Stephen D Roper

List of Publications by Year
in descending order

124 papers	10,028 citations	34076 52 h-index	34964 98 g-index
185 all docs	185 docs citations	185 times ranked	4681 citing authors

#	Article	IF	Citations
1	Chemical and electrical synaptic interactions among taste bud cells. Current Opinion in Physiology, 2021, 20, 118-125.	0.9	10
2	Editorial overview: Taste: from peripheral receptors to perception. Current Opinion in Physiology, 2021, 21, 44-47.	0.9	3
3	â€œTripartite Synapsesâ€• in Taste Buds: A Role for Type I Glial-like Taste Cells. Journal of Neuroscience, 2021, 41, 9860-9871.	1.7	13
4	Encoding Taste: From Receptors to Perception. Handbook of Experimental Pharmacology, 2021, , 53-90.	0.9	5
5	Microphysiology of Taste Buds. , 2020, , 187-210.		5
6	Oral thermosensing by murine trigeminal neurons: modulation by capsaicin, menthol and mustard oil. Journal of Physiology, 2019, 597, 2045-2061.	1.3	33
7	The Role of the Anion in Salt (NaCl) Detection by Mouse Taste Buds. Journal of Neuroscience, 2019, 39, 6224-6232.	1.7	64
8	Recognizing Taste: Coding Patterns Along the Neural Axis in Mammals. Chemical Senses, 2019, 44, 237-247.	1.1	58
9	Mouse Trigeminal Neurons Respond to Kokumi Substances. , 2019, , 171-187.		3
10	Transcriptomes and neurotransmitter profiles of classes of gustatory and somatosensory neurons in the geniculate ganglion. Nature Communications, 2017, 8, 760.	5.8	61
11	Taste buds: cells, signals and synapses. Nature Reviews Neuroscience, 2017, 18, 485-497.	4.9	371
12	Taste: Mammalian Taste Bud Physiology â˜†. , 2017, , .		3
13	The taste of table salt. Pflugers Archiv European Journal of Physiology, 2015, 467, 457-463.	1.3	62
14	Leptin's Effect on Taste Bud Calcium Responses and Transmitter Secretion. Chemical Senses, 2015, 40, 217-222.	1.1	13
15	Breadth of tuning in taste afferent neurons varies with stimulus strength. Nature Communications, 2015, 6, 8171.	5.8	88
16	A permeability barrier surrounds taste buds in lingual epithelia. American Journal of Physiology - Cell Physiology, 2015, 308, C21-C32.	2.1	32
17	Sensory endâ€organs: signal processing in the periphery: a symposium presented at the 2013 Annual Meeting of the Society for Neuroscience, San Diego, CA, USA. Journal of Physiology, 2014, 592, 3383-3385.	1.3	2
18	TRPs in Taste and Chemesthesis. Handbook of Experimental Pharmacology, 2014, 223, 827-871.	0.9	107

