

# Archie R Portis

## List of Publications by Year in descending order

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70  
papers

8,039  
citations

57758

44  
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102487

66  
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76  
all docs

76  
docs citations

76  
times ranked

6950  
citing authors

#	ARTICLE	IF	CITATIONS
1	Frontiers, Opportunities, and Challenges in Biochemical and Chemical Catalysis of CO <sub>2</sub> Fixation. <i>Chemical Reviews</i> , 2013, 113, 6621-6658.	47.7	1,786
2	Arabidopsis thaliana expressing a thermostable chimeric Rubisco activase exhibits enhanced growth and higher rates of photosynthesis at moderately high temperatures. <i>Photosynthesis Research</i> , 2009, 100, 143-153.	2.9	127
3	Cool C4 Photosynthesis: Pyruvate Pi Dikinase Expression and Activity Corresponds to the Exceptional Cold Tolerance of Carbon Assimilation in <i>Miscanthus x giganteus</i> . <i>Plant Physiology</i> , 2008, 148, 557-567.	4.8	143
4	An Increase In Expression Of Pyruvate Pi Dikinase Corresponds To Cold-Tolerant C4 Photosynthesis Of <i>Miscanthus X Giganteus</i> . , 2008, , 845-849.		0
5	Can the cold tolerance of C4 photosynthesis in <i>Miscanthus x giganteus</i> relative to <i>Zea mays</i> be explained by differences in activities and thermal properties of Rubisco?. <i>Journal of Experimental Botany</i> , 2007, 59, 1779-1787.	4.8	49
6	A Novel Nucleus-Encoded Chloroplast Protein, PIFI, Is Involved in NAD(P)H Dehydrogenase Complex-Mediated Chlororespiratory Electron Transport in Arabidopsis. <i>Plant Physiology</i> , 2007, 144, 1742-1752.	4.8	37
7	Regulation of Rubisco activase and its interaction with Rubisco. <i>Journal of Experimental Botany</i> , 2007, 59, 1597-1604.	4.8	205
8	Discoveries in Rubisco (Ribulose 1,5-bisphosphate carboxylase/oxygenase): a historical perspective. <i>Photosynthesis Research</i> , 2007, 94, 121-143.	2.9	138
9	Identification of critical arginine residues in the functioning of Rubisco activase. <i>Archives of Biochemistry and Biophysics</i> , 2006, 450, 176-182.	3.0	22
10	Kinetic Analysis of the Slow Inactivation of Rubisco During Catalysis: Effects of Temperature, O <sub>2</sub> and Mg <sup>++</sup> . <i>Photosynthesis Research</i> , 2006, 87, 195-204.	2.9	36
11	Two conserved tryptophan residues are responsible for intrinsic fluorescence enhancement in Rubisco activase upon ATP binding. <i>Photosynthesis Research</i> , 2006, 88, 185-193.	2.9	7
12	Increased Sensitivity of Oxidized Large Isoform of Ribulose-1,5-bisphosphate Carboxylase/Oxygenase (Rubisco) Activase to ADP Inhibition Is Due to an Interaction between Its Carboxyl Extension and Nucleotide-binding Pocket. <i>Journal of Biological Chemistry</i> , 2006, 281, 25241-25249.	3.4	29
13	Effect of activase level and isoform on the thermotolerance of photosynthesis in Arabidopsis. <i>Journal of Experimental Botany</i> , 2006, 57, 3793-3799.	4.8	53
14	Two Residues of Rubisco Activase Involved in Recognition of the Rubisco Substrate. <i>Journal of Biological Chemistry</i> , 2005, 280, 24864-24869.	3.4	47
15	Temperature Dependence of Photosynthesis in Arabidopsis Plants with Modifications in Rubisco Activase and Membrane Fluidity. <i>Plant and Cell Physiology</i> , 2005, 46, 522-530.	3.1	149
16	The discovery of Rubisco activase – yet another story of serendipity. <i>Advances in Photosynthesis and Respiration</i> , 2005, , 851-858.	1.0	9
17	Enhanced translation of a chloroplast-expressed RbcS gene restores small subunit levels and photosynthesis in nuclear RbcS antisense plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 6315-6320.	7.1	180
18	Oxygen-dependent H <sub>2</sub> O <sub>2</sub> production by Rubisco. <i>FEBS Letters</i> , 2004, 571, 124-128.	2.8	73

