Matthew S Gentry

List of Publications by Year
in descending order

99 papers	2,976 citations	201674 27 h-index	189892 50 g-index
108 all docs	108 docs citations	108 times ranked	2351 citing authors

#	Article	IF	Citations
1	From The Cover: Insights into Lafora disease: Malin is an E3 ubiquitin ligase that ubiquitinates and promotes the degradation of laforin. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 8501-8506.	7.1	221
2	STARCH-EXCESS4 Is a Laforin-Like Phosphoglucan Phosphatase Required for Starch Degradation in Arabidopsis thaliana Â Â. Plant Cell, 2009, 21, 334-346.	6.6	208
3	Laforin, a Dual Specificity Phosphatase That Dephosphorylates Complex Carbohydrates. Journal of Biological Chemistry, 2006, 281, 30412-30418.	3.4	183
4	A conserved phosphatase cascade that regulates nuclear membrane biogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6596-6601.	7.1	145
5	Malin Decreases Glycogen Accumulation by Promoting the Degradation of Protein Targeting to Glycogen (PTG). Journal of Biological Chemistry, 2008, 283, 4069-4076.	3.4	144
6	The phosphatase laforin crosses evolutionary boundaries and links carbohydrate metabolism to neuronal disease. Journal of Cell Biology, 2007, 178, 477-488.	5.2	140
7	The Phosphoglucan Phosphatase Like Sex Four2 Dephosphorylates Starch at the C3-Position in Arabidopsis Â Â. Plant Cell, 2011, 23, 4096-4111.	6.6	119
8	A role for AGL ubiquitination in the glycogen storage disorders of Lafora and Coriâ€™s disease. Genes and Development, 2007, 21, 2399-2409.	5.9	90
9	Lafora disease: insights into neurodegeneration from plant metabolism. Trends in Biochemical Sciences, 2009, 34, 628-639.	7.5	83
10	Nuclear Glycogenolysis Modulates Histone Acetylation in Human Non-Small Cell Lung Cancers. Cell Metabolism, 2019, 30, 903-916.e7.	16.2	72
11	Lafora disease offers a unique window into neuronal glycogen metabolism. Journal of Biological Chemistry, 2018, 293, 7117-7125.	3.4	71
12	Lactate supports a metabolic-epigenetic link in macrophage polarization. Science Advances, 2021, 7, eabi8602.	10.3	70
13	Targeting Pathogenic Lafora Bodies in Lafora Disease Using an Antibody-Enzyme Fusion. Cell Metabolism, 2019, 30, 689-705.e6.	16.2	66
14	Laforin, a protein with many faces: glucan phosphatase, adapter protein, et alii. FEBS Journal, 2013, 280, 525-537.	4.7	63
15	APOE alters glucose flux through central carbon pathways in astrocytes. Neurobiology of Disease, 2020, 136, 104742.	4.4	61
16	Phosphoglucan-bound structure of starch phosphatase Starch Excess4 reveals the mechanism for C6 specificity. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7272-7277.	7.1	54
17	Structural Mechanism of Laforin Function in Glycogen Dephosphorylation and Lafora Disease. Molecular Cell, 2015, 57, 261-272.	9.7	54
18	Structural basis for the glucan phosphatase activity of Starch Excess4. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15379-15384.	7.1	47

