Sandhya Srikant Visweswariah

List of Publications by Year
in descending order

127 papers	3,538 citations	126907 33 h-index	189892 50 g-index
134 all docs	134 docs citations	134 times ranked	2934 citing authors

#	Article	IF	Citations
1	Familial Diarrhea Syndrome Caused by an Activating<i>GUCY2C</i>Mutation. New England Journal of Medicine, 2012, 366, 1586-1595.	27.0	175
2	Nature of linkage between the cationic headgroup and cholesteryl skeleton controls gene transfection efficiency. FEBS Letters, 2000, 473, 341-344.	2.8	121
3	Site-directed mutagenesis using a single mutagenic oligonucleotide and DpnI digestion of template DNA. Analytical Biochemistry, 2003, 319, 335-336.	2.4	109
4	cAMP-regulated Protein Lysine Acetylases in Mycobacteria. Journal of Biological Chemistry, 2010, 285, 24313-24323.	3.4	105
5	Cyclic AMP-dependent Protein Lysine Acylation in Mycobacteria Regulates Fatty Acid and Propionate Metabolism. Journal of Biological Chemistry, 2013, 288, 14114-14124.	3.4	96
6	The Rv0805 Gene fromMycobacterium tuberculosisEncodes a 3â€˜,5â€˜-Cyclic Nucleotide Phosphodiesterase:Â Biochemical and Mutational Analysisâ€. Biochemistry, 2005, 44, 15695-15704.	2.5	80
7	Structural and Biochemical Analysis of the Rv0805 Cyclic Nucleotide Phosphodiesterase from Mycobacterium tuberculosis. Journal of Molecular Biology, 2007, 365, 211-225.	4.2	74
8	Congenital secretory diarrhoea caused by activating germline mutations in<i>GUCY2C</i>. Gut, 2016, 65, 1306-1313.	12.1	74
9	Advantage of the Ether Linkage between the Positive Charge and the Cholesteryl Skeleton in Cholesterol-Based Amphiphiles as Vectors for Gene Delivery. Bioconjugate Chemistry, 2002, 13, 378-384.	3.6	73
10	Receptor guanylyl cyclase C (GC-C): regulation and signal transduction. Molecular and Cellular Biochemistry, 2010, 334, 67-80.	3.1	73
11	New messages from old messengers: cAMP and mycobacteria. Trends in Microbiology, 2006, 14, 543-550.	7.7	69
12	Intramacrophage ROS Primes the Innate Immune System via JAK/STAT and Toll Activation. Cell Reports, 2020, 33, 108368.	6.4	67
13	A Mycobacterial Cyclic AMP Phosphodiesterase That Moonlights as a Modifier of Cell Wall Permeability. Journal of Biological Chemistry, 2009, 284, 32846-32857.	3.4	62
14	The multiple and enigmatic roles of guanylyl cyclase C in intestinal homeostasis. FEBS Letters, 2012, 586, 2835-2840.	2.8	62
15	Guanylin, Uroguanylin, and Heat-stable Euterotoxin Activate Guanylate Cyclase C and/or a Pertussis Toxin-sensitive G Protein in Human Proximal Tubule Cells. Journal of Biological Chemistry, 2002, 277, 17758-17764.	3.4	61
16	Genomic mapping of cAMP receptor protein (CRP^{Mt}) in<i>Mycobacterium tuberculosis</i>: relation to transcriptional start sites and the role of CRP^{Mt}as a transcription factor. Nucleic Acids Research, 2014, 42, 8320-8329.	14.5	54
17	Mycobacterial adenylyl cyclases: Biochemical diversity and structural plasticity. FEBS Letters, 2006, 580, 3344-3352.	2.8	53
18	Systematic Analysis of Mycobacterial Acylation Reveals First Example of Acylation-mediated Regulation of Enzyme Activity of a Bacterial Phosphatase. Journal of Biological Chemistry, 2015, 290, 26218-26234.	3.4	53

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19	Expression of GC-C, a Receptor-Guanylate Cyclase, and Its Endogenous Ligands Uroguanylin and Guanylin along the Rostrocaudal Axis of the Intestine*. Endocrinology, 2000, 141, 3210-3224.	2.8	51
