

Steven G Ball

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

106
papers

11,026
citations

46
h-index

105
g-index

110
ext. papers

12,241
ext. citations

8.9
avg, IF

5.46
L-index

#	Paper	IF	Citations
106	The Chlamydomonas genome reveals the evolution of key animal and plant functions. <i>Science</i> , 2007 , 318, 245-50	33.3	1969
105	Starch granules: structure and biosynthesis. <i>International Journal of Biological Macromolecules</i> , 1998 , 23, 85-112	7.9	1400
104	Genome analysis of the smallest free-living eukaryote <i>Ostreococcus tauri</i> unveils many unique features. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 11647-52	11.5	669
103	From bacterial glycogen to starch: understanding the biogenesis of the plant starch granule. <i>Annual Review of Plant Biology</i> , 2003 , 54, 207-33	30.7	540
102	Recent progress toward understanding biosynthesis of the amylopectin crystal. <i>Plant Physiology</i> , 2000 , 122, 989-97	6.6	411
101	From glycogen to amylopectin: a model for the biogenesis of the plant starch granule. <i>Cell</i> , 1996 , 86, 349-52	56.2	393
100	Algal genomes reveal evolutionary mosaicism and the fate of nucleomorphs. <i>Nature</i> , 2012 , 492, 59-65	50.4	304
99	Cyanophora paradoxa genome elucidates origin of photosynthesis in algae and plants. <i>Science</i> , 2012 , 335, 843-7	33.3	304
98	Chlamydomonas starchless mutant defective in ADP-glucose pyrophosphorylase hyper-accumulates triacylglycerol. <i>Metabolic Engineering</i> , 2010 , 12, 387-91	9.7	294
97	Genome structure and metabolic features in the red seaweed <i>Chondrus crispus</i> shed light on evolution of the Archaeplastida. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 5247-52	11.5	239
96	The phenotype of soluble starch synthase IV defective mutants of <i>Arabidopsis thaliana</i> suggests a novel function of elongation enzymes in the control of starch granule formation. <i>Plant Journal</i> , 2007 , 49, 492-504	6.9	205
95	The evolution of glycogen and starch metabolism in eukaryotes gives molecular clues to understand the establishment of plastid endosymbiosis. <i>Journal of Experimental Botany</i> , 2011 , 62, 1775-801	7.0	182
94	Genome of the red alga <i>Porphyridium purpureum</i> . <i>Nature Communications</i> , 2013 , 4, 1941	17.4	165
93	Progress in understanding the biosynthesis of amylose. <i>Trends in Plant Science</i> , 1998 , 3, 462-467	13.1	164
92	Soluble starch synthase I: a major determinant for the synthesis of amylopectin in <i>Arabidopsis thaliana</i> leaves. <i>Plant Journal</i> , 2005 , 43, 398-412	6.9	146
91	Mutants of <i>Arabidopsis</i> lacking a chloroplastic isoamylase accumulate phytoglycogen and an abnormal form of amylopectin. <i>Plant Physiology</i> , 2005 , 138, 184-95	6.6	145
90	Starchless mutants of <i>Chlamydomonas reinhardtii</i> lack the small subunit of a heterotetrameric ADP-glucose pyrophosphorylase. <i>Journal of Bacteriology</i> , 2001 , 183, 1069-77	3.5	144