#	Article	IF	Citations
19	Reexamining Chronic Toxoplasma gondii Infection: Surprising Activity for a â€œDormantâ€•Parasite. Current Clinical Microbiology Reports, 2016, 3, 175-185.	3.4	47
20	Brain glycogen serves as a critical glucosamine cache required for protein glycosylation. Cell Metabolism, 2021, 33, 1404-1417.e9.	16.2	47
21	Conservation of the glucan phosphatase laforin is linked to rates of molecular evolution and the glucan metabolism of the organism. BMC Evolutionary Biology, 2009, 9, 138.	3.2	43
22	Hippocampal disruptions of synaptic and astrocyte metabolism are primary events of early amyloid pathology in the 5xFAD mouse model of Alzheimerâ€™s disease. Cell Death and Disease, 2021, 12, 954.	6.3	41
23	A malachite green-based assay to assess glucan phosphatase activity. Analytical Biochemistry, 2013, 435, 54-56.	2.4	38
24	Emerging roles of N-linked glycosylation in brain physiology and disorders. Trends in Endocrinology and Metabolism, 2021, 32, 980-993.	7.1	38
25	HUWE1 Is a Molecular Link Controlling RAF-1 Activity Supported by the Shoc2 Scaffold. Molecular and Cellular Biology, 2014, 34, 3579-3593.	2.3	37
26	Structure of the Arabidopsis Glucan Phosphatase LIKE SEX FOUR2 Reveals a Unique Mechanism for Starch Dephosphorylation. Plant Cell, 2013, 25, 2302-2314.	6.6	35
27	APOÎ•4 lowers energy expenditure in females and impairs glucose oxidation by increasing flux through aerobic glycolysis. Molecular Neurodegeneration, 2021, 16, 62.	10.8	34
28	Structural Insights into Glucan Phosphatase Dynamics Using Amide Hydrogenâ^'Deuterium Exchange Mass Spectrometry. Biochemistry, 2009, 48, 9891-9902.	2.5	32
29	Mechanistic Insights into Glucan Phosphatase Activity against Polyglucan Substrates. Journal of Biological Chemistry, 2015, 290, 23361-23370.	3.4	32
30	Laforin, a dual-specificity phosphatase involved in Lafora disease, is phosphorylated at Ser25 by AMP-activated protein kinase. Biochemical Journal, 2011, 439, 265-275.	3.7	29
31	Brain Glycogen Structure and Its Associated Proteins: Past, Present and Future. Advances in Neurobiology, 2019, 23, 17-81.	1.8	29
32	Accurate and sensitive quantitation of glucose and glucose phosphates derived from storage carbohydrates by mass spectrometry. Carbohydrate Polymers, 2020, 230, 115651.	10.2	27
33	Antibody-Mediated Enzyme Therapeutics and Applications in Glycogen Storage Diseases. Trends in Molecular Medicine, 2019, 25, 1094-1109.	6.7	26
34	Clinical Features, Survival and Prognostic Factors of Glycogen-Rich Clear Cell Carcinoma (GRCC) of the Breast in the U.S. Population. Journal of Clinical Medicine, 2019, 8, 246.	2.4	26
35	Laforin, a Dual Specificity Phosphatase Involved in Lafora Disease, Is Present Mainly as Monomeric Form with Full Phosphatase Activity. PLoS ONE, 2011, 6, e24040.	2.5	25
36	Deciphering the role of malin in the lafora progressive myoclonus epilepsy. IUBMB Life, 2012, 64, 801-808.	3.4	25

#	Article	IF	Citations
37	Astrocytic glycogen accumulation drives the pathophysiology of neurodegeneration in Lafora disease. Brain, 2021, 144, 2349-2360.	7.6	25
38	In situ spatial glycomic imaging of mouse and human Alzheimer's disease brains. Alzheimer's and Dementia, 2022, 18, 1721-1735.	0.8	25
39	Structural mechanisms of plant glucan phosphatases in starch metabolism. FEBS Journal, 2016, 283, 2427-2447.	4.7	24
40	Lafora disease E3-ubiquitin ligase malin is related to TRIM32 at both the phylogenetic and functional level. BMC Evolutionary Biology, 2011, 11, 225.	3.2	23
41	Unique carbohydrate binding platforms employed by the glucan phosphatases. Cellular and Molecular Life Sciences, 2016, 73, 2765-2778.	5.4	23
42	Structural biology of glucan phosphatases from humans to plants. Current Opinion in Structural Biology, 2016, 40, 62-69.	5.7	23
43	Polyglucosan body structure in Lafora disease. Carbohydrate Polymers, 2020, 240, 116260.	10.2	22
44	The UBA domain of SnRK1 promotes activation and maintains catalytic activity. Biochemical and Biophysical Research Communications, 2018, 497, 127-132.	2.1	21
45	Laforin and malin knockout mice have normal glucose disposal and insulin sensitivity. Human Molecular Genetics, 2012, 21, 1604-1610.	2.9	20
46	Activation of Drp1 promotes fatty acids-induced metabolic reprograming to potentiate Wnt signaling in colon cancer. Cell Death and Differentiation, 2022, 29, 1913-1927.	11.2	20
47	Plant Î±â€glucan phosphatases SEX4 and LSF2 display different affinity for amylopectin and amylose. FEBS Letters, 2016, 590, 118-128.	2.8	18
48	Central Nervous System Delivery and Biodistribution Analysis of an Antibodyâ€“Enzyme Fusion for the Treatment of Lafora Disease. Molecular Pharmaceutics, 2019, 16, 3791-3801.	4.6	18
49	The 5th International Lafora Epilepsy Workshop: Basic science elucidating therapeutic options and preparing for therapies in the clinic. Epilepsy and Behavior, 2020, 103, 106839.	1.7	17
50	Dimerization of the Glucan Phosphatase Laforin Requires the Participation of Cysteine 329. PLoS ONE, 2013, 8, e69523.	2.5	15
51	The unique evolution of the carbohydrateâ€binding module CBM 20 in laforin. FEBS Letters, 2018, 592, 586-598.	2.8	12
52	Clear Cell Adenocarcinoma of the Urinary Bladder Is a Glycogen-Rich Tumor with Poorer Prognosis. Journal of Clinical Medicine, 2020, 9, 138.	2.4	12
53	The 3rd International Lafora Epilepsy Workshop: Evidence for a cure. Epilepsy and Behavior, 2018, 81, 125-127.	1.7	11
54	The 4th International Lafora Epilepsy Workshop: Shifting paradigms, paths to treatment, and hope for patients. Epilepsy and Behavior, 2019, 90, 284-286.	1.7	11

