

Lonny R Levin

List of Publications by Year in descending order

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94
papers

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57758

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docs citations

97
times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	Soluble Adenylyl Cyclase as an Evolutionarily Conserved Bicarbonate Sensor. <i>Science</i> , 2000, 289, 625-628.	12.6	771
2	The <i>Drosophila</i> learning and memory gene <i>rutabaga</i> encodes a β -adenylyl cyclase. <i>Cell</i> , 1992, 68, 479-489.	28.9	561
3	The <i>S. cerevisiae</i> CDC25 gene product regulates the RAS/adenylate cyclase pathway. <i>Cell</i> , 1987, 48, 789-799.	28.9	523
4	Cyclic AMP Produced inside Mitochondria Regulates Oxidative Phosphorylation. <i>Cell Metabolism</i> , 2009, 9, 265-276.	16.2	422
5	Fungal Adenylyl Cyclase Integrates CO ₂ Sensing with cAMP Signaling and Virulence. <i>Current Biology</i> , 2005, 15, 2021-2026.	3.9	372
6	The β -Soluble Adenylyl Cyclase in Sperm Mediates Multiple Signaling Events Required for Fertilization. <i>Developmental Cell</i> , 2005, 9, 249-259.	7.0	353
7	Kinetic Properties of β -Soluble Adenylyl Cyclase. <i>Journal of Biological Chemistry</i> , 2003, 278, 15922-15926.	3.4	316
8	cAMP-independent control of sporulation, glycogen metabolism, and heat shock resistance in <i>S. cerevisiae</i> . <i>Cell</i> , 1988, 53, 555-566.	28.9	291
9	Molecular Details of cAMP Generation in Mammalian Cells: A Tale of Two Systems. <i>Journal of Molecular Biology</i> , 2006, 362, 623-639.	4.2	284
10	Compartmentalization of bicarbonate-sensitive adenylyl cyclase in distinct signaling microdomains. <i>FASEB Journal</i> , 2003, 17, 82-84.	0.5	259
11	Preferential expression of the <i>drosophila rutabaga</i> gene in mushroom bodies, neural centers for learning in insects. <i>Neuron</i> , 1992, 9, 619-627.	8.1	239
12	Metabolic Communication between Astrocytes and Neurons via Bicarbonate-Responsive Soluble Adenylyl Cyclase. <i>Neuron</i> , 2012, 75, 1094-1104.	8.1	225
13	Bicarbonate-regulated Adenylyl Cyclase (sAC) Is a Sensor That Regulates pH-dependent V-ATPase Recycling. <i>Journal of Biological Chemistry</i> , 2003, 278, 49523-49529.	3.4	202
14	Intracellular cAMP signaling by soluble adenylyl cyclase. <i>Kidney International</i> , 2011, 79, 1277-1288.	5.2	176
15	Bicarbonate-responsive β -soluble adenylyl cyclase defines a nuclear cAMP microdomain. <i>Journal of Cell Biology</i> , 2004, 164, 527-534.	5.2	157
16	<i>Cryptococcus neoformans</i> Senses CO ₂ through the Carbonic Anhydrase Can2 and the Adenylyl Cyclase Cac1. <i>Eukaryotic Cell</i> , 2006, 5, 103-111.	3.4	156
17	Bicarbonate activation of adenylyl cyclase via promotion of catalytic active site closure and metal recruitment. <i>Nature Structural and Molecular Biology</i> , 2005, 12, 32-37.	8.2	149
18	cAMP and Mitochondria. <i>Physiology</i> , 2013, 28, 199-209.	3.1	129