20	Intestinal Cell Proliferation and Senescence Are Regulated by Receptor Guanylyl Cyclase C and p21. Journal of Biological Chemistry, 2014, 289, 581-593.	3.4	51
21	The GAF Domain of the cGMP-Binding, cGMP-Specific Phosphodiesterase (PDE5) Is a Sensor and a Sink for cGMP. Biochemistry, 2008, 47, 3534-3543.	2.5	49
22	A Survey of Nucleotide Cyclases in Actinobacteria: Unique Domain Organization and Expansion of the Class III Cyclase Family inMycobacterium tuberculosis. Comparative and Functional Genomics, 2004, 5, 17-38.	2.0	48
23	Metallophosphoesterases: structural fidelity with functional promiscuity. Biochemical Journal, 2015, 467, 201-216.	3.7	48
24	Cholesterol promotes Cytolysin A activity by stabilizing the intermediates during pore formation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E7323-E7330.	7.1	48
25	Class III nucleotide cyclases in bacteria and archaebacteria: lineage-specific expansion of adenylyl cyclases and a dearth of guanylyl cyclases. FEBS Letters, 2004, 561, 11-21.	2.8	47
26	The Linker Region in Receptor Guanylyl Cyclases Is a Key Regulatory Module. Journal of Biological Chemistry, 2009, 284, 27135-27145.	3.4	46
27	Thermodynamic Analyses Reveal Role of Water Release in Epitope Recognition by a Monoclonal Antibody against the Human Guanylyl Cyclase C Receptor. Journal of Biological Chemistry, 1999, 274, 31272-31278.	3.4	44
28	Tyrphostins Are Inhibitors of Guanylyl and Adenylyl Cyclases. Biochemistry, 2004, 43, 8247-8255.	2.5	44
29	Super-resolution Stimulated Emission Depletion-Fluorescence Correlation Spectroscopy Reveals Nanoscale Membrane Reorganization Induced by Pore-Forming Proteins. Langmuir, 2016, 32, 9649-9657.	3.5	43
30	Cyclic AMP in Mycobacteria: Characterization and Functional Role of the Rv1647 Ortholog in <i>Mycobacterium smegmatis</i>. Journal of Bacteriology, 2008, 190, 3824-3834.	2.2	42
31	Characterization and partial purification of the human receptor for the heat-stable enterotoxin. FEBS Journal, 1994, 219, 727-736.	0.2	39
32	Cross Talk between Receptor Guanylyl Cyclase C and c-src Tyrosine Kinase Regulates Colon Cancer Cell Cytostasis. Molecular and Cellular Biology, 2009, 29, 5277-5289.	2.3	39
33	The Evolution of Guanylyl Cyclases as Multidomain Proteins: Conserved Features of Kinase-Cyclase Domain Fusions. Journal of Molecular Evolution, 2009, 68, 587-602.	1.8	37
34	The Kinase Homology Domain of Receptor Guanylyl Cyclase C:Â ATP Binding and Identification of an Adenine Nucleotide Sensitive Siteâ€. Biochemistry, 2006, 45, 1888-1898.	2.5	36
35	Expression of the Receptor Guanylyl Cyclase C and Its Ligands in Reproductive Tissues of the Rat: A Potential Role for a Novel Signaling Pathway in the Epididymis1. Biology of Reproduction, 2002, 67, 1975-1980.	2.7	34
36	Signalling mechanisms in Mycobacteria. Tuberculosis, 2011, 91, 432-440.	1.9	34

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37	Glycosylation of the receptor guanylate cyclase C: role in ligand binding and catalytic activity. Biochemical Journal, 2004, 379, 653-663.	3.7	33
38	Functional Inactivation of the Human Guanylyl Cyclase C Receptor:â€‰ Modeling and Mutation of the Protein Kinase-like Domain. Biochemistry, 2001, 40, 9196-9206.	2.5	32
39	Mutational analysis of the Mycobacterium tuberculosis Rv1625c adenylyl cyclase: residues that confer nucleotide specificity contribute to dimerization. FEBS Letters, 2003, 545, 253-259.	2.8	32
40	Epitope conservation and immunohistochemical localization of the guanylin/stable toxin peptide receptor, guanylyl cyclase C. Journal of Cellular Biochemistry, 1997, 66, 500-511.	2.6	31
