Robert T Mullen

List of Publications by Citations

120 papers	6,400 citations	46 h-index	77 g-index
124 ext. papers	7,403 ext. citations	6.5 avg, IF	5.7 L-index

#	Paper	IF	Citations
120	Tung tree DGAT1 and DGAT2 have nonredundant functions in triacylglycerol biosynthesis and are localized to different subdomains of the endoplasmic reticulum. *Plant Cell*, **2006**, 18, 2294-313	11.6	393
119	Plant peroxisomes: biogenesis and function. *Plant Cell*, **2012**, 24, 2279-303	11.6	313
118	The origin and maintenance of mammalian peroxisomes involves a de novo PEX16-dependent pathway from the ER. *Journal of Cell Biology*, **2006**, 173, 521-32	7.3	258
117	ARC1 is an E3 ubiquitin ligase and promotes the ubiquitination of proteins during the rejection of self-incompatible Brassica pollen. *Plant Cell*, **2003**, 15, 885-98	11.6	251
116	Biogenesis and functions of lipid droplets in plants: Thematic Review Series: Lipid Droplet Synthesis and Metabolism: from Yeast to Man. *Journal of Lipid Research*, **2012**, 53, 215-26	6.3	250
115	Localization of the tomato bushy stunt virus replication protein p33 reveals a peroxisome-to-endoplasmic reticulum sorting pathway. *Plant Cell*, **2005**, 17, 3513-31	11.6	210
114	Engineering oilseeds for sustainable production of industrial and nutritional feedstocks: solving bottlenecks in fatty acid flux. *Current Opinion in Plant Biology*, **2007**, 10, 236-44	9.9	166
113	Membrane-bound fatty acid desaturases are inserted co-translationally into the ER and contain different ER retrieval motifs at their carboxy termini. *Plant Journal*, **2004**, 37, 156-73	6.9	158
112	Molecular analysis of a bifunctional fatty acid conjugase/desaturase from tung. Implications for the evolution of plant fatty acid diversity. *Plant Physiology*, **2002**, 130, 2027-38	6.6	138
111	Arginase-negative mutants of Arabidopsis exhibit increased nitric oxide signaling in root development. *Plant Physiology*, **2008**, 147, 1936-46	6.6	137
110	Identification of a new class of lipid droplet-associated proteins in plants. *Plant Physiology*, **2013**, 162, 1926-36	6.6	134
109	Identification of the peroxisomal targeting signal for cottonseed catalase. *Plant Journal*, **1997**, 12, 313-26	6.9	114
108	Increased nitrogen-use efficiency in transgenic rice plants over-expressing a nitrogen-responsive early nodulin gene identified from rice expression profiling. *Plant, Cell and Environment*, **2009**, 32, 1749-60	8.4	112
107	Compartmentation of GABA metabolism raises intriguing questions. *Trends in Plant Science*, **2012**, 17, 57-9	13.1	106
106	Disruption of the Arabidopsis CGI-58 homologue produces Chanarin-Dorfman-like lipid droplet accumulation in plants. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 17833-8	11.5	103
105	The dual-targeted purple acid phosphatase isozyme AtPAP26 is essential for efficient acclimation of Arabidopsis to nutritional phosphate deprivation. *Plant Physiology*, **2010**, 153, 1112-22	6.6	102
104	Procera is a putative DELLA mutant in tomato (Solanum lycopersicum): effects on the seed and vegetative plant. *Journal of Experimental Botany*, **2008**, 59, 585-93	7	100

103	Arabidopsis thaliana GPAT8 and GPAT9 are localized to the ER and possess distinct ER retrieval signals: functional divergence of the dilysine ER retrieval motif in plant cells. *Plant Physiology and Biochemistry*, **2009**, 47, 867-79	5.4	98
102	FYVE1/FREE1 Interacts with the PYL4 ABA Receptor and Mediates Its Delivery to the Vacuolar Degradation Pathway. *Plant Cell*, **2016**, 28, 2291-2311	11.6	97
