Takumi Misaka

List of Publications by Year
in descending order

124 papers	3,841 citations	126907 33 h-index	155660 55 g-index
124 all docs	124 docs citations	124 times ranked	4001 citing authors

#	Article	IF	Citations
1	Evolution of sweet taste perception in hummingbirds by transformation of the ancestral umami receptor. Science, 2014, 345, 929-933.	12.6	169
2	Characterization of Ligands for Fish Taste Receptors. Journal of Neuroscience, 2007, 27, 5584-5592.	3.6	149
3	Characterization of the Modes of Binding between Human Sweet Taste Receptor and Low-Molecular-Weight Sweet Compounds. PLoS ONE, 2012, 7, e35380.	2.5	139
4	Primary Structure of a Dynamin-related Mouse Mitochondrial GTPase and Its Distribution in Brain, Subcellular Localization, and Effect on Mitochondrial Morphology. Journal of Biological Chemistry, 2002, 277, 15834-15842.	3.4	136
5	Crystal Structure of Glucansucrase from the Dental Caries Pathogen Streptococcus mutans. Journal of Molecular Biology, 2011, 408, 177-186.	4.2	135
6	Umamiâ€“bitter interactions: The suppression of bitterness by umami peptides via human bitter taste receptor. Biochemical and Biophysical Research Communications, 2015, 456, 586-590.	2.1	119
7	Two Distinct Determinants of Ligand Specificity in T1R1/T1R3 (the Umami Taste Receptor). Journal of Biological Chemistry, 2013, 288, 36863-36877.	3.4	101
8	Soyacystatin, a Novel Cysteine Proteinase Inhibitor in Soybean, is Distinct in Protein Structure and Gene Organization from Other Cystatins of Animal and Plant Origin. FEBS Journal, 1996, 240, 609-614.	0.2	93
9	Characterization of the Î²-d-Glucopyranoside Binding Site of the Human Bitter Taste Receptor hTAS2R16*. Journal of Biological Chemistry, 2010, 285, 28373-28378.	3.4	87
10	Evaluation of the bitterness of green tea catechins by a cell-based assay with the human bitter taste receptor hTAS2R39. Biochemical and Biophysical Research Communications, 2011, 405, 620-625.	2.1	87
11	Protective role of the leukotriene B₄receptor BLT2 in murine inflammatory colitis. FASEB Journal, 2010, 24, 4678-4690.	0.5	77
12	Taste Buds Have a Cyclic Nucleotide-activated Channel, CNGgust. Journal of Biological Chemistry, 1997, 272, 22623-22629.	3.4	74
13	Luteolin and Quercetin Affect the Cholesterol Absorption Mediated by Epithelial Cholesterol Transporter Niemannâ€“Pick C1-Like 1 in Caco-2 Cells and Rats. PLoS ONE, 2014, 9, e97901.	2.5	73
14	Taste-modifying sweet protein, neoculin, is received at human T1R3 amino terminal domain. Biochemical and Biophysical Research Communications, 2007, 358, 585-589.	2.1	72
15	Extracellular Production of Neoculin, a Sweet-Tasting Heterodimeric Protein with Taste-Modifying Activity, by Aspergillus oryzae. Applied and Environmental Microbiology, 2006, 72, 3716-3723.	3.1	68
16	Microbial production of sensory-active miraculin. Biochemical and Biophysical Research Communications, 2007, 360, 407-411.	2.1	65
17	Molecular Cloning, Characterization, and Expression of Wheat Cystatins. Bioscience, Biotechnology and Biochemistry, 2001, 65, 22-28.	1.3	58
18	Aquaporin-9 is expressed in a mucus-secreting goblet cell subset in the small intestine. FEBS Letters, 2003, 540, 157-162.	2.8	58