41	Expression and regulation of the cGMP-binding, cGMP-specific phosphodiesterase (PDE5) in human colonic epithelial cells: Role in the induction of cellular refractoriness to the heat-stable enterotoxin peptide. Journal of Cellular Biochemistry, 2000, 77, 159-167.	2.6	31
42	Biochemical Characterization of the Intracellular Domain of the Human Guanylyl Cyclase C Receptor Provides Evidence for a Catalytically Active Homotrimerâ€. Biochemistry, 2000, 39, 16075-16083.	2.5	31
43	Characterization of phylogenetically distant members of the adenylate cyclase family from mycobacteria: Rv1647 from Mycobacterium tuberculosis and its orthologue ML1399 from M. leprae. Biochemical Journal, 2005, 387, 541-551.	3.7	31
44	Interaction of heat-stable enterotoxins with human colonie (T84) cells: modulation of the activation of guanylyl cyclase. Microbial Pathogenesis, 1992, 12, 209-218.	2.9	30
45	Homologous desensitization of the human guanylate cyclase C receptor. FEBS Journal, 2000, 267, 179-187.	0.2	30
46	Distinct Allostery Induced in the Cyclic GMP-binding, Cyclic GMP-specific Phosphodiesterase (PDE5) by Cyclic GMP, Sildenafil, and Metal Ions. Journal of Biological Chemistry, 2011, 286, 8545-8554.	3.4	30
47	A Universal Stress Protein (USP) in Mycobacteria Binds cAMP. Journal of Biological Chemistry, 2015, 290, 12731-12743.	3.4	30
48	Dual regulation of heat-stable enterotoxin-mediated cGMP accumulation in T84 cells by receptor desensitization and increased phosphodiesterase activity. FEBS Letters, 1997, 408, 345-349.	2.8	28
49	Evolution of bacterial transcription factors: how proteins take on new tasks, but do not always stop doing the old ones. Trends in Microbiology, 2015, 23, 463-467.	7.7	28
50	Immunological characterization of riboflavin carrier proteins using monoclonal antibodies. Molecular Immunology, 1987, 24, 969-974.	2.2	27
51	Characterization of an Evolutionarily Conserved Metallophosphoesterase That Is Expressed in the Fetal Brain and Associated with the WAGR Syndrome. Journal of Biological Chemistry, 2009, 284, 5217-5228.	3.4	27
52	Lysis dynamics and membrane oligomerization pathways for Cytolysin A (ClyA) pore-forming toxin. RSC Advances, 2014, 4, 4930.	3.6	27
53	One-Pota-Bromoacetalization of Carbonyl Compounds. Synthesis, 1982, 1982, 309-310.	2.3	26
54	Modeling and mutational analysis of the GAF domain of the cGMP-binding, cGMP-specific phosphodiesterase, PDE5. FEBS Letters, 2003, 539, 161-166.	2.8	26

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55	Cyclic nucleotide binding and structural changes in the isolated GAF domain of<i>Anabaena</i>adenylyl cyclase, CyaB2. PeerJ, 2015, 3, e882.	2.0	26
56	Cloning and hyperexpression of a gene encoding the heat-stable toxin of Escherichia coli. Gene, 1989, 81, 219-226.	2.2	25
57	Structure and activity of OK-GC: a kidney receptor guanylate cyclase activated by guanylin peptides. American Journal of Physiology - Renal Physiology, 1999, 276, F882-F891.	2.7	25
58	The cGMP-binding, cGMP-specific phosphodiesterase (PDE5): intestinal cell expression, regulation and role in fluid secretion. Cellular Signalling, 2004, 16, 681-692.	3.6	25
59	Cyclic AMP-induced Conformational Changes in Mycobacterial Protein Acetyltransferases. Journal of Biological Chemistry, 2012, 287, 18115-18129.	3.4	24
60	Linking carbon metabolism to carotenoid production in mycobacteria using Raman spectroscopy. FEMS Microbiology Letters, 2015, 362, 1-6.	1.8	24