101	Arabidopsis SEIPIN Proteins Modulate Triacylglycerol Accumulation and Influence Lipid Droplet Proliferation. *Plant Cell*, **2015**, 27, 2616-36	11.6	96
100	Biochemical characterization, mitochondrial localization, expression, and potential functions for an Arabidopsis gamma-aminobutyrate transaminase that utilizes both pyruvate and glyoxylate. *Journal of Experimental Botany*, **2009**, 60, 1743-57	7	92
99	Lipid Droplet-Associated Proteins (LDAPs) Are Required for the Dynamic Regulation of Neutral Lipid Compartmentation in Plant Cells. *Plant Physiology*, **2016**, 170, 2052-71	6.6	87
98	Arabidopsis PEROXIN11c-e, FISSION1b, and DYNAMIN-RELATED PROTEIN3A cooperate in cell cycle-associated replication of peroxisomes. *Plant Cell*, **2008**, 20, 1567-85	11.6	87
97	Turning Over a New Leaf in Lipid Droplet Biology. *Trends in Plant Science*, **2017**, 22, 596-609	13.1	84
96	The sorting signals for peroxisomal membrane-bound ascorbate peroxidase are within its C-terminal tail. *Journal of Biological Chemistry*, **2000**, 275, 16337-44	5.4	83
95	Commentary: why don't plant leaves get fat?. *Plant Science*, **2013**, 207, 128-34	5.3	82
94	Peroxisome biogenesis: the peroxisomal endomembrane system and the role of the ER. *Journal of Cell Biology*, **2006**, 174, 11-7	7.3	79
93	Novel targeting signals mediate the sorting of different isoforms of the tail-anchored membrane protein cytochrome b5 to either endoplasmic reticulum or mitochondria. *Plant Cell*, **2004**, 16, 3002-19	11.6	77
92	The ER-peroxisome connection in plants: development of the "ER semi-autonomous peroxisome maturation and replication" model for plant peroxisome biogenesis. *Biochimica Et Biophysica Acta - Molecular Cell Research*, **2006**, 1763, 1655-68	4.9	74
91	How are peroxisomes formed? The role of the endoplasmic reticulum and peroxins. *Trends in Plant Science*, **2001**, 6, 256-61	13.1	74
90	Immunocytological localization of two plant fatty acid desaturases in the endoplasmic reticulum. *FEBS Letters*, **2001**, 494, 44-7	3.8	73
89	Characterization of the Arabidopsis thaliana exocyst complex gene families by phylogenetic, expression profiling, and subcellular localization studies. *New Phytologist*, **2010**, 185, 401-19	9.8	63
88	Subcellular and tissue localization of NAD kinases from Arabidopsis: compartmentalization of de novo NADP biosynthesis. *Planta*, **2010**, 231, 305-17	4.7	63
87	Mutational analyses of a type 2 peroxisomal targeting signal that is capable of directing oligomeric protein import into tobacco BY-2 glyoxysomes. *Plant Journal*, **1998**, 16, 709-20	6.9	61
86	The α/β hydrolase CGI-58 and peroxisomal transport protein PXA1 coregulate lipid homeostasis and signaling in Arabidopsis. *Plant Cell*, **2013**, 25, 1726-39	11.6	60

85	Temperature-sensitive post-translational regulation of plant omega-3 fatty-acid desaturases is mediated by the endoplasmic reticulum-associated degradation pathway. *Journal of Biological Chemistry*, **2010**, 285, 21781-96	5.4	58
84	Down-regulation of DELLA genes is not essential for germination of tomato, soybean, and Arabidopsis seeds. *Plant Physiology*, **2004**, 136, 2782-9	6.6	57
83	Identification and characterization of a plastid-localized Arabidopsis glyoxylate reductase isoform: comparison with a cytosolic isoform and implications for cellular redox homeostasis and aldehyde detoxification. *Journal of Experimental Botany*, **2008**, 59, 2545-54	7	56
