Pauline Schaap

List of Publications by Year
in descending order

127 papers	4,725 citations	38 h-index	61 g-index
132 all docs	132 docs citations	132 times ranked	2849 citing authors

87888 123424

#	Article	IF	Citations
1	Genome of Acanthamoeba castellanii highlights extensive lateral gene transfer and early evolution of tyrosine kinase signaling. Genome Biology, 2013, 14, R11.	9.6	296
2	Molecular Phylogeny and Evolution of Morphology in the Social Amoebas. Science, 2006, 314, 661-663.	12.6	232
3	Induction of post-aggregative differentiation in Dictyostelium discoideum by cAMP. Experimental Cell Research, 1985, 159, 388-396.	2.6	184
4	Phylogeny-wide analysis of social amoeba genomes highlights ancient origins for complex intercellular communication. Genome Research, 2011, 21, 1882-1891.	5.5	145
5	Comparative genomics of the social amoebae Dictyostelium discoideum and Dictyostelium purpureum. Genome Biology, 2011, 12, R20.	9.6	141
6	Interactions between adenosine and oscillatory cAMP signaling regulate size and pattern in Dictyostelium. Cell, 1986, 45, 137-144.	28.9	118
7	The prokaryote messenger c-di-GMP triggers stalk cell differentiation in Dictyostelium. Nature, 2012, 488, 680-683.	27.8	103
8	Postaggregative differentiation induction by cyclic AMP in Dictyostelium: Intracellular transduction pathway and requirement for additional stimuli. Developmental Biology, 1986, 118, 52-63.	2.0	95
9	The Evolution of Aggregative Multicellularity and Cellâ€“Cell Communication in the Dictyostelia. Journal of Molecular Biology, 2015, 427, 3722-3733.	4.2	92
10	cAMP signaling in Dictyostelium. Complexity of cAMP synthesis, degradation and detection. Journal of Muscle Research and Cell Motility, 2002, 23, 793-802.	2.0	89
11	The<i>Physarum polycephalum</i>Genome Reveals Extensive Use of Prokaryotic Two-Component and Metazoan-Type Tyrosine Kinase Signaling. Genome Biology and Evolution, 2016, 8, 109-125.	2.5	87
12	Phosphorylation of Chemoattractant Receptors Is Not Essential for Chemotaxis or Termination of G-protein-mediated Responses. Journal of Biological Chemistry, 1997, 272, 27313-27318.	3.4	86
13	Guanylyl Cyclase Activity Associated with Putative Bifunctional Integral Membrane Proteins in Plasmodium falciparum. Journal of Biological Chemistry, 2000, 275, 22147-22156.	3.4	84
14	Regulation of size and pattern in the cellular slime molds. Differentiation, 1986, 33, 1-16.	1.9	82
15	Evolutionary crossroads in developmental biology: Dictyostelium discoideum. Development (Cambridge), 2011, 138, 387-396.	2.5	80
16	Adenylyl Cyclase G, an Osmosensor Controlling Germination of Dictyostelium Spores. Journal of Biological Chemistry, 1996, 271, 23623-23625.	3.4	79
17	Extracellular cAMP is sufficient to restore developmental gene expression and morphogenesis in Dictyostelium cells lacking the aggregation adenylyl cyclase (ACA).. Genes and Development, 1993, 7, 2172-2180.	5.9	76
18	Guanylyl cyclases across the tree of life. Frontiers in Bioscience - Landmark, 2005, 10, 1485.	3.0	68