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19	Arachidonic acid can function as a signaling modulator by activating the TRPM5 cation channel in taste receptor cells. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2006, 1761, 1078-1084.	2.4	57
20	Artepillin C, a Major Ingredient of Brazilian Propolis, Induces a Pungent Taste by Activating TRPA1 Channels. PLoS ONE, 2012, 7, e48072.	2.5	56
21	A water channel closely related to rat brain aquaporin 4 is expressed in acid- and pepsinogen-secretory cells of human stomach. FEBS Letters, 1996, 381, 208-212.	2.8	55
22	Crystal Structure of Neoculin: Insights into its Sweetness and Taste-modifying Activity. Journal of Molecular Biology, 2006, 359, 148-158.	4.2	54
23	Alternative splicing of RGS8 gene determines inhibitory function of receptor type-specific Gq signaling. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 10138-10143.	7.1	53
24	Acetic acid activates PKD1L3â€“PKD2L1 channelâ€”A candidate sour taste receptor. Biochemical and Biophysical Research Communications, 2009, 385, 346-350.	2.1	53
25	Human sweet taste receptor mediates acid-induced sweetness of miraculin. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16819-16824.	7.1	51
26	Gliadain, a gibberellin-inducible cysteine proteinase occurring in germinating seeds of wheat, Triticum aestivum L., specifically digests gliadin and is regulated by intrinsic cystatins. FEBS Journal, 2007, 274, 1908-1917.	4.7	50
27	OPA1 expression in the normal rat retina and optic nerve. Journal of Comparative Neurology, 2005, 488, 1-10.	1.6	47
28	Aquaporinâ€1 knockout mice and polycystic kidney disease animals share a common mechanism of cyst formation. FASEB Journal, 2008, 22, 3672-3684.	0.5	47
29	Amiloride reduces the sweet taste intensity by inhibiting the human sweet taste receptor. Biochemical and Biophysical Research Communications, 2010, 397, 220-225.	2.1	46
30	l-Theanine elicits umami taste via the T1R1Â+ÂT1R3 umami taste receptor. Amino Acids, 2014, 46, 1583-1587.	2.7	45
31	Umami taste dysfunction in patients receiving radiotherapy for head and neck cancer. Oral Oncology, 2009, 45, e19-e23.	1.5	44
32	Functional diversity of bitter taste receptor TAS2R16 in primates. Biology Letters, 2012, 8, 652-656.	2.3	44
33	Hypothalamic neuronal circuits regulating hunger-induced taste modification. Nature Communications, 2019, 10, 4560.	12.8	39
34	SatB2-Expressing Neurons in the Parabrachial Nucleus Encode Sweet Taste. Cell Reports, 2019, 27, 1650-1656.e4.	6.4	39
35	Acidâ€induced sweetness of neoculin is ascribed to its pHâ€dependent agonisticâ€antagonistic interaction with human sweet taste receptor. FASEB Journal, 2008, 22, 2323-2330.	0.5	35
36	Early origin of sweet perception in the songbird radiation. Science, 2021, 373, 226-231.	12.6	34

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37	Taste Receptor Cells Express Voltage-Dependent Potassium Channels in a Cell Age-Specific Manner. Chemical Senses, 2006, 31, 739-746.	2.0	33
38	Sweeteners interacting with the transmembrane domain of the human sweet-taste receptor induce sweet-taste synergisms in binary mixtures. Food Chemistry, 2012, 130, 561-568.	8.2	33
39	Effects of coexpression with Homer isoforms on the function of metabotropic glutamate receptor 1Î±. Molecular and Cellular Neurosciences, 2003, 23, 157-168.	2.2	32
40	Interaction between PKD1L3 and PKD2L1 through their transmembrane domains is required for localization of PKD2L1 at taste pores in taste cells of circumvallate and foliate papillae. FASEB Journal, 2010, 24, 4058-4067.	0.5	32
41	Positive/Negative Allosteric Modulation Switching in an Umami Taste Receptor (T1R1/T1R3) by a Natural Flavor Compound, Methional. Scientific Reports, 2018, 8, 11796.	3.3	32
42	Dietary Flavonoids Activate the Constitutive Androstane Receptor (CAR). Journal of Agricultural and Food Chemistry, 2010, 58, 2168-2173.	5.2	31
43	The human bitter taste receptor, hTAS2R16, discriminates slight differences in the configuration of disaccharides. Biochemical and Biophysical Research Communications, 2010, 402, 595-601.	2.1	31
44	Activation of the hTAS2R14 Human Bitter-Taste Receptor by (âˆ')-Epigallocatechin Gallate and (âˆ')-Epicatechin Gallate. Bioscience, Biotechnology and Biochemistry, 2013, 77, 1981-1983.	1.3	31
45	Plant-specific insertions in the soybean aspartic proteinases, soyAP1 and soyAP2, perform different functions of vacuolar targeting. Journal of Plant Physiology, 2006, 163, 856-862.	3.5	29
46	Participation of the peripheral taste system in aging-dependent changes in taste sensitivity. Neuroscience, 2017, 358, 249-260.	2.3	29
47	Neoculin, a taste-modifying protein, is recognized by human sweet taste receptor. NeuroReport, 2006, 17, 1241-1244.	1.2	28
48	Transient receptor potential channel M5 and phospholipaseC-Î²2 colocalizing in zebrafish taste receptor cells. NeuroReport, 2007, 18, 1517-1520.	1.2	28
49	Advanced method for high-throughput expression of mutated eukaryotic membrane proteins in Saccharomyces cerevisiae. Biochemical and Biophysical Research Communications, 2008, 371, 841-845.	2.1	28
50	Wheat cysteine proteases triticain Î±, Î² and Î³ exhibit mutually distinct responses to gibberellin in germinating seeds. Journal of Plant Physiology, 2009, 166, 101-106.	3.5	28
51	Evolution of the primate glutamate taste sensor from a nucleotide sensor. Current Biology, 2021, 31, 4641-4649.e5.	3.9	28
52	TMC4 is a novel chloride channel involved in high-concentration salt taste sensation. Journal of Physiological Sciences, 2021, 71, 23.	2.1	27
53	pH-Dependent Inhibition of the Human Bitter Taste Receptor hTAS2R16 by a Variety of Acidic Substances. Journal of Agricultural and Food Chemistry, 2009, 57, 2508-2514.	5.2	26
54	Molecular mechanisms of the action of miraculin, a taste-modifying protein. Seminars in Cell and Developmental Biology, 2013, 24, 222-225.	5.0	26