82	Subcellular localization and expression of multiple tomato gamma-aminobutyrate transaminases that utilize both pyruvate and glyoxylate. *Journal of Experimental Botany*, **2009**, 60, 3255-67	7	54
81	Distinct pathways mediate the sorting of tail-anchored proteins to the plastid outer envelope. *PLoS ONE*, **2010**, 5, e10098	3.7	53
80	Protein-Protein Interaction Network and Subcellular Localization of the Arabidopsis Thaliana ESCRT Machinery. *Frontiers in Plant Science*, **2011**, 2, 20	6.2	49
79	Metabolic engineering for enhanced oil in biomass. *Progress in Lipid Research*, **2019**, 74, 103-129	14.3	48
78	Arabidopsis lipid droplet-associated protein (LDAP) - interacting protein (LDIP) influences lipid droplet size and neutral lipid homeostasis in both leaves and seeds. *Plant Journal*, **2017**, 92, 1182-1201	6.9	47
77	Arabidopsis and maize RidA proteins preempt reactive enamine/imine damage to branched-chain amino acid biosynthesis in plastids. *Plant Cell*, **2014**, 26, 3010-22	11.6	47
76	Life in the fast lane: actin-based motility of plant peroxisomes. *Canadian Journal of Botany*, **2002**, 80, 430-441		47
75	Biogenesis and membrane properties of peroxisomes: does the boundary membrane serve and protect?. *Trends in Plant Science*, **1996**, 1, 389-394	13.1	46
74	Hydrophobic-domain-dependent protein-protein interactions mediate the localization of GPAT enzymes to ER subdomains. *Traffic*, **2011**, 12, 452-72	5.7	43
73	Engineering plant oils as high-value industrial feedstocks for biorefining: the need for underpinning cell biology research. *Physiologia Plantarum*, **2008**, 132, 11-22	4.6	42
72	Dedicated Industrial Oilseed Crops as Metabolic Engineering Platforms for Sustainable Industrial Feedstock Production. *Scientific Reports*, **2016**, 6, 22181	4.9	42
71	Lipid droplet-associated proteins (LDAPs) are involved in the compartmentalization of lipophilic compounds in plant cells. *Plant Signaling and Behavior*, **2013**, 8, e27141	2.5	41
70	Localization of the Carnation Italian ringspot virus replication protein p36 to the mitochondrial outer membrane is mediated by an internal targeting signal and the TOM complex. *BMC Cell Biology*, **2008**, 9, 54		40
69	Mechanisms of lipid droplet biogenesis. *Biochemical Journal*, **2019**, 476, 1929-1942	3.8	39
68	Development and potential of genetically engineered oilseeds. *Seed Science Research*, **2005**, 15, 255-267	1.3	39

67	ABI3 expression ceases following, but not during, germination of tomato and Arabidopsis seeds. *Journal of Experimental Botany*, **2006**, 57, 1291-7	7	38
66	Catabolism of GABA in apple fruit: Subcellular localization and biochemical characterization of two aminobutyrate transaminases. *Postharvest Biology and Technology*, **2013**, 75, 106-113	6.2	34
65	Characterization of the targeting signal of the Arabidopsis 22-kD integral peroxisomal membrane protein. *Plant Physiology*, **2003**, 133, 813-28	6.6	34
64	Bacterial- and plant-type phosphoenolpyruvate carboxylase isozymes from developing castor oil seeds interact in vivo and associate with the surface of mitochondria. *Plant Journal*, **2012**, 71, 251-62	6.9	33
63	The calmodulin-like protein CML43 functions as a salicylic-acid-inducible root-specific Ca(2+) sensor in Arabidopsis. *Biochemical Journal*, **2014**, 457, 127-36	3.8	33
62	Regulation of loblolly pine (Pinus taeda L.) arginase in developing seedling tissue during germination and post-germinative growth. *Plant Molecular Biology*, **2001**, 45, 555-65	4.6	32