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19	Rubisco Activase. , 2004, , 1117-1119.		0
20	Rubisco activase - Rubisco's catalytic chaperone. <i>Photosynthesis Research</i> , 2003, 75, 11-27.	2.9	494
21	The life of ribulose 1,5-bisphosphate carboxylase/oxygenaseâ€™ posttranslational facts and mysteries. <i>Archives of Biochemistry and Biophysics</i> , 2003, 414, 150-158.	3.0	86
22	Light modulation of Rubisco in Arabidopsis requires a capacity for redox regulation of the larger Rubisco activase isoform. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 3330-3334.	7.1	186
23	Temperature Response of Mesophyll Conductance. Implications for the Determination of Rubisco Enzyme Kinetics and for Limitations to Photosynthesis in Vivo. <i>Plant Physiology</i> , 2002, 130, 1992-1998.	4.8	659
24	Complementation of the Nuclear Antisense rbcS-Induced Photosynthesis Deficiency by Introducing an rbcS Gene into the Tobacco Plastid Genome. <i>Plant and Cell Physiology</i> , 2002, 43, 1302-1313.	3.1	34
25	The discovery of Rubisco activase - yet another story of serendipity. <i>Photosynthesis Research</i> , 2002, 73, 257-264.	2.9	28
26	Characterization of the regulatory function of the 46-kDa isoform of Rubisco activase from Arabidopsis. <i>Photosynthesis Research</i> , 2001, 68, 29-37.	2.9	60
27	Targeting a Nuclear Anthranilate Synthase Î±-Subunit Gene to the Tobacco Plastid Genome Results in Enhanced Tryptophan Biosynthesis. Return of a Gene to Its Pre-Endosymbiotic Origin. <i>Plant Physiology</i> , 2001, 127, 131-141.	4.8	64
28	Alteration of the Adenine Nucleotide Response and Increased Rubisco Activation Activity of Arabidopsis Rubisco Activase by Site-Directed Mutagenesis1. <i>Plant Physiology</i> , 2000, 123, 1077-1086.	4.8	25
29	Activase Region on Chloroplast Ribulose-1,5-bisphosphate Carboxylase/Oxygenase. <i>Journal of Biological Chemistry</i> , 2000, 275, 26241-26244.	3.4	56
30	Potent Inhibition of Ribulose-Bisphosphate Carboxylase by an Oxidized Impurity in Ribulose-1,5-Bisphosphate1. <i>Plant Physiology</i> , 1998, 117, 1059-1069.	4.8	105
31	Specificity for Activase Is Changed by a Pro-89 to Arg Substitution in the Large Subunit of Ribulose-1,5-bisphosphate Carboxylase/Oxygenase. <i>Journal of Biological Chemistry</i> , 1997, 272, 17033-17037.	3.4	68
32	The regulation of Rubisco by Rubisco activase. <i>Journal of Experimental Botany</i> , 1995, 46, 1285-1291.	4.8	123
33	Characteristics of the Interaction between Rubisco and Rubisco Activase. , 1995, , 3933-3938.		0
34	Mg <sup>2+</sup> and ATP or adenosine 5â€™-[Î³-thio]-triphosphate (ATPÎ³S) enhances intrinsic fluorescence and induces aggregation which increases the activity of spinach Rubisco activase. <i>BBA - Proteins and Proteomics</i> , 1993, 1202, 47-55.	2.1	54
35	Species-Dependent Variation in the Interaction of Substrate-Bound Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase (Rubisco) and Rubisco Activase. <i>Plant Physiology</i> , 1992, 100, 1858-1862.	4.8	95
36	Dissociation of Ribulose-1,5-Bisphosphate Bound to Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase and Its Enhancement by Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Activase-Mediated Hydrolysis of ATP. <i>Plant Physiology</i> , 1992, 99, 1348-1353.	4.8	99

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37	A fluorometric study with 1-anilinonaphthalene-8-sulfonic acid (ANS) of the interactions of ATP and ADP with rubisco activase. <i>BBA - Proteins and Proteomics</i> , 1991, 1079, 263-267.	2.1	17
38	Activation of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase (Rubisco) by Rubisco Activase. <i>Plant Physiology</i> , 1990, 94, 245-250.	4.8	22
39	Activity of Ribulose 1,5-Bisphosphate Carboxylase Oxygenase as a Function of Storage Conditions. <i>Plant Physiology</i> , 1990, 93, 1511-1513.	4.8	7
40	Impaired reductive activation of stromal bisphosphatases in tomato leaves following low-temperature exposure at high light. <i>Archives of Biochemistry and Biophysics</i> , 1990, 282, 302-308.	3.0	103
41	Partial reduction in ribulose 1,5-bisphosphate carboxylase/oxygenase activity by carboxypeptidase A. <i>Archives of Biochemistry and Biophysics</i> , 1990, 283, 397-400.	3.0	19
42	Rubisco activase. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1990, 1015, 15-28.	1.0	92
43	Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Activase Protein Prevents the in Vitro Decline in Activity of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase. <i>Plant Physiology</i> , 1989, 90, 968-971.	4.8	83
44	Adenosine triphosphate hydrolysis by purified rubisco activase. <i>Archives of Biochemistry and Biophysics</i> , 1989, 268, 93-99.	3.0	139
45	Release of the nocturnal inhibitor, carabitol-1-phosphate, from ribulose bisphosphate carboxylase/oxygenase by rubisco activase. <i>FEBS Letters</i> , 1988, 233, 413-416.	2.8	90
46	Purification and Assay of Rubisco Activase from Leaves. <i>Plant Physiology</i> , 1988, 88, 1008-1014.	4.8	87
47	Effects of Irradiance and Methyl Viologen Treatment on ATP, ADP, and Activation of Ribulose Bisphosphate Carboxylase in Spinach Leaves. <i>Plant Physiology</i> , 1988, 88, 850-853.	4.8	52
48	Protein-Bound Ribulose Bisphosphate Correlates with Deactivation of Ribulose Bisphosphate Carboxylase in Leaves. <i>Plant Physiology</i> , 1988, 87, 244-249.	4.8	76
49	Involvement of Stromal ATP in the Light Activation of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase in Intact Isolated Chloroplasts. <i>Plant Physiology</i> , 1988, 86, 293-298.	4.8	91
50	Rubisco Activase Mediates ATP-Dependent Activation of Ribulose Bisphosphate Carboxylase. <i>Plant Physiology</i> , 1987, 85, 152-154.	4.8	140
51	Purification and Species Distribution of Rubisco Activase. <i>Plant Physiology</i> , 1987, 84, 930-936.	4.8	143
52	Inhibition of the Photosynthetic Activities of Isolated Spinach Chloroplasts by Phosphonate Compounds. <i>Plant Physiology</i> , 1987, 84, 649-653.	4.8	15
53	Stimulation of thylakoid energization and ribulose-bisphosphate carboxylase/oxygenase activation in Arabidopsis leaves by methyl viologen. <i>FEBS Letters</i> , 1987, 221, 215-220.	2.8	22
54	Rubisco Activase; Purification, Subunit Composition and Species Distribution. , 1987, , 379-382.		1

