²-lactamase induction pathway. Future Microbiology, 2011, 6, 1415-1427.	2.0	61
21	Crystal Structure of the AmpR Effector Binding Domain Provides Insight into the Molecular Regulation of Inducible AmpC Î²-Lactamase. Journal of Molecular Biology, 2010, 400, 998-1010.	4.2	48
22	Potent and selective inhibition of pathogenic viruses by engineered ubiquitin variants. PLoS Pathogens, 2017, 13, e1006372.	4.7	48
23	AmpG Inactivation Restores Susceptibility of Pan-Î²-Lactam-Resistant Pseudomonas aeruginosa Clinical Strains. Antimicrobial Agents and Chemotherapy, 2011, 55, 1990-1996.	3.2	47
24	Insight into a strategy for attenuating AmpCâ€mediated Î²â€lactam resistance: Structural basis for selective inhibition of the glycoside hydrolase NagZ. Protein Science, 2009, 18, 1541-1551.	7.6	43
25	Biochemical and Structural Assessment of the 1-N-Azasugar GalNAc-isofagomine as a Potent Family 20 Î²-N-Acetylhexosaminidase Inhibitor. Journal of Biological Chemistry, 2001, 276, 42131-42137.	3.4	42
26	Construction of a hybrid Î²-hexosaminidase subunit capable of forming stable homodimers that hydrolyze GM2 ganglioside in vivo. Molecular Therapy - Methods and Clinical Development, 2016, 3, 15057.	4.1	39
27	The Development of Selective Inhibitors of NagZ: Increased Susceptibility of Gram-Negative Bacteria to Î²-Lactams. ChemBioChem, 2013, 14, 1973-1981.	2.6	38
28	Association ofRalGTP-Binding Protein with Human Platelet Dense Granules. Biochemical and Biophysical Research Communications, 1996, 225, 40-46.	2.1	37
29	Selective trihydroxyazepane NagZ inhibitors increase sensitivity of Pseudomonas aeruginosa to Î²-lactams. Chemical Communications, 2013, 49, 10983.	4.1	36
30	Novel Vector Design and Hexosaminidase Variant Enabling Self-Complementary Adeno-Associated Virus for the Treatment of Tay-Sachs Disease. Human Gene Therapy, 2016, 27, 509-521.	2.7	35
31	Viral OTU Deubiquitinases: A Structural and Functional Comparison. PLoS Pathogens, 2014, 10, e1003894.	4.7	33
32	Systemic Gene Transfer of a Hexosaminidase Variant Using an scAAV9.47 Vector Corrects G_{M2}Gangliosidosis in Sandhoff Mice. Human Gene Therapy, 2016, 27, 497-508.	2.7	30
33	Experimental mapping of soluble protein domains using a hierarchical approach. Nucleic Acids Research, 2011, 39, e125-e125.	14.5	29
34	Adding Insult to Injury: Mechanistic Basis for How AmpC Mutations Allow Pseudomonas aeruginosa To Accelerate Cephalosporin Hydrolysis and Evade Avibactam. Antimicrobial Agents and Chemotherapy, 2020, 64, .	3.2	27
35	Anchimeric assistance in hexosaminidases. Canadian Journal of Chemistry, 2002, 80, 1064-1074.	1.1	26
36	Synergistic activity of fosfomycin, Î²-lactams and peptidoglycan recycling inhibition againstPseudomonas aeruginosa. Journal of Antimicrobial Chemotherapy, 2017, 72, 448-454.	3.0	25

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37	Molecular Basis of 1,6-Anhydro Bond Cleavage and Phosphoryl Transfer by Pseudomonas aeruginosa 1,6-Anhydro-N-acetylmuramic Acid Kinase. Journal of Biological Chemistry, 2011, 286, 12283-12291.	3.4	24
38	Structural and Biochemical Insights into the Peptidoglycan Hydrolase Domain of FlgJ from Salmonella typhimurium. PLoS ONE, 2016, 11, e0149204.	2.5	20
39	Mutations in HYAL2, Encoding Hyaluronidase 2, Cause a Syndrome of Orofacial Clefting and Cor Triatriatum Sinister in Humans and Mice. PLoS Genetics, 2017, 13, e1006470.	3.5	20