61	Plants utilize a highly conserved system for repair of NADH and NADPH hydrates. *Plant Physiology*, **2014**, 165, 52-61	6.6	31
60	Identification of a rice RNA- and microtubule-binding protein as the multifunctional protein, a peroxisomal enzyme involved in the beta -oxidation of fatty acids. *Journal of Biological Chemistry*, **2002**, 277, 2419-29	5.4	31
59	Glyoxylate reductase isoform 1 is localized in the cytosol and not peroxisomes in plant cells. *Journal of Integrative Plant Biology*, **2012**, 54, 152-68	8.3	30
58	Stable and transient expression of chimeric peroxisomal membrane proteins induces an independent "zippering" of peroxisomes and an endoplasmic reticulum subdomain. *Planta*, **2001**, 213, 849-63	4.7	30
57	Arabidopsis TH2 Encodes the Orphan Enzyme Thiamin Monophosphate Phosphatase. *Plant Cell*, **2016**, 28, 2683-2696	11.6	30
56	Multiple Domains in PEX16 Mediate Its Trafficking and Recruitment of Peroxisomal Proteins to the ER. *Traffic*, **2015**, 16, 832-52	5.7	29
55	Identification of mitochondrial thiamin diphosphate carriers from Arabidopsis and maize. *Functional and Integrative Genomics*, **2012**, 12, 317-26	3.8	29
54	Production of a Brassica napus Low-Molecular Mass Acyl-Coenzyme A-Binding Protein in Arabidopsis Alters the Acyl-Coenzyme A Pool and Acyl Composition of Oil in Seeds. *Plant Physiology* , **2014**, 165, 550-560	6.6	28
53	Peroxisome dynamics in plant cells: a role for the cytoskeleton. *Plant Science*, **2003**, 164, 307-315	5.3	28
52	A unique N-terminal sequence in the Carnation Italian ringspot virus p36 replicase-associated protein interacts with the host cell ESCRT-I component Vps23. *Journal of Virology*, **2014**, 88, 6329-44	6.6	27
51	Identification of mitochondrial coenzyme a transporters from maize and Arabidopsis. *Plant Physiology*, **2013**, 162, 581-8	6.6	26
50	Lipid droplets in plants and algae: Distribution, formation, turnover and function. *Seminars in Cell and Developmental Biology*, **2020**, 108, 82-93	7.5	23

49	New insights into the targeting of a subset of tail-anchored proteins to the outer mitochondrial membrane. *Frontiers in Plant Science*, **2014**, 5, 426	6.2	23
48	PEX16: a multifaceted regulator of peroxisome biogenesis. *Frontiers in Physiology*, **2013**, 4, 241	4.6	23
47	Tail-anchored membrane proteins: exploring the complex diversity of tail-anchored-protein targeting in plant cells. *Plant Cell Reports*, **2011**, 30, 137-51	5.1	23
46	Biochemistry of high stearic sunflower, a new source of saturated fats. *Progress in Lipid Research*, **2014**, 55, 30-42	14.3	22
45	Molecular characterization of the fatty alcohol oxidation pathway for wax-ester mobilization in germinated jojoba seeds. *Plant Physiology*, **2013**, 161, 72-80	6.6	22
44	Engineering the production of conjugated fatty acids in Arabidopsis thaliana leaves. *Plant Biotechnology Journal*, **2017**, 15, 1010-1023	11.6	21
43	Mouse fat storage-inducing transmembrane protein 2 (FIT2) promotes lipid droplet accumulation in plants. *Plant Biotechnology Journal*, **2017**, 15, 824-836	11.6	21
42	Identification of Low-Abundance Lipid Droplet Proteins in Seeds and Seedlings. *Plant Physiology*, **2020**, 182, 1326-1345	6.6	20
41	Sunflower (Helianthus annuus) long-chain acyl-coenzyme A synthetases expressed at high levels in developing seeds. *Physiologia Plantarum*, **2014**, 150, 363-73	4.6	20
40	SEIPIN Isoforms Interact with the Membrane-Tethering Protein VAP27-1 for Lipid Droplet Formation. *Plant Cell*, **2020**, 32, 2932-2950	11.6	20