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55	Purification of ribulose-1,5-bisphosphate carboxylase/oxygenase with high specific activity by fast protein liquid chromatography. <i>Analytical Biochemistry</i> , 1986, 153, 97-101.	2.4	45
56	Light and CO <sub>2</sub> Response of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Activation in Arabidopsis Leaves. <i>Plant Physiology</i> , 1986, 80, 655-659.	4.8	130
57	Exchange Properties of the Activator CO <sub>2</sub> of Spinach Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase. <i>Plant Physiology</i> , 1986, 80, 707-710.	4.8	12
58	Activation of Ribulosebisphosphate Carboxylase/Oxygenase at Physiological CO <sub>2</sub> and Ribulosebisphosphate Concentrations by Rubisco Activase. <i>Plant Physiology</i> , 1986, 82, 967-971.	4.8	191
59	A soluble chloroplast protein catalyzes ribulosebisphosphate carboxylase/oxygenase activation in vivo. <i>Photosynthesis Research</i> , 1985, 7, 193-201.	2.9	230
60	Regulation of Photosynthetic Carbon Metabolism under Photorespiratory and Non-photorespiratory Conditions: the Role of Phosphate and Triose Phosphates. , 1984, , 821-824.		2
61	Analysis of the Role of the Phosphate Translocator and External Metabolites in Steady-State Chloroplast Photosynthesis. <i>Plant Physiology</i> , 1983, 71, 936-943.	4.8	17
62	A Mutant of <i>Arabidopsis thaliana</i> Which Lacks Activation of RuBP Carboxylase <i>In Vivo</i> . <i>Plant Physiology</i> , 1982, 70, 381-387.	4.8	167
63	Effects of the Relative Extrachloroplastic Concentrations of Inorganic Phosphate, 3-Phosphoglycerate, and Dihydroxyacetone Phosphate on the Rate of Starch Synthesis in Isolated Spinach Chloroplasts. <i>Plant Physiology</i> , 1982, 70, 393-396.	4.8	23
64	Evidence of a Low Stromal Mg <sup>2+</sup> Concentration in Intact Chloroplasts in the Dark. <i>Plant Physiology</i> , 1981, 67, 985-989.	4.8	95
65	Assay of nucleotides and other phosphate-containing compounds in isolated chloroplasts by ion exchange chromatography. <i>Analytical Biochemistry</i> , 1980, 101, 278-287.	2.4	32
66	Fructose-and sedoheptulosebisphosphatase. The sites of a possible control of CO <sub>2</sub> fixation by light-dependent changes of the stromal Mg <sup>2+</sup> concentration. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1977, 461, 313-325.	1.0	105
67	Light-dependent changes of the Mg <sup>2+</sup> concentration in the stroma in relation to the Mg <sup>2+</sup> dependency of CO <sub>2</sub> fixation in intact chloroplasts. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1976, 449, 434-446.	1.0	249
68	Conformational changes in coupling factor 1 may control the rate of electron flow in spinach chloroplasts. <i>Biochemical and Biophysical Research Communications</i> , 1975, 64, 877-884.	2.1	57
69	Effects of Adenine Nucleotides and of Photophosphorylation on H <sup>+</sup> Uptake and the Magnitude of the H <sup>+</sup> Gradient in Illuminated Chloroplasts. <i>Journal of Biological Chemistry</i> , 1974, 249, 6250-6254.	3.4	117
70	On the pH-dependence of the light-induced hydrogen ion gradient in spinach chloroplasts. <i>Archives of Biochemistry and Biophysics</i> , 1973, 156, 621-625.	3.0	35