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19	Introduction to signal processing in peripheral sensory organs. Seminars in Cell and Developmental Biology, 2013, 24, 1-2.	2.3	2
20	Taste buds as peripheral chemosensory processors. Seminars in Cell and Developmental Biology, 2013, 24, 71-79.	2.3	157
21	Adenosine Enhances Sweet Taste through A2B Receptors in the Taste Bud. Journal of Neuroscience, 2012, 32, 322-330.	1.7	73
22	Gustatory and Olfactory Sensory Transduction. , 2012, , 681-697.		3
23	Infrared Sensory Organs. , 2012, , 699-704.		0
24	Real-time detection of acetylcholine release from the human endocrine pancreas. Nature Protocols, 2012, 7, 1015-1023.	5.5	23
25	Glutamate May Be an Efferent Transmitter That Elicits Inhibition in Mouse Taste Buds. PLoS ONE, 2012, 7, e30662.	1.1	28
26	Acetylcholine is released from taste cells, enhancing taste signalling. Journal of Physiology, 2012, 590, 3009-3017.	1.3	38
27	Alpha cells secrete acetylcholine as a non-neuronal paracrine signal priming beta cell function in humans. Nature Medicine, 2011, 17, 888-892.	15.2	258
28	Knocking Out P2X Receptors Reduces Transmitter Secretion in Taste Buds. Journal of Neuroscience, 2011, 31, 13654-13661.	1.7	52
29	GABA, Its Receptors, and GABAergic Inhibition in Mouse Taste Buds. Journal of Neuroscience, 2011, 31, 5782-5791.	1.7	59
30	Acid Stimulation (Sour Taste) Elicits GABA and Serotonin Release from Mouse Taste Cells. PLoS ONE, 2011, 6, e25471.	1.1	45
31	Controlling what we eat: How circulating peptide hormones influence taste and appetite. Biochemist, 2011, 33, 14-17.	0.2	0
32	Intracellular Ca²⁺ and TRPM5â€mediated membrane depolarization produce ATP secretion from taste receptor cells. Journal of Physiology, 2010, 588, 2343-2350.	1.3	83
33	The cell biology of taste. Journal of Cell Biology, 2010, 191, 429-429.	2.3	4
34	The cell biology of taste. Journal of Cell Biology, 2010, 190, 285-296.	2.3	689
35	Oxytocin Signaling in Mouse Taste Buds. PLoS ONE, 2010, 5, e11980.	1.1	47
36	Taste receptors for umami: the case for multiple receptors. American Journal of Clinical Nutrition, 2009, 90, 738S-742S.	2.2	157

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37	Interaction between the second messengers cAMP and Ca²⁺ in mouse presynaptic taste cells. Journal of Physiology, 2009, 587, 1657-1668.	1.3	36
38	Cellâ€toâ€cell communication in intact taste buds through ATP signalling from pannexin 1 gap junction hemichannels. Journal of Physiology, 2009, 587, 5899-5906.	1.3	102
39	Processing Umami and Other Tastes in Mammalian Taste Buds. Annals of the New York Academy of Sciences, 2009, 1170, 60-65.	1.8	11
40	Parallel processing in mammalian taste buds?. Physiology and Behavior, 2009, 97, 604-608.	1.0	23
41	Autocrine and Paracrine Roles for ATP and Serotonin in Mouse Taste Buds. Journal of Neuroscience, 2009, 29, 13909-13918.	1.7	137
42	Presynaptic (Type III) cells in mouse taste buds sense sour (acid) taste. Journal of Physiology, 2008, 586, 2903-2912.	1.3	188
43	ATP release through connexin hemichannels and gap junction transfer of second messengers propagate Ca ²⁺ signals across the inner ear. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18770-18775.	3.3	297
44	Norepinephrine Is Coreleased with Serotonin in Mouse Taste Buds. Journal of Neuroscience, 2008, 28, 13088-13093.	1.7	69
45	Imaging Cyclic AMP Changes in Pancreatic Islets of Transgenic Reporter Mice. PLoS ONE, 2008, 3, e2127.	1.1	31
46	Breadth of Tuning and Taste Coding in Mammalian Taste Buds. Journal of Neuroscience, 2007, 27, 10840-10848.	1.7	230
47	The role of pannexin 1 hemichannels in ATP release and cell-cell communication in mouse taste buds. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6436-6441.	3.3	492
48	Signal transduction and information processing in mammalian taste buds. Pflugers Archiv European Journal of Physiology, 2007, 454, 759-776.	1.3	251
49	Separate Populations of Receptor Cells and Presynaptic Cells in Mouse Taste Buds. Journal of Neuroscience, 2006, 26, 3971-3980.	1.7	274
50	Faithful Expression of GFP from the PLCÎ²2 Promoter in a Functional Class of Taste Receptor Cells. Chemical Senses, 2006, 31, 213-219.	1.1	48
51	Umami Responses in Mouse Taste Cells Indicate More than One Receptor. Journal of Neuroscience, 2006, 26, 2227-2234.	1.7	130
52	Mouse Taste Buds Release Serotonin in Response to Taste Stimuli. Chemical Senses, 2005, 30, i39-i40.	1.1	17
53	PLCÎ²2-Independent Behavioral Avoidance of Prototypical Bitter-Tasting Ligands. Chemical Senses, 2005, 30, 593-600.	1.1	75
54	Mouse Taste Buds Use Serotonin as a Neurotransmitter. Journal of Neuroscience, 2005, 25, 843-847.	1.7	161