39	Evidence that glutamine transaminase and omega-amidase potentially act in tandem to close the methionine salvage cycle in bacteria and plants. *Phytochemistry*, **2015**, 113, 160-9	4	19
38	Biochemical and molecular characterization of RcSUS1, a cytosolic sucrose synthase phosphorylated in vivo at serine 11 in developing castor oil seeds. *Journal of Biological Chemistry*, **2014**, 289, 33412-24	5.4	19
37	Cloning, functional analysis, and subcellular localization of two isoforms of NADH:cytochrome b5 reductase from developing seeds of tung (Vernicia fordii). *Plant Science*, **2005**, 169, 375-385	5.3	19
36	Regulatory Phosphorylation of Bacterial-Type PEP Carboxylase by the Ca-Dependent Protein Kinase RcCDPK1 in Developing Castor Oil Seeds. *Plant Physiology*, **2017**, 174, 1012-1027	6.6	18
35	The RING-Type E3 Ligase XBAT35.2 Is Involved in Cell Death Induction and Pathogen Response. *Plant Physiology*, **2017**, 175, 1469-1483	6.6	18
34	Sunflower HaGPAT9-1 is the predominant GPAT during seed development. *Plant Science*, **2016**, 252, 42-52	3.3	15
33	Differential subcellular localization of endogenous and transfected soluble epoxide hydrolase in mammalian cells: evidence for isozyme variants. *FEBS Letters*, **1999**, 445, 301-5	3.8	13
32	The calcium-dependent protein kinase RcCDPK2 phosphorylates sucrose synthase at Ser11 in developing castor oil seeds. *Biochemical Journal*, **2016**, 473, 3667-3682	3.8	11

31	Addition of an N-terminal epitope tag significantly increases the activity of plant fatty acid desaturases expressed in yeast cells. *Applied Microbiology and Biotechnology*, **2009**, 83, 117-25	5.7	11
30	An Apoplastic -Glucosidase is Essential for the Degradation of Flavonol 3-O--Glucoside-7-O--Rhamnosides in Arabidopsis. *Plant and Cell Physiology*, **2017**, 58, 1030-1047	4.9	10
29	Response of high leaf-oil Arabidopsis thaliana plant lines to biotic or abiotic stress. *Plant Signaling and Behavior*, **2018**, 13, e1464361	2.5	10
28	Ancient Plant Glyoxylate/Succinic Semialdehyde Reductases: GLYR1s Are Cytosolic, Whereas GLYR2s Are Localized to Both Mitochondria and Plastids. *Frontiers in Plant Science*, **2017**, 8, 601	6.2	10
27	Regulation of two loblolly pine (Pinus taeda L.) isocitrate lyase genes in megagametophytes of mature and stratified seeds and during postgerminative growth. *Plant Molecular Biology*, **1997**, 33, 593-604	4.6	10
26	Illuminating subcellular structures and dynamics in plants: a fluorescent protein toolboxThis review is one of a selection of papers published in the Special Issue on Plant Cell Biology.. *Canadian Journal of Botany*, **2006**, 84, 515-522		10
25	Lectin AtGAL1 interacts with high-mannose glycoform of the purple acid phosphatase AtPAP26 secreted by phosphate-starved Arabidopsis. *Plant, Cell and Environment*, **2019**, 42, 1158-1166	8.4	10
24	The metabolite repair enzyme Nit1 is a dual-targeted amidase that disposes of damaged glutathione in. *Biochemical Journal*, **2019**, 476, 683-697	3.8	9
23	CGI-58, a key regulator of lipid homeostasis and signaling in plants, also regulates polyamine metabolism. *Plant Signaling and Behavior*, **2014**, 9, e27723	2.5	9
22	Expression of a lipid-inducible, self-regulating form of Yarrowia lipolytica lipase LIP2 in Saccharomyces cerevisiae. *Applied Microbiology and Biotechnology*, **2011**, 92, 1207-17	5.7	9
21	The N termini of Brassica and tung omega-3 fatty acid desaturases mediate proteasome-dependent protein degradation in plant cells. *Plant Signaling and Behavior*, **2011**, 6, 422-5	2.5	9