40	Conformational flexibility of the glycosidase NagZ allows it to bind structurally diverse inhibitors to suppress Î²â€lactam antibiotic resistance. Protein Science, 2017, 26, 1161-1170.	7.6	18
41	Structural and mechanistic analysis of a Î²-glycoside phosphorylase identified by screening a metagenomic library. Journal of Biological Chemistry, 2018, 293, 3451-3467.	3.4	18
42	Producing Glucose 6-Phosphate from Cellulosic Biomass. Journal of Biological Chemistry, 2015, 290, 26638-26648.	3.4	17
43	Evaluation of the Risk for Tay-Sachs Disease in Individuals of French Canadian Ancestry Living in New England. Clinical Chemistry, 2007, 53, 392-398.	3.2	13
44	Phenylalanine induces Burkholderia cenocepacia phenylacetic acid catabolism through degradation to phenylacetyl-CoA in synthetic cystic fibrosis sputum medium. Microbial Pathogenesis, 2011, 51, 186-193.	2.9	12
45	A mechanism-based GlcNAc-inspired cyclophellitol inactivator of the peptidoglycan recycling enzyme NagZ reverses resistance to Î²-lactams inPseudomonas aeruginosa. Chemical Communications, 2018, 54, 10630-10633.	4.1	12
46	Independent inhibition of the polymerase and deubiquitinase activities of the Crimean-Congo Hemorrhagic Fever Virus full-length L-protein. PLoS Neglected Tropical Diseases, 2020, 14, e0008283.	3.0	12
47	Frontrunners in the race to develop a SARS-CoV-2 vaccine. Canadian Journal of Microbiology, 2021, 67, 189-212.	1.7	11
48	Molecular characterization of the RNA-protein complex directing â^'2/â^'1 programmed ribosomal frameshifting during arterivirus replicase expression. Journal of Biological Chemistry, 2020, 295, 17904-17921.	3.4	10
49	A Fluorescent Transport Assay Enables Studying AmpG Permeases Involved in Peptidoglycan Recycling and Antibiotic Resistance. ACS Chemical Biology, 2016, 11, 2626-2635.	3.4	8
50	In Cellulo Examination of a Beta-Alpha Hybrid Construct of Beta-Hexosaminidase A Subunits, Reported to Interact with the GM2 Activator Protein and Hydrolyze GM2 Ganglioside. PLoS ONE, 2013, 8, e57908.	2.5	8
51	Conformational Itinerary of Pseudomonas aeruginosa 1,6-Anhydro-N-acetylmuramic Acid Kinase during Its Catalytic Cycle. Journal of Biological Chemistry, 2014, 289, 4504-4514.	3.4	7
52	The endopeptidase of the maize-affecting Marafivirus type member maize rayado fino virus doubles as a deubiquitinase. Journal of Biological Chemistry, 2021, 297, 100957.	3.4	5
53	Platelet Hexosaminidase A Enzyme Assay Effectively Detects Carriers Missed by Targeted DNA Mutation Analysis. JIMD Reports, 2012, 6, 1-6.	1.5	4
54	Molecular Basis for the Potent Inhibition of the Emerging Carbapenemase VCC-1 by Avibactam. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	4

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55	Characterization of the sorbitol dehydrogenase SmoS from Sinorhizobium meliloti 1021. Acta Crystallographica Section D: Structural Biology, 2021, 77, 380-390.	2.3	2
56	MG-110â€...Intravenous neonatal gene therapy corrects GM2 gangliosidoses in sandhoff mice for â€˜long-termâ€™, by using an aav expressing a new hexosaminidase variant. Journal of Medical Genetics, 2015, 52, A4.2-A4.	3.2	0
57	Independent Inhibition of the Polymerase and Deubiquitinase Activities of the Crimeanâ€“Congo Hemorrhagic Fever Virus Full-Length L-Protein. Proceedings (mdpi), 2020, 50, .	0.2	0
58	Letter to the Editor. Molecular Therapy, 2021, 29, 3.	8.2	0
59	Increased phosphorylation of HexM improves lysosomal uptake and potential for managing GM2 gangliosidoses. BBA Advances, 2022, 2, 100032.	1.6	0