#	Article	IF	Citations
55	Frontotemporal dementia non-sense mutation of progranulin rescued by aminoglycosides. Human Molecular Genetics, 2020, 29, 624-634.	2.9	11
56	The 6th International Lafora Epilepsy Workshop: Advances in the search for a cure. Epilepsy and Behavior, 2021, 119, 107975.	1.7	11
57	Whatâ€™s in a name?. ELife, 2017, 6, .	6.0	10
58	A novel EPM2A mutation yields a slow progression form of Lafora disease. Epilepsy Research, 2018, 145, 169-177.	1.6	10
59	Spatial profiling of gangliosides in mouse brain by mass spectrometry imaging. Journal of Lipid Research, 2020, 61, 1537.	4.2	10
60	Tissue-Specific Downregulation of Fatty Acid Synthase Suppresses Intestinal Adenoma Formation via Coordinated Reprograming of Transcriptome and Metabolism in the Mouse Model of Apc-Driven Colorectal Cancer. International Journal of Molecular Sciences, 2022, 23, 6510.	4.1	9
61	Oligomerization and carbohydrate binding of glucan phosphatases. Analytical Biochemistry, 2018, 563, 51-55.	2.4	8
62	The Toxoplasma glucan phosphatase TgLaforin utilizes a distinct functional mechanism that can be exploited by therapeutic inhibitors. Journal of Biological Chemistry, 2022, 298, 102089.	3.4	8
63	Serotonergic therapy in epilepsy. Current Opinion in Neurology, 2021, 34, 206-212.	3.6	7
64	An empirical pipeline for personalized diagnosis of Lafora disease mutations. IScience, 2021, 24, 103276.	4.1	7
65	A bioassay for Lafora disease and laforin glucan phosphatase activity. Clinical Biochemistry, 2013, 46, 1869-1876.	1.9	6
66	Laforin. The AFCS-nature Molecule Pages, 0, , .	0.2	5
67	Analysis of circulating metabolites to differentiate Parkinsonâ€™s disease and essential tremor. Neuroscience Letters, 2022, 769, 136428.	2.1	5
68	Expression, purification and characterization of soluble red rooster laforin as a fusion protein in Escherichia coli. BMC Biochemistry, 2014, 15, 8.	4.4	4
69	251st ENMC international workshop: Polyglucosan storage myopathies 13â€“15 December 2019, Hoofddorp, the Netherlands. Neuromuscular Disorders, 2021, 31, 466-477.	0.6	4
70	Generation and characterization of a laforin nanobody inhibitor. Clinical Biochemistry, 2021, 93, 80-89.	1.9	3
71	The E3 ligase malin plays a pivotal role in promoting nuclear glycogenolysis and histone acetylation. Annals of Translational Medicine, 2020, 8, 254-254.	1.7	3
72	An In Vivo Assay to Quantify Stable Protein Phosphatase 2A (PP2A) Heterotrimeric Species. , 2007, 365, 71-84.		2