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55	Multiple Pathways for Signaling Glutamate Taste in Rodents. Chemical Senses, 2005, 30, i29-i30.	1.1	7
56	Rat Gustatory Neurons in the Geniculate Ganglion Express Glutamate Receptor Subunits. Chemical Senses, 2004, 29, 463-471.	1.1	17
57	Responses of the Rat Chorda Tympani Nerve to Glutamate-Sucrose Mixtures. Chemical Senses, 2004, 29, 473-482.	1.1	20
58	Acid-Sensing Ion Channel-2 Is Not Necessary for Sour Taste in Mice. Journal of Neuroscience, 2004, 24, 4088-4091.	1.7	72
59	Glutamate Taste: Discrimination between the Tastes of Glutamate Agonists and Monosodium Glutamate in Rats. Chemical Senses, 2004, 29, 291-299.	1.1	24
60	Acid-Sensitive Two-Pore Domain Potassium (K2P) Channels in Mouse Taste Buds. Journal of Neurophysiology, 2004, 92, 1928-1936.	0.9	101
61	Sour Taste Stimuli Evoke Ca 2+ and pH Responses in Mouse Taste Cells. Journal of Physiology, 2003, 547, 475-483.	1.3	117
62	Role of the G-Protein Subunit Î±-Gustducin in Taste Cell Responses to Bitter Stimuli. Journal of Neuroscience, 2003, 23, 9947-9952.	1.7	93
63	Monosodium glutamate (MSG) and taste-mGluR4, a candidate for an umami taste receptor. Forum of Nutrition, 2003, 56, 87-9.	3.7	3
64	Discrimination between the Tastes of Sucrose and Monosodium Glutamate in Rats. Chemical Senses, 2002, 27, 375-382.	1.1	43
65	Individual mouse taste cells respond to multiple chemical stimuli. Journal of Physiology, 2002, 544, 501-509.	1.3	119
66	Individual mouse taste cells respond to multiple chemical stimuli. Journal of Physiology, 2002, 544, 501-509.	1.3	1
67	Glutamate-induced cobalt uptake reveals non-NMDA receptors in developing rat taste buds. NeuroReport, 2001, 12, 1715-1718.	0.6	8
68	Taste Receptor Cells That Discriminate Between Bitter Stimuli. Science, 2001, 291, 1557-1560.	6.0	192
69	Gustatory and Olfactory Sensory Transduction. , 2001, , 815-831.		0
70	Glutamate-induced cobalt uptake reveals non-NMDA receptors in rat taste cells. , 2000, 417, 315-324.		35
71	A metabotropic glutamate receptor variant functions as a taste receptor. Nature Neuroscience, 2000, 3, 113-119.	7.1	548
72	<i>In Situ</i>Ca²⁺Imaging Reveals Neurotransmitter Receptors for Glutamate in Taste Receptor Cells. Journal of Neuroscience, 2000, 20, 7978-7985.	1.7	86