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19	Cholesterol Stabilizes TAZ in Hepatocytes to Promote Experimental Non-alcoholic Steatohepatitis. <i>Cell Metabolism</i> , 2020, 31, 969-986.e7.	16.2	117
20	The Quorum-Sensing Molecules Farnesol/Homoserine Lactone and Dodecanol Operate via Distinct Modes of Action in <i>Candida albicans</i> . <i>Eukaryotic Cell</i> , 2011, 10, 1034-1042.	3.4	115
21	A Phosphodiesterase 2A Isoform Localized to Mitochondria Regulates Respiration. <i>Journal of Biological Chemistry</i> , 2011, 286, 30423-30432.	3.4	115
22	Crystal structures of human soluble adenylyl cyclase reveal mechanisms of catalysis and of its activation through bicarbonate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3727-3732.	7.1	113
23	CO ₂ /HCO ₃ ²⁻ - and Calcium-regulated Soluble Adenylyl Cyclase as a Physiological ATP Sensor. <i>Journal of Biological Chemistry</i> , 2013, 288, 33283-33291.	3.4	108
24	CO ₂ /HCO ₃ ²⁻ -responsive soluble adenylyl cyclase as a putative metabolic sensor. <i>Trends in Endocrinology and Metabolism</i> , 2001, 12, 366-370.	7.1	105
25	Glucose and GLP-1 Stimulate cAMP Production via Distinct Adenylyl Cyclases in INS-1E Insulinoma Cells. <i>Journal of General Physiology</i> , 2008, 132, 329-338.	1.9	104
26	CO ₂ Acts as a Signalling Molecule in Populations of the Fungal Pathogen <i>Candida albicans</i> . <i>PLoS Pathogens</i> , 2010, 6, e1001193.	4.7	104
27	Physiological carbon dioxide, bicarbonate, and pH sensing. <i>Pflügers Archiv European Journal of Physiology</i> , 2010, 460, 953-964.	2.8	100
28	Soluble Adenylyl Cyclase Is Localized to Cilia and Contributes to Ciliary Beat Frequency Regulation via Production of cAMP. <i>Journal of General Physiology</i> , 2007, 130, 99-109.	1.9	99
29	Specific expression of soluble adenylyl cyclase in male germ cells. , 2000, 56, 6-11.		92
30	Endothelial CD99 signals through soluble adenylyl cyclase and PKA to regulate leukocyte transendothelial migration. <i>Journal of Experimental Medicine</i> , 2015, 212, 1021-1041.	8.5	92
31	Soluble adenylyl cyclase is required for netrin-1 signaling in nerve growth cones. <i>Nature Neuroscience</i> , 2006, 9, 1257-1264.	14.8	89
32	Compartmentalization of Distinct cAMP Signaling Pathways in Mammalian Sperm. <i>Journal of Biological Chemistry</i> , 2013, 288, 35307-35320.	3.4	88
33	Bicarbonate-sensing soluble adenylyl cyclase is an essential sensor for acid/base homeostasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 442-447.	7.1	85
34	Pharmacological Distinction between Soluble and Transmembrane Adenylyl Cyclases. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2013, 347, 589-598.	2.5	82
35	Physiological Roles of Acid-Base Sensors. <i>Annual Review of Physiology</i> , 2015, 77, 347-362.	13.1	75
36	Discovery of LRE1 as a specific and allosteric inhibitor of soluble adenylyl cyclase. <i>Nature Chemical Biology</i> , 2016, 12, 838-844.	8.0	74

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37	Identification of Functional Domains of Adenylyl Cyclase Using in Vivo Chimeras. <i>Journal of Biological Chemistry</i> , 1995, 270, 7573-7579.	3.4	71
38	Somatic α -Soluble TM Adenylyl Cyclase Isoforms Are Unaffected in Sacytm1Lex/Sacytm1Lex α -Knockout TM Mice. <i>PLoS ONE</i> , 2008, 3, e3251.	2.5	67
39	A Novel Mechanism for Adenylyl Cyclase Inhibition from the Crystal Structure of Its Complex with Catechol Estrogen. <i>Journal of Biological Chemistry</i> , 2005, 280, 31754-31759.	3.4	66
40	Soluble Adenylyl Cyclase Mediates Nerve Growth Factor-induced Activation of Rap1. <i>Journal of Biological Chemistry</i> , 2006, 281, 17253-17258.	3.4	64
41	Calcium-sensing soluble adenylyl cyclase mediates TNF signal transduction in human neutrophils. <i>Journal of Experimental Medicine</i> , 2005, 202, 353-361.	8.5	62
42	Modulation of NaCl absorption by $[HCO_3^-]$ in the marine teleost intestine is mediated by soluble adenylyl cyclase. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2010, 299, R62-R71.	1.8	51
43	Autoinhibitory regulation of soluble adenylyl cyclase. <i>Molecular Reproduction and Development</i> , 2006, 73, 361-368.	2.0	50
44	Metabolic changes in mouse sperm during capacitation. <i>Biology of Reproduction</i> , 2020, 103, 791-801.	2.7	50
45	Regulation of Epithelial Na ⁺ Transport by Soluble Adenylyl Cyclase in Kidney Collecting Duct Cells. <i>Journal of Biological Chemistry</i> , 2009, 284, 5774-5783.	3.4	47
46	Neuronal expression of soluble adenylyl cyclase in the mammalian brain. <i>Brain Research</i> , 2013, 1518, 1-8.	2.2	46
47	Pharmacological modulation of the CO ₂ /HCO ₃ ⁻ /pH-, calcium-, and ATP-sensing soluble adenylyl cyclase. , 2018, 190, 173-186.		46
48	Particulate and soluble adenylyl cyclases participate in the sperm acrosome reaction. <i>Biochemical and Biophysical Research Communications</i> , 2007, 358, 1128-1135.	2.1	45
49	Soluble Adenylyl Cyclase Defines a Nuclear cAMP Microdomain in Keratinocyte Hyperproliferative Skin Diseases. <i>Journal of Investigative Dermatology</i> , 2010, 130, 1279-1287.	0.7	45
50	Gastric Inhibitory Peptide Controls Adipose Insulin Sensitivity via Activation of cAMP-response Element-binding Protein and p110 β Isoform of Phosphatidylinositol 3-Kinase. <i>Journal of Biological Chemistry</i> , 2011, 286, 43062-43070.	3.4	44
51	Regulation of Anterior Chamber Drainage by Bicarbonate-sensitive Soluble Adenylyl Cyclase in the Ciliary Body. <i>Journal of Biological Chemistry</i> , 2011, 286, 41353-41358.	3.4	40
52	Transient exposure to calcium ionophore enables in vitro fertilization in sterile mouse models. <i>Scientific Reports</i> , 2016, 6, 33589.	3.3	40
53	HCO ₃ ⁻ -dependent soluble adenylyl cyclase activates cystic fibrosis transmembrane conductance regulator in corneal endothelium. <i>American Journal of Physiology - Cell Physiology</i> , 2003, 284, C1114-C1122.	4.6	39
54	Physiological Sensing of Carbon Dioxide/Bicarbonate/pH via Cyclic Nucleotide Signaling. <i>Sensors</i> , 2011, 11, 2112-2128.	3.8	38