#	Article	IF	Citations
73	Two Diseasesâ€"One Preclinical Treatment Targeting Glycogen Synthesis. Neurotherapeutics, 2022, 19, 977-981.	4.4	2
74	Brain glycogen serves as a critical glucosamine cache required for protein glycosylation. FASEB Journal, 2021, 35, .	0.5	1
75	Compartmentalized glycogenolysis regulates lung cancer transcription. FASEB Journal, 2019, 33, 652.25.	0.5	1
76	Nucleoside triphosphate cosubstrates control the substrate profile and efficiency of aminoglycoside 3â€²-O-phosphotransferase type IIa. MedChemComm, 2018, 9, 1332-1339.	3.4	0
77	Protein hyperâ€glycosylation is a metabolic feature of mouse and human brains with beta amyloid pathology. FASEB Journal, 2021, 35, .	0.5	0
78	Personalized Diagnosis of Lafora Disease through Biochemical Characterization of SNPs. FASEB Journal, 2021, 35, .	0.5	0
79	Deuterium exchange mass spectrometry reveals structural dynamics of glucan phosphatases. FASEB Journal, 2010, 24, 863.5.	0.5	0
80	Structural and functional studies of plant glucan phosphatases. FASEB Journal, 2012, 26, 766.2.	0.5	0
81	Regulation of glycogen phosphorylase by the malinâ€laforin complex. FASEB Journal, 2012, 26, 852.14.	0.5	0
82	Discovery, characterization, and structural analyses of glucan phosphatases from plants to humans. FASEB Journal, 2012, 26, 766.3.	0.5	0
83	The malinâ€laforin compex modulates glycogen catabolism through its effect on glycogen phosphorylase. FASEB Journal, 2013, 27, 662.6.	0.5	0
84	Laforin: Function and Action of a Glucan Phosphatase. , 2016, , 1-13.		0
85	Reversible Glucan Phosphorylation Requires Unique Carbohydrate Binding Platforms. FASEB Journal, 2016, 30, 1094.1.	0.5	0
86	Defining Thermophilic Glucan Dikinases in Cyanidioschyzon merolae. FASEB Journal, 2016, 30, .	0.5	0
87	Laforin. , 2017, , 1-13.		0
88	Laforin. , 2018, , 2803-2815.		0
89	Patientâ€Specific Mechanisms of Lafora Disease Mutations in the Human Glycogen Phosphatase. FASEB Journal, 2018, 32, 673.1.	0.5	0
90	Personalized Diagnosis for Lafora Disease, a Fatal Epilepsy. FASEB Journal, 2018, 32, 541.8.	0.5	0

#	Article	IF	Citations
91	â€œPersonalized mechanisms of Lafora disease using Differential Scanning Fluorimetryâ€• FASEB Journal, 2019, 33, 636.4.	0.5	0
92	Structural Studies of a Novel Glucan Phosphatase from the Red Alga Cyanidioschyzon Merolae. FASEB Journal, 2019, 33, 645.3.	0.5	0
93	High-dimensionality reduction clustering of complex carbohydrates to study lung cancer metabolic heterogeneity. Advances in Cancer Research, 2022, 154, 227-251.	5.0	0
94	Developing a Pipeline for Personalized Diagnoses of Glut1 Deficiency Syndrome. FASEB Journal, 2022, 36, .	0.5	0
95	Elucidating the Role of Glycogen in Glucose Transporter 1 Deficiency Syndrome. FASEB Journal, 2022, 36, .	0.5	0
96	Development of a Novel ELISA for Sensitive Quantitation of Glycogen and Polyglucosan Bodies. FASEB Journal, 2022, 36, .	0.5	0
97	A human prefrontal cortex tissue microarray to study Alzheimerâ€™s disease. FASEB Journal, 2022, 36, .	0.5	0
98	Longitudinal profiling of the Plasma Glycome from Normal and Alzheimerâ€™s Disease individuals. FASEB Journal, 2022, 36, .	0.5	0
99	Peter J. Roach (1948â€“2022). Cell Metabolism, 2022, 34, 937-939.	16.2	0