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19	Evolutionary origin of cAMP-based chemoattraction in the social amoebae. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 6385-6390.	7.1	67
20	The Dictyostelium homologue of mammalian soluble adenylyl cyclase encodes a guanylyl cyclase. EMBO Journal, 2001, 20, 4341-4348.	7.8	64
21	The multicellularity genes of dictyostelid social amoebas. Nature Communications, 2016, 7, 12085.	12.8	63
22	cAMP pulses coordinate morphogenetic movement during fruiting body formation of Dictyostelium minutum. Proceedings of the National Academy of Sciences of the United States of America, 1984, 81, 2122-2126.	7.1	62
23	Multiple Splice Variants Encode a Novel Adenylyl Cyclase of Possible Plastid Origin Expressed in the Sexual Stage of the Malaria Parasite Plasmodium falciparum. Journal of Biological Chemistry, 2003, 278, 22014-22022.	3.4	61
24	cAMP-dependent protein kinase activity is essential for preaggregative gene expression inDictyostelium. FEBS Letters, 1995, 368, 381-384.	2.8	58
25	A Novel Adenylyl Cyclase Detected in Rapidly Developing Mutants of Dictyostelium. Journal of Biological Chemistry, 1998, 273, 30859-30862.	3.4	57
26	Activated cAMP receptors switch encystation into sporulation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7089-7094.	7.1	57
27	Analysis of phenotypic evolution in Dictyostelia highlights developmental plasticity as a likely consequence of colonial multicellularity. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20130976.	2.6	57
28	Encystation: the most prevalent and underinvestigated differentiation pathway of eukaryotes. Microbiology (United Kingdom), 2018, 164, 727-739.	1.8	54
29	Cell cycle phase in Dictyostelium discoideum is correlated with the expression of cyclic AMP production, detection, and degradation. Developmental Biology, 1988, 125, 410-416.	2.0	53
30	Cyclic-AMP binding to the cell surface during development of Dictyostelium discoideum. Differentiation, 1984, 27, 83-87.	1.9	50
31	From Drought Sensing to Developmental Control: Evolution of Cyclic AMP Signaling in Social Amoebas. Molecular Biology and Evolution, 2008, 25, 2109-2118.	8.9	50
32	Fingerprinting of Adenylyl Cyclase Activities during Dictyostelium Development Indicates a Dominant Role for Adenylyl Cyclase B in Terminal Differentiation. Developmental Biology, 1999, 212, 182-190.	2.0	49
33	Dual role of cAMP duringDictyostelium development. Experientia, 1995, 51, 1166-1174.	1.2	48
34	Trypanosoma cruzi adenylyl cyclase is encoded by a complex multigene family. Molecular and Biochemical Parasitology, 1999, 104, 205-217.	1.1	47
35	Adenylyl Cyclase A Expression Is Tip-Specific in Dictyostelium Slugs and Directs StatA Nuclear Translocation and CudA Gene Expression. Developmental Biology, 2001, 234, 151-160.	2.0	45
36	The possible involvement of oscillatory cAMP signaling in multicellular morphogenesis of the cellular slime molds. Developmental Biology, 1984, 105, 470-478.	2.0	44

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37	A STAT-regulated, stress-induced signalling pathway in Dictyostelium. Journal of Cell Science, 2003, 116, 2907-2915.	2.0	42
38	Multiple effects of differentiation-inducing factor on prespore differentiation and cyclic-AMP signal transduction in Dictyostelium. Differentiation, 1986, 33, 24-28.	1.9	40
39	Cytoplasmic acidification facilitates but does not mediate DIF-induced prestalk gene expression in Dictyostelium discoideum. Developmental Biology, 1990, 140, 182-188.	2.0	40
40	Multiple Roots of Fruiting Body Formation in Amoebozoa. Genome Biology and Evolution, 2018, 10, 591-606.	2.5	39
41	Adenylyl Cyclase G Is Activated by an Intramolecular Osmosensor. Molecular Biology of the Cell, 2004, 15, 1479-1486.	2.1	38
42	cAMP production by adenylyl cyclase G induces prespore differentiation in Dictyostelium slugs. Development (Cambridge), 2007, 134, 959-966.	2.5	37
43	High cAMP in spores of Dictyostelium discoideum: association with spore dormancy and inhibition of germination. Microbiology (United Kingdom), 1999, 145, 1883-1890.	1.8	36
44	Temperature-sensitive Gbeta mutants discriminate between G protein-dependent and -independent signaling mediated by serpentine receptors. EMBO Journal, 1998, 17, 5076-5084.	7.8	34
45	Localization of chemoattractant receptors on Dictyostelium discoideum cells during aggregation and down-regulation. Developmental Biology, 1988, 128, 72-77.	2.0	33
46	Lithium respecifiescyclic -AMP-Induced cell-type specific gene expression inDictyostelium. Genesis, 1988, 9, 589-596.	2.1	31
47	Vectors for expression of proteins with single or combinatorial fluorescent protein and tandem affinity purification tags in Dictyostelium. Protein Expression and Purification, 2007, 53, 283-288.	1.3	31
48	Secreted Cyclic Di-GMP Induces Stalk Cell Differentiation in the Eukaryote Dictyostelium discoideum. Journal of Bacteriology, 2016, 198, 27-31.	2.2	31
49	Patterns of cell differentiation in several cellular slime mold species. Developmental Biology, 1985, 111, 51-61.	2.0	30
50	Control of cAMP-induced gene expression by divergent signal transduction pathways. Genesis, 1991, 12, 25-34.	2.1	30
51	Evolutionary reconstruction of pattern formation in 98 Dictyostelium species reveals that cell-type specialization by lateral inhibition is a derived trait. EvoDevo, 2014, 5, 34.	3.2	30
52	The cyclic AMP phosphodiesterase RegA critically regulates encystation in social and pathogenic amoebas. Cellular Signalling, 2014, 26, 453-459.	3.6	30
53	Specificity of adenosine inhibition of cAMP-induced responses in Dictyostelium resembles that of the P site of higher organisms. Developmental Biology, 1986, 117, 245-251.	2.0	29
54	Dictyostelium developmentâ€"socializing through cAMP. Seminars in Cell and Developmental Biology, 1999, 10, 567-576.	5.0	29