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55	pH sensing via bicarbonate-regulated α -soluble β -adenylyl cyclase (sAC). <i>Frontiers in Physiology</i> , 2013, 4, 343.	2.8	38
56	Crystal Structure and Regulation Mechanisms of the CyaB Adenylyl Cyclase from the Human Pathogen <i>Pseudomonas aeruginosa</i> . <i>Journal of Molecular Biology</i> , 2012, 416, 271-286.	4.2	36
57	A mitochondrial CO ₂ -adenylyl cyclase β -cAMP signalosome controls yeast normoxic cytochrome <i>c</i> oxidase activity. <i>FASEB Journal</i> , 2014, 28, 4369-4380.	0.5	35
58	Structure-Based Development of Novel Adenylyl Cyclase Inhibitors. <i>Journal of Medicinal Chemistry</i> , 2008, 51, 4456-4464.	6.4	33
59	Soluble adenylyl cyclase is essential for proper lysosomal acidification. <i>Journal of General Physiology</i> , 2016, 148, 325-339.	1.9	32
60	Transient Sperm Starvation Improves the Outcome of Assisted Reproductive Technologies. <i>Frontiers in Cell and Developmental Biology</i> , 2019, 7, 262.	3.7	32
61	A Soluble Adenylyl Cyclase Form Targets to Axonemes and Rescues Beat Regulation in Soluble Adenylyl Cyclase Knockout Mice. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2014, 51, 750-760.	2.9	28
62	Distinct intracellular sAC-cAMP domains regulate ER calcium signaling and OXPHOS function. <i>Journal of Cell Science</i> , 2017, 130, 3713-3727.	2.0	28
63	Mammalian pigmentation is regulated by a distinct cAMP-dependent mechanism that controls melanosome pH. <i>Science Signaling</i> , 2018, 11, .	3.6	28
64	Conservation of functional domain structure in bicarbonate-regulated β -soluble β -adenylyl cyclases in bacteria and eukaryotes. <i>Development Genes and Evolution</i> , 2004, 214, 503-9.	0.9	27
65	Capacitation increases glucose consumption in murine sperm. <i>Molecular Reproduction and Development</i> , 2020, 87, 1037-1047.	2.0	27
66	Role of soluble adenylyl cyclase in the heart. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2012, 302, H538-H543.	3.2	26
67	Soluble adenylyl cyclase inhibition prevents human sperm functions essential for fertilization. <i>Molecular Human Reproduction</i> , 2021, 27, .	2.8	26
68	Bithionol Potently Inhibits Human Soluble Adenylyl Cyclase through Binding to the Allosteric Activator Site. <i>Journal of Biological Chemistry</i> , 2016, 291, 9776-9784.	3.4	25
69	Characterization of <i>Plasmodium falciparum</i> Adenylyl Cyclase- β^2 and Its Role in Erythrocytic Stage Parasites. <i>PLoS ONE</i> , 2012, 7, e39769.	2.5	24
70	Soluble Adenylyl Cyclase Is Necessary and Sufficient to Overcome the Block of Axonal Growth by Myelin-Associated Factors. <i>Journal of Neuroscience</i> , 2014, 34, 9281-9289.	3.6	22
71	Identification of a haem domain in human soluble adenylyl cyclase. <i>Bioscience Reports</i> , 2012, 32, 491-499.	2.4	21
72	Bicarbonate, carbon dioxide and pH sensing via mammalian bicarbonate-regulated soluble adenylyl cyclase. <i>Interface Focus</i> , 2021, 11, 20200034.	3.0	19