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55	Neuron Differentiation-Related Genes Are Up-regulated in the Hypothalamus of Odorant-Inhaling Rats Subjected to Acute Restraint Stress. Journal of Agricultural and Food Chemistry, 2010, 58, 7922-7929.	5.2	24
56	Modulation of Sweet Taste by Umami Compounds via Sweet Taste Receptor Subunit hT1R2. PLoS ONE, 2015, 10, e0124030.	2.5	23
57	Establishment of a New Cell-Based Assay To Measure the Activity of Sweeteners in Fluorescent Food Extracts. Journal of Agricultural and Food Chemistry, 2011, 59, 12131-12138.	5.2	22
58	Signal peptide peptidase and its homologs in <i>Arabidopsis thaliana</i>â€" plant tissueâ€specific expression and distinct subcellular localization. FEBS Journal, 2008, 275, 34-43.	4.7	20
59	Photoactive ligands probing the sweet taste receptor. Design and synthesis of highly potent diazirinyl d-phenylalanine derivatives. Bioorganic and Medicinal Chemistry Letters, 2010, 20, 1081-1083.	2.2	20
60	Bulky high-mannose-type N-glycan blocks the taste-modifying activity of miraculin. Biochimica Et Biophysica Acta - General Subjects, 2010, 1800, 986-992.	2.4	20
61	The dynamin-related mouse mitochondrial GTPase OPA1 alters the structure of the mitochondrial inner membrane when exogenously introduced into COS-7 cells. Neuroscience Research, 2006, 55, 123-133.	1.9	19
62	Identification and Modulation of the Key Amino Acid Residue Responsible for the pH Sensitivity of Neoculin, a Taste-Modifying Protein. PLoS ONE, 2011, 6, e19448.	2.5	19
63	Differential expression of wheat aspartic proteinases, WAP1 and WAP2, in germinating and maturing seeds. Journal of Plant Physiology, 2007, 164, 470-477.	3.5	18
64	Hepatic Gene Expression of the Insulin Signaling Pathway Is Altered by Administration of Persimmon Peel Extract: A DNA Microarray Study Using Type 2 Diabetic Goto-Kakizaki Rats. Journal of Agricultural and Food Chemistry, 2011, 59, 3320-3329.	5.2	18
65	Polyphenols in Alcoholic Beverages Activating Constitutive Androstane Receptor CAR. Bioscience, Biotechnology and Biochemistry, 2011, 75, 1635-1637.	1.3	18
66	Methyl syringate, a low-molecular-weight phenolic ester, as an activator of the chemosensory ion channel TRPA1. Archives of Pharmacal Research, 2012, 35, 2211-2218.	6.3	18
67	Structural insights into the differences among lactisole derivatives in inhibitory mechanisms against the human sweet taste receptor. PLoS ONE, 2019, 14, e0213552.	2.5	18
68	Transgenic labeling of taste receptor cells in model fish under the control of the 5â€²-upstream region of medaka phospholipase C-beta 2 gene. Gene Expression Patterns, 2007, 7, 149-157.	0.8	17
69	Efficacy of Long-Term Feeding of Î±-Glycerophosphocholine for Aging-Related Phenomena in Old Mice. Gerontology, 2020, 66, 275-285.	2.8	16
70	Molecular Cloning and Taste Bud-Specific Expression of a Novel Cyclic Nucleotide-Gated Channel. Annals of the New York Academy of Sciences, 1998, 855, 150-159.	3.8	15
71	Neoculin, a taste-modifying sweet protein, accumulates in ripening fruits of cultivated Curculigo latifolia. Journal of Plant Physiology, 2008, 165, 1964-1969.	3.5	15
72	Fluorescence-based optimization of human bitter taste receptor expression in Saccharomyces cerevisiae. Biochemical and Biophysical Research Communications, 2009, 382, 704-710.	2.1	15