89	Physiology of starch storage in the monocellular alga <i>Chlamydomonas reinhardtii</i> . <i>Plant Science</i> , 1990 , 66, 1-9	5.3	136
88	Hydrogen production in <i>Chlamydomonas</i> : photosystem II-dependent and -independent pathways differ in their requirement for starch metabolism. <i>Plant Physiology</i> , 2009 , 151, 631-40	6.6	134
87	Metabolic symbiosis and the birth of the plant kingdom. <i>Molecular Biology and Evolution</i> , 2008 , 25, 536-48	4.3	132
86	Evolution of plant-like crystalline storage polysaccharide in the protozoan parasite <i>Toxoplasma gondii</i> argues for a red alga ancestry. <i>Journal of Molecular Evolution</i> , 2005 , 60, 257-67	3.1	106
85	Amylose is synthesized in vitro by extension of and cleavage from amylopectin. <i>Journal of Biological Chemistry</i> , 1998 , 273, 22232-40	5.4	102
84	Role of the <i>Escherichia coli</i> <i>glgX</i> gene in glycogen metabolism. <i>Journal of Bacteriology</i> , 2005 , 187, 1465-73	3.5	96
83	Circadian clock regulation of starch metabolism establishes GBSSI as a major contributor to amylopectin synthesis in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2006 , 142, 305-17	6.6	94
82	Plastidial phosphorylase is required for normal starch synthesis in <i>Chlamydomonas reinhardtii</i> . <i>Plant Journal</i> , 2006 , 48, 274-85	6.9	93
81	A <i>Chlamydomonas reinhardtii</i> low-starch mutant is defective for 3-phosphoglycerate activation and orthophosphate inhibition of ADP-glucose pyrophosphorylase. <i>Planta</i> , 1991 , 185, 17-26	4.7	92
80	Mutants of <i>Arabidopsis</i> lacking starch branching enzyme II substitute plastidial starch synthesis by cytoplasmic maltose accumulation. <i>Plant Cell</i> , 2006 , 18, 2694-709	11.6	86
79	Metabolic effectors secreted by bacterial pathogens: essential facilitators of plastid endosymbiosis?. <i>Plant Cell</i> , 2013 , 25, 7-21	11.6	84
78	Genetic and biochemical evidence for the involvement of alpha-1,4 glucanotransferases in amylopectin synthesis. <i>Plant Physiology</i> , 1999 , 120, 993-1004	6.6	84
77	Control of starch composition and structure through substrate supply in the monocellular alga <i>Chlamydomonas reinhardtii</i> . <i>Journal of Biological Chemistry</i> , 1996 , 271, 16281-7	5.4	79
76	The relocation of starch metabolism to chloroplasts: when, why and how. <i>Trends in Plant Science</i> , 2008 , 13, 574-82	13.1	78
75	Glycogen phosphorylase, the product of the <i>glgP</i> Gene, catalyzes glycogen breakdown by removing glucose units from the nonreducing ends in <i>Escherichia coli</i> . <i>Journal of Bacteriology</i> , 2006 , 188, 5266-72	3.5	77
74	Preamylopectin Processing: A Mandatory Step for Starch Biosynthesis in Plants. <i>Plant Cell</i> , 1996 , 8, 1353-61	11.6	73
73	Functions of heteromeric and homomeric isoamylase-type starch-debranching enzymes in developing maize endosperm. <i>Plant Physiology</i> , 2010 , 153, 956-69	6.6	71
72	Biochemical characterization of the <i>chlamydomonas reinhardtii</i> alpha-1,4 glucanotransferase supports a direct function in amylopectin biosynthesis. <i>Plant Physiology</i> , 1999 , 120, 1005-14	6.6	69