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55	Identification of a Novel Type of cGMP Phosphodiesterase That Is Defective in the ChemotacticstmFMutants. Molecular Biology of the Cell, 2002, 13, 3870-3877.	2.1	29
56	Evolution of size and pattern in the social amoebas. BioEssays, 2007, 29, 635-644.	2.5	29
57	Evolution of developmental cyclic adenosine monophosphate signaling in the Dictyostelia from an amoebozoan stress response. Development Growth and Differentiation, 2011, 53, 452-462.	1.5	29
58	Cyclic di-nucleotide signaling enters the eukaryote domain. IUBMB Life, 2013, 65, 897-903.	3.4	29
59	A Conserved Signalling Pathway for Amoebozoan Encystation that was Co-Opted for Multicellular Development. Scientific Reports, 2015, 5, 9644.	3.3	28
60	Diversity and Evolution of Sensor Histidine Kinases in Eukaryotes. Genome Biology and Evolution, 2019, 11, 86-108.	2.5	28
61	Correlations between tip dominance, prestalk/prespore pattern, and CAMP-relay efficiency in slugs of Dictyostelium discoideum. Differentiation, 1985, 30, 7-14.	1.9	27
62	Expression of a family of expansin-like proteins during the development of Dictyostelium discoideum. FEBS Letters, 2003, 546, 416-418.	2.8	27
63	A well supported multi gene phylogeny of 52 dictyostelia. Molecular Phylogenetics and Evolution, 2019, 134, 66-73.	2.7	27
64	The Amoebozoa. Methods in Molecular Biology, 2013, 983, 1-15.	0.9	25
65	Evolution of developmental signalling in Dictyostelid social amoebas. Current Opinion in Genetics and Development, 2016, 39, 29-34.	3.3	25
66	Early Recognition of Prespore Differentiation in Dictyostelium discoideum and its Significance for Models on Pattern Formation. Differentiation, 1982, 22, 1-5.	1.9	24
67	Regulation of Dictyostelium Adenylylcyclases by Morphogen-Induced Modulation of Cytosolic pH or Ca2+ Levels. Developmental Biology, 1995, 168, 179-188.	2.0	24
68	Pharmacological profiling of the Dictyostelium adenylate cyclases ACA, ACB and ACG. Biochemical Journal, 2007, 401, 309-316.	3.7	24
69	Quantitative analysis of the spatial distribution of ultrastructural differentiation markers during development ofDictyostelium discoideum. Wilhelm Roux's Archives of Developmental Biology, 1983, 192, 86-94.	1.4	23
70	Characterization of a cAMP-stimulated cAMP Phosphodiesterase inDictyostelium discoideum. Journal of Biological Chemistry, 2003, 278, 14356-14362.	3.4	23
71	The organisation of fruiting body formation in Dictyostelium minutum. Cell Differentiation, 1983, 12, 287-297.	0.4	22
72	Functional Promiscuity of Gene Regulation by Serpentine Receptors in <i>Dictyostelium discoideum</i>. Molecular and Cellular Biology, 1998, 18, 5744-5749.	2.3	22