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73	Human Bitter Taste Receptors hTAS2R8 and hTAS2R39 with Differential Functions to Recognize Bitter Peptides. Bioscience, Biotechnology and Biochemistry, 2011, 75, 1188-1190.	1.3	15
74	Nuclear Receptor-Mediated Alleviation of Alcoholic Fatty Liver by Polyphenols Contained in Alcoholic Beverages. PLoS ONE, 2014, 9, e87142.	2.5	15
75	The single pore residue Asp523 in PKD2L1 determines Ca2+ permeation of the PKD1L3/PKD2L1 complex. Biochemical and Biophysical Research Communications, 2011, 404, 946-951.	2.1	14
76	The response of PKD1L3â€Š/â€ŠPKD2L1 to acid stimuli is inhibited by capsaicin and its pungent analogs. FEBS Journal, 2012, 279, 1857-1870.	4.7	14
77	Protective role of the leukotriene B4receptor BLT2 in murine inflammatory colitis. FASEB Journal, 2010, 24, 4678-4690.	0.5	14
78	Suppression of hTAS2R16 Signaling by Umami Substances. International Journal of Molecular Sciences, 2020, 21, 7045.	4.1	12
79	A gustatory cyclic nucleotide-gated channels CNGgust, is expressed in the retina. NeuroReport, 1999, 10, 743-746.	1.2	11
80	Surface Plasmon Resonance Analysis on Interactions of Food Components with a Taste Epithelial Cell Model. Journal of Agricultural and Food Chemistry, 2010, 58, 11870-11875.	5.2	11
81	Rapid Expansion of Phenylthiocarbamide Non-Tasters among Japanese Macaques. PLoS ONE, 2015, 10, e0132016.	2.5	11
82	Variation in ligand responses of the bitter taste receptors TAS2R1 and TAS2R4 among New World monkeys. BMC Evolutionary Biology, 2016, 16, 208.	3.2	11
83	The Use of Mammalian Cultured Cells Loaded with a Fluorescent Dye Shows Specific Membrane Penetration of Undissociated Acetic Acid. Bioscience, Biotechnology and Biochemistry, 2012, 76, 523-529.	1.3	10
84	Soy Peptides Enhance Heterologous Membrane Protein Productivity during the Exponential Growth Phase ofSaccharomyces cerevisiae. Bioscience, Biotechnology and Biochemistry, 2012, 76, 628-631.	1.3	10
85	Expression of the synaptic exocytosisâ€regulating molecule complexin 2 in taste buds and its participation in peripheral taste transduction. Journal of Neurochemistry, 2015, 133, 806-814.	3.9	10
86	Analysis of aging-dependent changes in taste sensitivities of the senescence-accelerated mouse SAMP1. Experimental Gerontology, 2018, 113, 64-73.	2.8	10
87	Biochemical and Genomic Analysis of Neoculin Compared to Monocot Mannose-Binding Lectins. Journal of Agricultural and Food Chemistry, 2008, 56, 5338-5344.	5.2	9
88	Cysteine-to-serine shuffling using a Saccharomyces cerevisiae expression system improves protein secretion: case of a nonglycosylated mutant of miraculin, a taste-modifying protein. Biotechnology Letters, 2011, 33, 103-107.	2.2	9
89	Identification of key neoculin residues responsible for the binding and activation of the sweet taste receptor. Scientific Reports, 2015, 5, 12947.	3.3	9
90	Ibuprofen, a Nonsteroidal Anti-Inflammatory Drug, is a Potent Inhibitor of the Human Sweet Taste Receptor. Chemical Senses, 2020, 45, 667-673.	2.0	9