71	Further evidence for the mandatory nature of polysaccharide debranching for the aggregation of semicrystalline starch and for overlapping functions of debranching enzymes in Arabidopsis leaves. <i>Plant Physiology</i> , 2008 , 148, 1309-23	6.6	68
70	Early gene duplication within chloroplastida and its correspondence with relocation of starch metabolism to chloroplasts. <i>Genetics</i> , 2008 , 178, 2373-87	4	66
69	Novel, starch-like polysaccharides are synthesized by an unbound form of granule-bound starch synthase in glycogen-accumulating mutants of <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 1999 , 119, 321-30	6.6	66
68	Starch division and partitioning. A mechanism for granule propagation and maintenance in the picophytoplanktonic green alga <i>Ostreococcus tauri</i> . <i>Plant Physiology</i> , 2004 , 136, 3333-40	6.6	65
67	Engineering the chloroplast targeted malarial vaccine antigens in <i>Chlamydomonas</i> starch granules. <i>PLoS ONE</i> , 2010 , 5, e15424	3.7	63
66	Extreme genome diversity in the hyper-prevalent parasitic eukaryote <i>Blastocystis</i> . <i>PLoS Biology</i> , 2017 , 15, e2003769	9.7	58
65	Biochemical characterization of wild-type and mutant isoamylases of <i>Chlamydomonas reinhardtii</i> supports a function of the multimeric enzyme organization in amylopectin maturation. <i>Plant Physiology</i> , 2001 , 125, 1723-31	6.6	52
64	Sequestration of host metabolism by an intracellular pathogen. <i>ELife</i> , 2016 , 5, e12552	8.9	50
63	Nature of the periplastidial pathway of starch synthesis in the cryptophyte <i>Guillardia theta</i> . <i>Eukaryotic Cell</i> , 2006 , 5, 954-63		49
62	Variation in storage alpha-glucans of the Porphyridiales (Rhodophyta). <i>Plant and Cell Physiology</i> , 2008 , 49, 103-16	4.9	46
61	Granule-bound starch synthase I. A major enzyme involved in the biogenesis of B-crystallites in starch granules. <i>FEBS Journal</i> , 2002 , 269, 3810-20		46
60	Transition from glycogen to starch metabolism in Archaeplastida. <i>Trends in Plant Science</i> , 2014 , 19, 18-28	3.1	45
59	Amylopectin biogenesis and characterization in the protozoan parasite <i>Toxoplasma gondii</i> , the intracellular development of which is restricted in the HepG2 cell line. <i>Microbes and Infection</i> , 2005 , 7, 41-8	9.3	45
58	Diversity of reaction characteristics of glucan branching enzymes and the fine structure of β -glucan from various sources. <i>Archives of Biochemistry and Biophysics</i> , 2014 , 562, 9-21	4.1	44
57	Pathway of cytosolic starch synthesis in the model glaucophyte <i>Cyanophora paradoxa</i> . <i>Eukaryotic Cell</i> , 2008 , 7, 247-57		43
56	When Simpler Is Better. Unicellular Green Algae for Discovering New Genes and Functions in Carbohydrate Metabolism. <i>Plant Physiology</i> , 2001 , 127, 1334-1338	6.6	42
55	Two loci control phytoglycogen production in the monocellular green alga <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2001 , 125, 1710-22	6.6	42
54	Crystal structure of the <i>Chlamydomonas</i> starch debranching enzyme isoamylase ISA1 reveals insights into the mechanism of branch trimming and complex assembly. <i>Journal of Biological Chemistry</i> , 2014 , 289, 22991-23003	5.4	40