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73	Taste Preference Synergy Between Glutamate Receptor Agonists and Inosine Monophosphate in Rats. Chemical Senses, 2000, 25, 507-515.	1.1	40
74	An Optimized Method for In Situ Hybridization with Signal Amplification That Allows the Detection of Rare mRNAs. Journal of Histochemistry and Cytochemistry, 1999, 47, 431-445.	1.3	181
75	The Taste of Monosodium Glutamate (MSG), L-Aspartic Acid, and N-Methyl-D-aspartate (NMDA) in Rats: Are NMDA Receptors Involved in MSG Taste?. Chemical Senses, 1999, 24, 449-457.	1.1	53
76	Molecular and Physiological Evidence for Glutamate (Umami) Taste Transduction via a G Protein-Coupled Receptora. Annals of the New York Academy of Sciences, 1998, 855, 398-406.	1.8	80
77	Uptake and release of neurotransmitter candidates, [3H]serotonin, [3H]glutamate, and [3H]?-aminobutyric acid, in taste buds of the mudpuppy,Necturus maculosus. Journal of Comparative Neurology, 1998, 392, 199-208.	0.9	41
78	Responses to Glutamate in Rat Taste Cells. Journal of Neurophysiology, 1997, 77, 3048-3059.	0.9	72
79	Serotonin Modulates Voltage-Dependent Calcium Current in<i>Necturus</i>Taste Cells. Journal of Neurophysiology, 1997, 77, 2515-2524.	0.9	47
80	The Taste of Monosodium Glutamate: Membrane Receptors in Taste Buds. Journal of Neuroscience, 1996, 16, 3817-3826.	1.7	248
81	Development of voltage-dependent currents in taste receptor cells. , 1996, 365, 278-288.		22
82	Neuromodulation of Transduction and Signal Processing in the End Organs of Taste. Chemical Senses, 1996, 21, 353-365.	1.1	66
83	Localization of serotonin in taste buds: A comparative study in four vertebrates. Journal of Comparative Neurology, 1995, 353, 364-370.	0.9	104
84	Estimation of the junctional resistance between electrically coupled receptor cells in Necturus taste buds.. Journal of General Physiology, 1995, 106, 705-725.	0.9	27
85	Bidirectional synaptic transmission in Necturus taste buds. Journal of Neuroscience, 1994, 14, 3791-3804.	1.7	46
86	Ca(2+)-dependent Cl- conductance in taste cells from Necturus. Journal of Neurophysiology, 1994, 72, 475-478.	0.9	36
87	Reduction of electrical coupling between Necturus taste receptor cells, a possible role in acid taste. Neuroscience Letters, 1994, 176, 212-216.	1.0	20
88	Merkel-like basal cells inNecturus taste buds contain serotonin. Journal of Comparative Neurology, 1993, 335, 606-613.	0.9	49
89	Electron microscopic immunocytochemistry of glutamate-containing nerve fibers in the taste bud of mudpuppy (Necturus maculosus). Microscopy Research and Technique, 1993, 26, 225-230.	1.2	12
90	Proton currents through amiloride-sensitive Na+ channels in isolated hamster taste cells: Enhancement by vasopressin and cAMP. Neuron, 1993, 10, 931-942.	3.8	151

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91	Identification of electrophysiologically distinct cell subpopulations in Necturus taste buds.. Journal of General Physiology, 1993, 102, 143-170.	0.9	38
92	Proton currents through amiloride-sensitive Na channels in hamster taste cells. Role in acid transduction.. Journal of General Physiology, 1992, 100, 803-824.	0.9	166
93	The microphysiology of peripheral taste organs. Journal of Neuroscience, 1992, 12, 1127-1134.	1.7	102
94	Immunocytochemical survey of putative neurotransmitters in taste buds fromNecturus maculosus. Journal of Comparative Neurology, 1992, 324, 509-521.	0.9	30
95	Immunocytochemistry of gamma-aminobutyric acid, glutamate, serotonin, and histamine inNecturus taste buds. Journal of Comparative Neurology, 1991, 307, 675-682.	0.9	42
96	Ca2+-dependent chloride conductance inNecturus taste cells. Journal of Membrane Biology, 1991, 124, 85-93.	1.0	17
97	Mediation of responses to calcium in taste cells by modulation of a potassium conductance. Science, 1991, 252, 126-128.	6.0	39
98	Chemotransduction in necturus taste buds, a model for taste processing. Neuroscience Research Supplement: the Official Journal of the Japan Neuroscience Society, 1990, 12, S73-S83.	0.0	5
99	Distribution of ion channels on taste cells and its relationship to chemosensory transduction. Journal of Membrane Biology, 1989, 109, 29-39.	1.0	42
100	Calcium Currents in Isolated Taste Receptor Cells of the Mudpuppy. Annals of the New York Academy of Sciences, 1989, 560, 112-115.	1.8	13
101	The Cell Biology of Vertebrate Taste Receptors. Annual Review of Neuroscience, 1989, 12, 329-353.	5.0	193
102	Ultrastructure of mouse vallate taste buds: III. Patterns of synaptic connectivity. Journal of Comparative Neurology, 1988, 270, 1-10.	0.9	118
103	Ultrastructure of taste cells and synapses in the mudpuppyNecturus maculosus. Journal of Comparative Neurology, 1988, 277, 268-280.	0.9	66
104	Evidence for a role of voltage-sensitive apical K+ channels in sour and salt taste transduction. Chemical Senses, 1988, 13, 115-121.	1.1	55
105	Isolation of single taste cells from lingual epithelium. Chemical Senses, 1988, 13, 355-366.	1.1	24
106	Membrane properties of isolated mudpuppy taste cells.. Journal of General Physiology, 1988, 91, 351-371.	0.9	130
107	Generation of the taste cell potential. Chemical Senses, 1987, 12, 217-234.	1.1	25
108	Passive and active membrane properties of mudpuppy taste receptor cells.. Journal of Physiology, 1987, 383, 601-614.	1.3	65