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73	The metabolic/pH sensor soluble adenylyl cyclase is a tumor suppressor protein. <i>Oncotarget</i> , 2016, 7, 45597-45607.	1.8	19
74	Optimization of lead compounds into on-demand, nonhormonal contraceptives: leveraging a public-private drug discovery institute collaboration. <i>Biology of Reproduction</i> , 2020, 103, 176-182.	2.7	18
75	Discovery of TDI-10229: A Potent and Orally Bioavailable Inhibitor of Soluble Adenylyl Cyclase (sAC,) Tj ETQq1 1 0.784314 rgBT /Over	2.8	16
76	Cloning and characterization of a <i>Drosophila</i> adenylyl cyclase homologous to mammalian type IX. <i>FEBS Letters</i> , 1997, 413, 104-108.	2.8	15
77	A calcium-inhibited <i>Drosophila</i> adenylyl cyclase. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2000, 1495, 125-139.	4.1	14
78	Activation of Soluble Adenylyl Cyclase Protects against Secretagogue Stimulated Zymogen Activation in Rat Pancreatic Acinar Cells. <i>PLoS ONE</i> , 2012, 7, e41320.	2.5	14
79	Differential Intraocular Pressure Measurements by Tonometry and Direct Cannulation After Treatment with Soluble Adenylyl Cyclase Inhibitors. <i>Journal of Ocular Pharmacology and Therapeutics</i> , 2017, 33, 574-581.	1.4	13
80	“Soluble” adenylyl cyclase-generated cyclic adenosine monophosphate promotes fast migration in PC12 cells. <i>Journal of Neuroscience Research</i> , 2008, 86, 118-124.	2.9	12
81	Soluble adenylyl cyclase regulates the cytosolic NADH/NAD ⁺ redox state and the bioenergetic switch between glycolysis and oxidative phosphorylation. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2021, 1862, 148367.	1.0	12
82	Purification of Soluble Adenylyl Cyclase. <i>Methods in Enzymology</i> , 2002, 345, 95-105.	1.0	10
83	Nonpigmented Ciliary Epithelial Cells Respond to Acetazolamide by a Soluble Adenylyl Cyclase Mechanism. , 2014, 55, 187.		9
84	Using an Extracellular Flux Analyzer to Measure Changes in Glycolysis and Oxidative Phosphorylation during Mouse Sperm Capacitation. <i>Journal of Visualized Experiments</i> , 2020, , .	0.3	9
85	6 Genetic characterization of adenylyl cyclase function. <i>Advances in Second Messenger and Phosphoprotein Research</i> , 1997, 32, 121-135.	4.5	8
86	The Soluble Guanylyl Cyclase Activator YC-1 Increases Intracellular cGMP and cAMP via Independent Mechanisms in INS-1E Cells. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2011, 338, 925-931.	2.5	6
87	The role of soluble adenylyl cyclase in health and disease. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2014, 1842, 2533-2534.	3.8	5
88	Fungal Adenylyl Cyclase Integrates CO ₂ Sensing with cAMP Signaling and Virulence. <i>Current Biology</i> , 2005, 15, 2177.	3.9	4
89	[51] Functional expression of mammalian adenosine cyclic monophosphate-dependent protein kinase in <i>saccharomyces cerevisiae</i> . <i>Methods in Enzymology</i> , 1991, 200, 605-627.	1.0	3
90	Identification of Transmembrane Adenylyl Cyclase Isoforms. <i>Methods in Enzymology</i> , 2002, 345, 150-159.	1.0	3

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91	CO ₂ /HCO ₃ ⁻ and calcium-regulated soluble adenylyl cyclase as a physiological ATP sensor.. Journal of Biological Chemistry, 2014, 289, 12679.	3.4	0
92	Novel Regulation of the Epithelial Na ⁺ Channel by Soluble Adenylyl Cyclase in Kidney Collecting Duct Cells. FASEB Journal, 2008, 22, 934.3.	0.5	0
93	Glucose and GLP-1 Stimulate cAMP Production via Distinct Adenylyl Cyclases in INS-1E Insulinoma Cells. Journal of Cell Biology, 2008, 182, i10-i10.	5.2	0
94	Endothelial CD99 Signals Through Soluble Adenylyl Cyclase and PKA to Regulate Leukocyte Transendothelial Migration. FASEB Journal, 2015, 29, 285.1.	0.5	0