61	Expression of the Extracellular Domain of the Human Heat-Stable Enterotoxin Receptor inEscherichia coliand Generation of Neutralizing Antibodies. Protein Expression and Purification, 1996, 8, 151-159.	1.3	23
62	Purification of a circulatory riboflavin carrier protein from pregnant bonnet monkey (M. radiata): comparison with chicken egg vitamin carrier. BBA - Proteins and Proteomics, 1987, 915, 141-148.	2.1	22
63	Cellular refractoriness to the heat-stable enterotoxin peptide is associated with alterations in levels of the differentially glycosylated forms of guanylyl cyclase C. FEBS Journal, 2003, 270, 3848-3857.	0.2	21
64	Nanoscale dynamics of phospholipids reveals an optimal assembly mechanism of pore-forming proteins in bilayer membranes. Physical Chemistry Chemical Physics, 2016, 18, 29935-29945.	2.8	20
65	Isolation of riboflavin carrier proteins from pregnant human and umbilical cord serum: Similarities with chicken egg riboflavin carrier protein. Bioscience Reports, 1987, 7, 563-571.	2.4	19
66	A Structural Basis for the Role of Nucleotide Specifying Residues in Regulating the Oligomerization of the Rv1625c Adenylyl Cyclase from M.tuberculosis. Journal of Molecular Biology, 2006, 356, 904-916.	4.2	19
67	Biochemical and immunological aspects of riboflavin carrier protein. Journal of Biosciences, 1988, 13, 87-104.	1.1	17
68	Site-specific N-Linked Glycosylation of Receptor Guanylyl Cyclase C Regulates Ligand Binding, Ligand-mediated Activation and Interaction with Vesicular Integral Membrane Protein 36, VIP36. Journal of Biological Chemistry, 2013, 288, 3907-3917.	3.4	17
69	The Solvent-Exposed C-Terminus of the Cytolysin A Pore-Forming Toxin Directs Pore Formation and Channel Function in Membranes. Biochemistry, 2016, 55, 5952-5961.	2.5	17
70	A Fluorescent Nucleic Acid Nanodevice Quantitatively Images Elevated Cyclic Adenosine Monophosphate in Membraneâ€Bound Compartments. Small, 2014, 10, 4276-4280.	10.0	15
71	Allostery and Conformational Dynamics in cAMP-binding Acyltransferases. Journal of Biological Chemistry, 2014, 289, 16588-16600.	3.4	15
72	Particle uptake driven phagocytosis in macrophages and neutrophils enhances bacterial clearance. Journal of Controlled Release, 2022, 343, 131-141.	9.9	15

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73	Monoclonal antibodies to mycobacterial DNA gyrase A inhibit DNA supercoiling activity. FEBS Journal, 2001, 268, 2038-2046.	0.2	14
74	Histone Deacetylases Regulate Multicellular Development in the Social Amoeba Dictyostelium discoideum. Journal of Molecular Biology, 2009, 391, 833-848.	4.2	14
75	Unique Utilization of a Phosphoprotein Phosphatase Fold by a Mammalian Phosphodiesterase Associated with WAGR Syndrome. Journal of Molecular Biology, 2011, 412, 481-494.	4.2	14
76	Gut-associated cGMP mediates colitis and dysbiosis in a mouse model of an activating mutation in <i>GUCY2C</i>. Journal of Experimental Medicine, 2021, 218, .	8.5	14
77	Mechanistic Insights into Pore Formation by an Î±-Pore Forming Toxin: Protein and Lipid Bilayer Interactions of Cytolysin A. Accounts of Chemical Research, 2021, 54, 120-131.	15.6	14
78	A rapid method of epitope analysis using Superose 12 gel filtration a study with monoclonal antibodies to chicken riboflavin carrier protein. Journal of Immunological Methods, 1987, 99, 173-177.	1.4	13
79	Refolding of native and recombinant chicken riboflavin carrier (or binding) protein : evidence for the formation of non-native intermediates during the generation of active protein. FEBS Journal, 1998, 258, 411-418.	0.2	13