53	Phylogenetic and biochemical evidence supports the recruitment of an ADP-glucose translocator for the export of photosynthate during plastid endosymbiosis. <i>Molecular Biology and Evolution</i> , 2010 , 27, 2691-701	8.3	39
52	Relationships between PSII-independent hydrogen bioproduction and starch metabolism as evidenced from isolation of starch catabolism mutants in the green alga <i>Chlamydomonas reinhardtii</i> . <i>International Journal of Hydrogen Energy</i> , 2010 , 35, 10731-10740	6.7	35
51	STA11, a <i>Chlamydomonas reinhardtii</i> locus required for normal starch granule biogenesis, encodes disproportionating enzyme. Further evidence for a function of alpha-1,4 glucanotransferases during starch granule biosynthesis in green algae. <i>Plant Physiology</i> , 2003 , 132, 137-45	6.6	35
50	Genetic dissection of floridean starch synthesis in the cytosol of the model dinoflagellate <i>Cryptocodinium cohnii</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 21126-30	11.5	34
49	Microarray data can predict diurnal changes of starch content in the picoalga <i>Ostreococcus</i> . <i>BMC Systems Biology</i> , 2011 , 5, 36	3.5	33
48	Chlamydia, cyanobiont, or host: who was on top in the mBage ϵ trois?. <i>Trends in Plant Science</i> , 2013 , 18, 673-9	13.1	31
47	The heterotrophic dinoflagellate <i>Cryptocodinium cohnii</i> defines a model genetic system to investigate cytoplasmic starch synthesis. <i>Eukaryotic Cell</i> , 2008 , 7, 872-80		31
46	Molecular cloning and characterization of ARO7-OSM2, a single yeast gene necessary for chorismate mutase activity and growth in hypertonic medium. <i>Molecular Genetics and Genomics</i> , 1986 , 205, 326-30		30
45	Biotic Host-Pathogen Interactions As Major Drivers of Plastid Endosymbiosis. <i>Trends in Plant Science</i> , 2017 , 22, 316-328	13.1	28
44	EVOLUTION. Pathogen to powerhouse. <i>Science</i> , 2016 , 351, 659-60	33.3	28
43	Storage, Photosynthesis, and Growth: The Conditional Nature of Mutations Affecting Starch Synthesis and Structure in <i>Chlamydomonas</i> . <i>Plant Cell</i> , 1995 , 7, 1117	11.6	28
42	Bound Substrate in the Structure of Cyanobacterial Branching Enzyme Supports a New Mechanistic Model. <i>Journal of Biological Chemistry</i> , 2017 , 292, 5465-5475	5.4	26
41	The debranching enzyme complex missing in glycogen accumulating mutants of <i>Chlamydomonas reinhardtii</i> displays an isoamylase-type specificity. <i>Plant Science</i> , 2000 , 157, 145-156	5.3	26
40	Molecular evolution accompanying functional divergence of duplicated genes along the plant starch biosynthesis pathway. <i>BMC Evolutionary Biology</i> , 2014 , 14, 103	3	23
39	Physicochemical variation of cyanobacterial starch, the insoluble β Glucans in cyanobacteria. <i>Plant and Cell Physiology</i> , 2013 , 54, 465-73	4.9	22
38	A forward genetic approach in <i>Chlamydomonas reinhardtii</i> as a strategy for exploring starch catabolism. <i>PLoS ONE</i> , 2013 , 8, e74763	3.7	22
37	Analysis of an improved <i>Cyanophora paradoxa</i> genome assembly. <i>DNA Research</i> , 2019 , 26, 287-299	4.5	18
36	Biotic interactions as drivers of algal origin and evolution. <i>New Phytologist</i> , 2017 , 216, 670-681	9.8	18

35	Convergent evolution of polysaccharide debranching defines a common mechanism for starch accumulation in cyanobacteria and plants. <i>Plant Cell</i> , 2013 , 25, 3961-75	11.6	18
34	Effects of granule-bound starch synthase I-defective mutation on the morphology and structure of pyrenoidal starch in <i>Chlamydomonas</i> . <i>Plant Science</i> , 2011 , 180, 238-45	5.3	17
33	The endopolysaccharide metabolism of the hyperthermophilic archeon <i>Thermococcus hydrothermalis</i> : polymer structure and biosynthesis. <i>Current Microbiology</i> , 2002 , 44, 206-11	2.4	16
32	Molecular and biochemical analysis of periplastidial starch metabolism in the cryptophyte <i>Guillardia theta</i> . <i>Eukaryotic Cell</i> , 2006 , 5, 964-71		14
31	Crystallization and crystallographic analysis of branching enzymes from <i>Cyanothece</i> sp. ATCC 51142. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2015 , 71, 1109-13	1.1	13
30	The Transition from Glycogen to Starch Metabolism in Cyanobacteria and Eukaryotes 2015 , 93-158		12
29	Eukaryote to gut bacteria transfer of a glycoside hydrolase gene essential for starch breakdown in plants. <i>Mobile Genetic Elements</i> , 2012 , 2, 81-87		12
28	Toward an understanding of the function of Chlamydiales in plastid endosymbiosis. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2015 , 1847, 495-504	4.6	11
27	Reconstruction of the sialylation pathway in the ancestor of eukaryotes. <i>Scientific Reports</i> , 2018 , 8, 29464.9		11
26	Starch Metabolism 2009 , 1-40		11
25	Was the Chlamydial Adaptative Strategy to Tryptophan Starvation an Early Determinant of Plastid Endosymbiosis?. <i>Frontiers in Cellular and Infection Microbiology</i> , 2016 , 6, 67	5.9	10
24	Characterization of Function of the GlgA2 Glycogen/Starch Synthase in <i>Cyanobacterium</i> sp. Clg1 Highlights Convergent Evolution of Glycogen Metabolism into Starch Granule Aggregation. <i>Plant Physiology</i> , 2016 , 171, 1879-92	6.6	9
23	Recent Views on the Biosynthesis of the Plant Starch Granule.. <i>Trends in Glycoscience and Glycotechnology</i> , 1995 , 7, 405-415	0.1	9
22	Commentary: Plastid establishment did not require a chlamydial partner. <i>Frontiers in Cellular and Infection Microbiology</i> , 2016 , 6, 43	5.9	9
21	Comparison of Chain-Length Preferences and Glucan Specificities of Isoamylase-Type β -Glucan Debranching Enzymes from Rice, Cyanobacteria, and Bacteria. <i>PLoS ONE</i> , 2016 , 11, e0157020	3.7	9
20	Host-pathogen biotic interactions shaped vitamin K metabolism in Archaeplastida. <i>Scientific Reports</i> , 2018 , 8, 15243	4.9	9
19	Eukaryotic microalgae genomics. The essence of being a plant. <i>Plant Physiology</i> , 2005 , 137, 397-8	6.6	8
18	Crystal Structures of the catalytic domain of Starch Synthase IV, of Granule Bound Starch Synthase From CLg1 and of Granule Bound Starch Synthase I of Illustrate Substrate Recognition in Starch Synthases. <i>Frontiers in Plant Science</i> , 2018 , 9, 1138	6.2	7