20	Meta-analysis of the expression profiles of the Arabidopsis ESCRT machinery. *Plant Signaling and Behavior*, **2011**, 6, 1897-903	2.5	9
19	A plastidial pantoate transporter with a potential role in pantothenate synthesis. *Biochemical Journal*, **2018**, 475, 813-825	3.8	8
18	LDIP cooperates with SEIPIN and LDAP to facilitate lipid droplet biogenesis in Arabidopsis. *Plant Cell*, **2021**, 33, 3076-3103	11.6	8
17	Arabidopsis At2g40730 encodes a cytoplasmic protein involved in nuclear tRNA export. *Botany*, **2011**, 89, 175-190	1.3	7
16	An RK/ST C-Terminal Motif is Required for Targeting of OEP7.2 and a Subset of Other Arabidopsis Tail-Anchored Proteins to the Plastid Outer Envelope Membrane. *Plant and Cell Physiology*, **2019**, 60, 516-537	4.9	7
15	New Insights Into Sunflower (L.) FatA and FatB Thioesterases, Their Regulation, Structure and Distribution. *Frontiers in Plant Science*, **2018**, 9, 1496	6.2	7
14	AKIN1, a subunit of SnRK1, regulates organic acid metabolism and acts as a global modulator of genes involved in carbon, lipid, and nitrogen metabolism. *Journal of Experimental Botany*, **2020**, 71, 1010-1028	7	5

13	-Galactosidase is synthesized in tomato seeds during development and is localized in the protein storage vacuoles. *Canadian Journal of Botany*, **2001**, 79, 1417-1424		5
12	Mouse Fat-Specific Protein 27 (FSP27) expressed in plant cells localizes to lipid droplets and promotes lipid droplet accumulation and fusion. *Biochimie*, **2020**, 169, 41-53	4.6	5
11	Plants, like mammals, but unlike Saccharomyces, do not regulate nuclear-cytoplasmic tRNA trafficking in response to nutrient stress. *Plant Signaling and Behavior*, **2011**, 6, 1183-8	2.5	3
10	Subcellular Localization of Acyl-CoA: Lysophosphatidylethanolamine Acyltransferases (LPEATs) and the Effects of Knocking-Out and Overexpression of Their Genes on Autophagy Markers Level and Life Span of. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	3
9	Lipid Droplet-Peroxisome Connections in Plants. *Contact (Thousand Oaks (Ventura County, Calif))*, **2020**, 3, 251525642090876	2.6	3
8	Effect of the embryo axis on catalase in the endosperm of germinating castor bean seeds. *Plant Science*, **1995**, 107, 177-187	5.3	2
7	Biochemical and molecular characterization of AtPAP17: a dual-localized, low molecular weight Arabidopsis purple acid phosphatase upregulated during phosphate deprivation, senescence, and oxidative stress. *Journal of Experimental Botany*, **2021**,	7	2
6	Genome-wide analysis of Homo sapiens, Arabidopsis thaliana, and Saccharomyces cerevisiae reveals novel attributes of tail-anchored membrane proteins. *BMC Genomics*, **2019**, 20, 835	4.5	1
5	Distinct domains within the NITROGEN LIMITATION ADAPTATION protein mediate its subcellular localization and function in the nitrate-dependent phosphate homeostasis pathway. *Botany*, **2018**, 96, 79-96	1.3	1
4	EARLY RESPONSIVE TO DEHYDRATION 7 Localizes to Lipid Droplets via Its Senescence Domain. *Frontiers in Plant Science*, **2021**, 12, 658961	6.2	0
3	Peroxisomal Membrane Ascorbate Peroxidase Is Sorted to a Membranous Network That Resembles a Subdomain of the Endoplasmic Reticulum. *Plant Cell*, **1999**, 11, 2167	11.6	
2	TEMPERATURE-SENSITIVE, POST-TRANSLATIONAL REGULATION OF PLANT OMEGA-3 FATTY ACID DESATURASES IS MEDIATED BY THE ER-ASSOCIATED DEGRADATION PATHWAY. *FASEB Journal*, **2010**, 24, 844.1	0.9	
1	CGI-58 regulates triacylglycerol metabolism and lipid signaling pathways in plant cells. *FASEB Journal*, **2012**, 26, 594.3	0.9	