80	Biopanning of endotoxin-specific phage displayed peptides. Biochemical and Biophysical Research Communications, 2003, 307, 133-138.	2.1	13
81	An adenylyl cyclase pseudogene in Mycobacterium tuberculosis has a functional ortholog in Mycobacterium avium. Biochimie, 2005, 87, 557-563.	2.6	13
82	Overexpression of the Rv0805 phosphodiesterase elicits a cAMP-independent transcriptional response. Tuberculosis, 2013, 93, 492-500.	1.9	13
83	Cyclic nucleotide signaling in intestinal epithelia: getting to the gut of the matter. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2013, 5, 409-424.	6.6	13
84	Protein kinaseâ€ƒC regulates transcription of the human guanylate cyclaseâ€ƒC gene. FEBS Journal, 2001, 268, 2160-2171.	0.2	12
85	Paralogous cAMP Receptor Proteins in <i>Mycobacterium smegmatis</i> Show Biochemical and Functional Divergence. Biochemistry, 2014, 53, 7765-7776.	2.5	12
86	Impaired Intestinal Sodium Transport in Inflammatory Bowel Disease: From the Passenger to the Driver's Seat. Cellular and Molecular Gastroenterology and Hepatology, 2021, 12, 277-292.	4.5	12
87	Guanylyl Cyclase C Receptor: Regulation of Catalytic Activity by ATP. Bioscience Reports, 1999, 19, 179-188.	2.4	11
88	Tyrosine phosphorylation of the human guanylyl cyclase C receptor. Journal of Biosciences, 2000, 25, 339-346.	1.1	11
89	The Non-catalytic â€œCap Domainâ€• of a Mycobacterial Metallophosphoesterase Regulates Its Expression and Localization in the Cell. Journal of Biological Chemistry, 2014, 289, 22470-22481.	3.4	11
90	Hyperexpression of Chicken Riboflavin Carrier Protein: Antibodies to the Recombinant Protein Curtail Pregnancy in Rodents. Protein Expression and Purification, 1996, 7, 147-154.	1.3	10

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91	Identification and characterization of receptors for riboflavin carrier protein in the chicken oocyte. BBA - Proteins and Proteomics, 1998, 1382, 230-242.	2.1	10
92	Defying the Stereotype: Non-Canonical Roles of the Peptide Hormones Guanylin and Uroguanylin. Frontiers in Endocrinology, 2011, 2, 14.	3.5	10
93	Absence of Receptor Guanylyl Cyclase C Enhances Ileal Damage and Reduces Cytokine and Antimicrobial Peptide Production during Oral Salmonella enterica Serovar Typhimurium Infection. Infection and Immunity, 2018, 86, .	2.2	10
94	A universal stress protein in Mycobacterium smegmatis sequesters the cAMP-regulated lysine acyltransferase and is essential for biofilm formation. Journal of Biological Chemistry, 2020, 295, 1500-1516.	3.4	10
95	Mutational landscape of receptor guanylyl cyclase C: Functional analysis and diseaseâ€related mutations. IUBMB Life, 2020, 72, 1145-1159.	3.4	10
96	Identification of Potential Binders of Mtb Universal Stress Protein (Rv1636) Through an in silico Approach and Insights Into Compound Selection for Experimental Validation. Frontiers in Molecular Biosciences, 2021, 8, 599221.	3.5	10
97	Receptor Guanylyl Cyclase C and Cyclic GMP in Health and Disease: Perspectives and Therapeutic Opportunities. Frontiers in Endocrinology, 0, 13, .	3.5	10
98	Purification, crystallization and preliminary X-ray diffraction analysis of the catalytic domain of adenylyl cyclase Rv1625c fromMycobacterium tuberculosis. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 371-373.	2.5	9
99	The ascent of nucleotide cyclases: conservation and evolution of a theme. Journal of Biosciences, 2002, 27, 85-91.	1.1	8