17	Infection and the first eukaryotes--Response. <i>Science</i> , 2016 , 352, 1065-6	33.3	4
16	Blurred pictures from the crime scene: the growing case for a function of Chlamydiales in plastid endosymbiosis. <i>Microbes and Infection</i> , 2015 , 17, 723-6	9.3	3
15	Evolution of Storage Polysaccharide Metabolism in Archaeplastida Opens an Unexpected Window on the Molecular Mechanisms That Drove Plastid Endosymbiosis 2014 , 111-134		3
14	Metabolic Symbiosis and the Birth of the Plant Kingdom. <i>Molecular Biology and Evolution</i> , 2008 , 25, 795-805		2
13	Regulation of Starch Biosynthesis 1998 , 549-567		2
12	Gasping for air. <i>ELife</i> , 2017 , 6,	8.9	2
11	Control of Starch Biosynthesis in Vascular Plants and Algae 258-289		2
10	L' Amidon: sa ´synthse, sa ´mobilisation, son ´histoire ´volutive. <i>Cahiers Agricultures</i> , 2009 , 18, 315-322	0.9	2
9	Conservation of the glycogen metabolism pathway underlines a pivotal function of storage polysaccharides in Chlamydiae. <i>Communications Biology</i> , 2021 , 4, 296	6.7	2
8	Retracing Storage Polysaccharide Evolution in Stramenopila. <i>Frontiers in Plant Science</i> , 2021 , 12, 6290456.2		1
7	Acute Illness and Death in Children With Adrenal Insufficiency. <i>Frontiers in Endocrinology</i> , 2021 , 12, 757566		0
6	Single stage hand assisted laparoscopic and trans thoracic excision of multifocal paraaortic and cardiac paragangliomas. <i>Journal of Surgical Case Reports</i> , 2019 , 2019, rjz169	0.6	
5	Planning Needs Specific Credentials. <i>Journal of the American Planning Association</i> , 2004 , 70, 97-97	2.9	
4	Ba-7 ?????????????????????????????????????(???????,????,????????????????????27?????(?64?)). <i>Bulletin of Applied Glycoscience</i> , 2015 , 5, B42	0.1	
3	Ca-1 ????????????(?P????)?????????(?????????,????,????????????????????27?????(?64?)). <i>Bulletin of Applied Glycoscience</i> , 2015 , 5, B46	0.1	
2	Green factories: The shaping and use of metabolic pathways in algae. <i>Biochemist</i> , 2009 , 31, 20-23	0.5	
1	Control of Starch Biosynthesis in Vascular Plants and Algae 2018 , 258-289		