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109	Voltage-Dependent Ionic Currents in Dissociated Mudpuppy Taste Cells. Annals of the New York Academy of Sciences, 1987, 510, 413-416.	1.8	2
110	Taste Cells in the Mudpuppy, Necturus maculosus, Are Electrically Coupled. Annals of the New York Academy of Sciences, 1987, 510, 723-724.	1.8	1
111	Dye-coupling in taste buds in the mudpuppy, Necturus maculosus. Journal of Neuroscience, 1987, 7, 3561-3565.	1.7	47
112	Ultrastructure of apical specializations of taste cells in the mudpuppy,Necturus maculosus. Journal of Comparative Neurology, 1987, 261, 604-615.	0.9	38
113	Ultrastructure of mouse vallate taste buds: II. Cell types and cell lineage. Journal of Comparative Neurology, 1986, 253, 242-252.	0.9	162
114	Ultrastructure of mouse vallate taste buds. I. Taste cells and their associated synapses. Journal of Comparative Neurology, 1985, 235, 48-60.	0.9	178
115	Amiloride does not block taste transduction in the mudpuppy, Necturus maculosus. Chemical Senses, 1985, 10, 341-352.	1.1	57
116	On the two subdivisions and intrinsic synaptic connexions in the submandibular ganglion of the rat.. Journal of Physiology, 1984, 346, 301-320.	1.3	26
117	Accuracy of regeneration of vagal parasympathetic axons. Journal of Comparative Neurology, 1983, 221, 145-153.	0.9	8
118	Regenerative impulses in taste cells. Science, 1983, 220, 1311-1312.	6.0	118
119	Somatic motor axons can innervate autonomic neurones in the frog heart. Journal of Physiology, 1982, 326, 173-188.	1.3	14
120	Disorganised and â€˜excessiveâ€™ reinnervation of frog cardiac ganglia. Nature, 1978, 274, 286-288.	13.7	11
121	An electrophysiological study of chemical and electrical synapses on neurones in the parasympathetic cardiac ganglion of the mudpuppy, Necturus maculosus: evidence for intrinsic ganglionic innervation.. Journal of Physiology, 1976, 254, 427-454.	1.3	48
122	Sprouting of synapses after partial denervation of frog cardiac ganglion. Nature, 1976, 259, 317-319.	13.7	29
123	The membrane effects, and sensitivity to strychnine, of neural inhibition of the Mauthner cell, and its inhibition by glycine and GABA. Journal of Physiology, 1973, 232, 87-111.	1.3	53
124	Analysis of Mauthner cell responses to iontophoretically delivered pulses of GABA, glycine and Lâ€glutamate. Journal of Physiology, 1973, 232, 113-128.	1.3	57