100	The regulatory role of the kinase-homology domain in receptor guanylyl cyclases: nothing â€˜pseudoâ€™ about it!. Biochemical Society Transactions, 2018, 46, 1729-1742.	3.4	8
101	Mycobacterial phenolic glycolipid synthesis is regulated by cAMP-dependent lysine acylation of FadD22. Microbiology (United Kingdom), 2017, 163, 373-382.	1.8	8
102	AMycobacterium smegmatisgyrase B specific monoclonal antibody reveals association of gyrase A and B subunits in the cell. FEMS Microbiology Letters, 2001, 194, 87-92.	1.8	7
103	Estrogen modulation of riboflavin carrier protein in the bonnet monkey (Macaca radiata). The Journal of Steroid Biochemistry, 1988, 31, 91-96.	1.1	6
104	The adenylyl cyclase Rv2212 modifies the proteome and infectivity of Mycobacterium bovis BCG. Folia Microbiologica, 2015, 60, 21-31.	2.3	6
105	Cyclic nucleotides, gut physiology and inflammation. FEBS Journal, 2020, 287, 1970-1981.	4.7	6
106	New structural forms of a mycobacterial adenylyl cyclase Rv1625c. IUCrJ, 2014, 1, 338-348.	2.2	6
107	A conformational epitope in the N-terminus of the Escherichia coli heat-stable enterotoxins is involved in receptor-ligand interactions. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 1996, 1317, 149-154.	3.8	5
108	Substrate specificity determinants of class <scp>III</scp> nucleotidyl cyclases. FEBS Journal, 2016, 283, 3723-3738.	4.7	5

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109	Topological mimicry and epitope duplication in the guanylyl cyclase C receptor. Protein Science, 1998, 7, 2175-2183.	7.6	4
110	Autoinhibitory mechanism and activity-related structural changes in a mycobacterial adenylyl cyclase. Journal of Structural Biology, 2015, 190, 304-313.	2.8	4
111	Mycobacterial STAND adenylyl cyclases: The HTH domain binds DNA to form biocrystallized nucleoids. Biophysical Journal, 2021, 120, 1231-1246.	0.5	4
112	Illuminating Cyclic Nucleotides: Sensors for cAMP and cGMP and Their Application in Live Cell Imaging. Journal of the Indian Institute of Science, 2017, 97, 109-128.	1.9	3
113	Lobe-specific Expression of Phosphodiesterase 5 in Rat Prostate. Urology, 2015, 85, 703.e7-703.e13.	1.0	2
114	A giant leap for womankind. Nature Medicine, 2019, 25, 704-707.	30.7	2
115	The pseudokinase domain in receptor guanylyl cyclases. Methods in Enzymology, 2022, 667, 535-574.	1.0	2
116	The metabolic impact of bacterial infection in the gut. FEBS Journal, 2023, 290, 3928-3945.	4.7	2
117	Studying Binding, Conformational Transition and Assembly of E. Coli Cytolysin a Pore Forming Toxin by Single Molecule Fluorescence. Biophysical Journal, 2017, 112, 524a.	0.5	1
118	Guanylyl cyclase receptor C. The AFCS-nature Molecule Pages, 0, , .	0.2	1
119	â€œThat which we call a rose by any other name would smell as sweetâ€ How the nose knows!. Resonance, 2005, 10, 28-34.	0.3	0
120	Signaling via guanylyl cyclase C: cGMP, Src and p21. BMC Pharmacology, 2011, 11, .	0.4	0
121	Physical understanding of pore formation on supported lipid bilayer by bacterial toxins. , 2013, , .		0
122	Guest Editorâ€™s Desk. Journal of the Indian Institute of Science, 2017, 97, 3-4.	1.9	0
123	Guanylyl Cyclase C. , 2016, , 1-8.		0
124	Guanylyl Cyclase Receptors. , 2016, , 1-8.		0
125	Guanylyl Cyclase C. , 2018, , 2301-2308.		0
126	Guanylyl Cyclase Receptors. , 2018, , 2308-2315.		0

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127	A Mycobacterium smegmatis gyrase B specific monoclonal antibody reveals association of gyrase A and B subunits in the cell. FEMS Microbiology Letters, 2001, 194, 87-92.	1.8	0