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73	Adenylate cyclase A acting on PKA mediates induction of stalk formation by cyclic diguanylate at the <i>Dictyostelium</i> organizer. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 516-521.	7.1	22
74	Evolution of self-organisation in Dictyostelia by adaptation of a non-selective phosphodiesterase and a matrix component for regulated cAMP degradation. Development (Cambridge), 2012, 139, 1336-1345.	2.5	21
75	Evolution of multicellularity in Dictyostelia. International Journal of Developmental Biology, 2019, 63, 359-369.	0.6	21
76	Opposite effects of adenosine on two types of cAMP-induced gene expression inDictyosteliumindicate the involvement of at least two different intracellular pathways for the transduction of cAMP signals. FEBS Letters, 1988, 228, 231-234.	2.8	19
77	The Hybrid Type Polyketide Synthase SteelyA Is Required for cAMP Signalling in Early Dictyostelium Development. PLoS ONE, 2014, 9, e106634.	2.5	19
78	A core phylogeny of Dictyostelia inferred from genomes representative of the eight major and minor taxonomic divisions of the group. BMC Evolutionary Biology, 2016, 16, 251.	3.2	19
79	Cell-type specific RNA-Seq reveals novel roles and regulatory programs for terminally differentiated Dictyostelium cells. BMC Genomics, 2018, 19, 764.	2.8	19
80	cAMP relay during early culmination of Dictyostelium minutum. Differentiation, 1985, 28, 205-208.	1.9	18
81	Extracellular cAMP Depletion Triggers Stalk Gene Expression inDictyostelium: Disparities in Developmental Timing and Dose Dependency Indicate That Prespore Induction and Stalk Repression by cAMP Are Mediated by Separate Signaling Pathways. Developmental Biology, 1996, 177, 152-159.	2.0	18
82	A cyanobacterial light activated adenylyl cyclase partially restores development of a Dictyostelium discoideum, adenylyl cyclase a null mutant. Journal of Biotechnology, 2014, 191, 246-249.	3.8	18
83	A model for pattern formation in Dictyostelium discoideum. Differentiation, 1996, 60, 1-16.	1.9	17
84	Two Distinct Signaling Pathways Mediate DIF Induction of Prestalk Gene Expression inDictyostelium. Experimental Cell Research, 1998, 245, 179-185.	2.6	17
85	Multiple signalling pathways connect chemoattractant receptors and calcium channels in Dictyostelium. Journal of Muscle Research and Cell Motility, 2002, 23, 853-865.	2.0	16
86	Root of Dictyostelia based on 213 universal proteins. Molecular Phylogenetics and Evolution, 2015, 92, 53-62.	2.7	16
87	Selective induction of gene expression and second-messenger accumulation in Dictyostelium discoideum by the partial chemotactic antagonist 8-p-chlorophenylthioadenosine 3',5'-cyclic monophosphate.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 9219-9223.	7.1	15
88	cAMP induces a transient elevation of cGMP levels during early culmination of Dietyostelium minutum. Cell Differentiation, 1985, 16, 29-33.	0.4	14
89	Cyclic AMP relay and cyclic AMP-induced cyclic GMP accumulation during development of<i>Dictyostelium discoideum</i>. FEMS Microbiology Letters, 1986, 34, 85-89.	1.8	14
90	Evolution of Multicellular Complexity in The Dictyostelid Social Amoebas. Genes, 2021, 12, 487.	2.4	14

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91	A sensitive method for assaying acetylcholine synthesis in human and frog skeletal muscle. Journal of Neurochemistry, 1979, 33, 389-392.	3.9	13
92	A set of genes conserved in sequence and expression traces back the establishment of multicellularity in social amoebae. BMC Genomics, 2016, 17, 871.	2.8	13
93	Cyclic AMP induction of Dictyostelium prespore gene expression requires autophagy. Developmental Biology, 2019, 452, 114-126.	2.0	13
94	The proppin Bcas3 and its interactor KinkyA localize to the early phagophore and regulate autophagy. Autophagy, 2021, 17, 640-655.	9.1	13
95	Development of the simple cellular slime mold Dictyostelium minutum. Developmental Biology, 1981, 85, 171-179.	2.0	11
96	Lithium, an inhibitor of cAMP-induced inositol 1,4,5-trisphosphate accumulation in Dictyostelium discoideum, inhibits activation of guanine-nucleotide-binding regulatory proteins, reduces activation of adenylylcyclase, but potentiates activation of guanylyl cyclase by cAMP. FEBS Journal, 1992, 209, 299-304.	0.2	11
97	Light regulation of cyclic-AMP levels in the red macroalga Porphyra leucosticta. Journal of Photochemistry and Photobiology B: Biology, 2001, 64, 69-74.	3.8	11
98	The transcription factor Spores Absent A is a PKA dependent inducer of Dictyostelium sporulation. Scientific Reports, 2018, 8, 6643.	3.3	11
99	From environmental sensing to developmental control: cognitive evolution in dictyostelid social amoebas. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20190756.	4.0	11
100	Phylogeny-wide conservation and change in developmental expression, cell-type specificity and functional domains of the transcriptional regulators of social amoebas. BMC Genomics, 2019, 20, 890.	2.8	10
101	Metabolic pathways for differentiation-inducing factor-1 and their regulation are conserved between closely related Dictyostelium species, but not between distant members of the family. Differentiation, 1995, 58, 95-100.	1.9	9
102	Contrasting activities of the aggregative and late PDSA promoters in Dictyostelium development. Developmental Biology, 2003, 255, 373-382.	2.0	9
103	Loss of the Polyketide Synthase StlB Results in Stalk Cell Overproduction in Polysphondylium violaceum. Genome Biology and Evolution, 2020, 12, 674-683.	2.5	8
104	Two ras genes in Dictyostelium minutum show high sequence homology, but different developmental regulation from Dictyostelium discoideum rasD and rasG genes1The sequence reported in this paper has been deposited in the GenBank data base (accession No. X89037).1. Gene, 1997, 187, 93-97.	2.2	7
105	Functional Dissection of Adenylate Cyclase R, an Inducer of Spore Encapsulation*. Journal of Biological Chemistry, 2010, 285, 41724-41731.	3.4	7
106	Improved annotation with de novo transcriptome assembly in four social amoeba species. BMC Genomics, 2017, 18, 120.	2.8	7
107	Cold climate adaptation is a plausible cause for evolution of multicellular sporulation in Dictyostelia. Scientific Reports, 2020, 10, 8797.	3.3	6
108	Kinetics and nucleotide specificity of a surface cAMP binding site inDictyostelium discoideum, which is not down-regulated by cAMP. FEMS Microbiology Letters, 1991, 82, 9-14.	1.8	5

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109	Abundantly expressed class of noncoding RNAs conserved through the multicellular evolution of dictyostelid social amoebas. Genome Research, 2021, 31, 436-447.	5.5	5
110	Evolution of a novel cell type in Dictyostelia required gene duplication of a cudA-like transcription factor. Current Biology, 2022, 32, 428-437.e4.	3.9	5
111	Effects of deletion of the receptor CrlA on Dictyostelium aggregation and MPBD-mediated responses are strain dependent and not evident in strain Ax2. FEMS Microbiology Letters, 2017, 364, .	1.8	4
112	Glycogen synthase kinase 3 promotes multicellular development over unicellular encystation in encysting Dictyostelia. EvoDevo, 2018, 9, 12.	3.2	4
113	The Social Amoeba Polysphondylium pallidum Loses Encystation and Sporulation, but Can Still Erect Fruiting Bodies in the Absence of Cellulose. Protist, 2014, 165, 569-579.	1.5	3
114	Loss of PIKfyve Causes Transdifferentiation of Dictyostelium Spores Into Basal Disc Cells. Frontiers in Cell and Developmental Biology, 2021, 9, 692473.	3.7	3
115	Interactome and evolutionary conservation of Dictyostelid small GTPases and their direct regulators. Small GTPases, 2022, 13, 239-254.	1.6	3
116	Regulation of size and pattern in the cellular slime molds. Differentiation, 1987, 33, 1-16.	1.9	2
117	Transformation with Vectors Harboring the NEOR Selection Marker Induces Germination-Specific Adenylylcyclase Activity in Dictyostelium Cells. Experimental Cell Research, 1995, 220, 505-508.	2.6	2
118	Four Signals to Shape a Slime Mold. , 1993, , 301-318.		1
119	The Evolution of Morphogenetic Signalling in Social Amoebae. , 2009, , 91-107.		1
120	Gene Regulation by Hormone-like Signals in Dictyostelium. , 1993, , 353-376.		1
121	Novel RNAseq-Informed Cell-type Markers and Their Regulation Alter Paradigms of Dictyostelium Developmental Control. Frontiers in Cell and Developmental Biology, 2022, 10, .	3.7	1
122	Non-metazoan Class III Nucleotidyl Cyclases: Novel Forms and Functions. IUBMB Life, 2004, 56, 527-528.	3.4	0
123	4 Evolution of Signalling and Morphogenesis in the Dictyostelids. , 2011, , 57-71.		0
124	A Pharmacological Approach to Identify Hormone Signaling Pathways Controlling Gene Regulation in Dictyostelium. , 1993, , 87-101.		0
125	The Evolution of Developmental Signalling in Dictyostelia from an Amoebozoan Stress Response. Advances in Marine Genomics, 2015, , 451-467.	1.2	0
126	Resolving Amoebozoan Encystation from Dictyostelium Evo-Devo and Amoebozoan Comparative Genomics. , 2020, , 19-29.		0

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127	CyclicÂdi-GMP Activates Adenylate Cyclase A and Protein Kinase A to Induce Stalk Formation in Dictyostelium. , 2020, , 563-574.		0