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91	Bitter taste receptor activation by hop-derived bitter components induces gastrointestinal hormone production in enteroendocrine cells. Biochemical and Biophysical Research Communications, 2020, 533, 704-709.	2.1	9
92	Activation of the Chemosensory Ion Channels TRPA1 and TRPV1 by Hydroalcohol Extract of Kalopanax pictus Leaves. Biomolecules and Therapeutics, 2012, 20, 550-555.	2.4	9
93	The Hepatic Genes for Immunoproteasome Are Upregulated by Refeeding after Fasting in the Rat. Bioscience, Biotechnology and Biochemistry, 2010, 74, 1320-1323.	1.3	8
94	Analysis of the interaction of food components with model lingual epithelial cells: the case of sweet proteins. Flavour and Fragrance Journal, 2011, 26, 274-278.	2.6	8
95	Characterization of the Human Bitter Taste Receptor Response to Sesquiterpene Lactones from Edible Asteraceae Species and Suppression of Bitterness through pH Control. ACS Omega, 2021, 6, 4401-4407.	3.5	8
96	Modulatory Effect of Theaflavins on Apical Sodium-Dependent Bile Acid Transporter (ASBT) Activity. Journal of Agricultural and Food Chemistry, 2021, 69, 9585-9596.	5.2	8
97	Transgenic labeling of higher order neuronal circuits linked to phospholipase Câ€Î²2â€“expressing taste bud cells in medaka fish. Journal of Comparative Neurology, 2013, 521, 1781-1802.	1.6	7
98	Tas2r125 functions as the main receptor for detecting bitterness of tea catechins in the oral cavity of mice. Biochemical and Biophysical Research Communications, 2018, 503, 2301-2305.	2.1	7
99	Recent progress in the use of diaziridine-based sweetener derivatives to elucidate the chemoreception mechanism of the sweet taste receptor. RSC Advances, 2021, 11, 32236-32247.	3.6	7
100	Crystallization and preliminary X-ray analysis of a glucansucrase from the dental caries pathogenStreptococcus mutans. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 1086-1088.	0.7	6
101	Chimeric Yeast G-Protein Î± Subunit Harboring a 37-Residue C-Terminal Gustducin-Specific Sequence Is Functional in<i>Saccharomyces cerevisiae</i>. Bioscience, Biotechnology and Biochemistry, 2012, 76, 512-516.	1.3	6
102	Unilateral nasal obstruction alters sweet taste preference and sweet taste receptors in rat circumvallate papillae. Acta Histochemica, 2019, 121, 135-142.	1.8	6
103	Transmembrane channel-like 4 is involved in pH and temperature-dependent modulation of salty taste. Bioscience, Biotechnology and Biochemistry, 2021, 85, 2295-2299.	1.3	6
104	Ibuprofen inhibits oral NaCl response through transmembrane channel-like 4. Biochemical and Biophysical Research Communications, 2021, 573, 76-79.	2.1	6
105	pH-Dependent Structural Change in Neoculin with Special Reference to Its Taste-Modifying Activity. Bioscience, Biotechnology and Biochemistry, 2009, 73, 2552-2555.	1.3	5
106	Non-Acidic Compounds Induce the Intense Sweet Taste of Neoculin, a Taste-Modifying Protein. Bioscience, Biotechnology and Biochemistry, 2011, 75, 1600-1602.	1.3	5
107	Dietary zinc status reversibly alters both the feeding behaviors of the rats and gene expression patterns in diencephalon. BioFactors, 2012, 38, 203-218.	5.4	5
108	Amino acid residues of bitter taste receptor TAS2R16 that determine sensitivity in primates to Î²-glycosides. Biophysics and Physicobiology, 2016, 13, 165-171.	1.0	5

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109	Novel indole and benzothiophene ring derivatives showing differential modulatory activity against human epithelial sodium channel subunits, ENaC Î² and Î³. Bioscience, Biotechnology and Biochemistry, 2019, 83, 243-250.	1.3	5
110	Analysis of Taste Sensitivities in App Knock-In Mouse Model of Alzheimerâ€™s Disease. Journal of Alzheimer's Disease, 2020, 76, 997-1004.	2.6	5
111	Accumulation of SNAP25 in mouse gustatory and somatosensory cortices in response to food and chemical stimulation. Neuroscience, 2012, 218, 326-334.	2.3	4
112	Differential expression analysis throughout the weaning period in the mouse cerebral cortex. Biochemical and Biophysical Research Communications, 2013, 431, 437-443.	2.1	4
113	Comparison between the timing of the occurrence of taste sensitivity changes and short-term memory decline due to aging in SAMP1 mice. PLoS ONE, 2021, 16, e0248673.	2.5	4
114	Development of a Cultured Cell-Based Human-Taste Evaluation System. Bioscience, Biotechnology and Biochemistry, 2013, 77, 1613-1616.	1.3	3
115	Ulex Europaeus Agglutinin-1 Is a Reliable Taste Bud Marker for In Situ Hybridization Analyses. Journal of Histochemistry and Cytochemistry, 2016, 64, 205-215.	2.5	3
116	Expression of serotonin receptor genes in cranial ganglia. Neuroscience Letters, 2016, 617, 46-51.	2.1	3
117	Asymmetric Synthesis of Photophore-Containing Lactisole Derivatives to Elucidate Sweet Taste Receptors. Molecules, 2020, 25, 2790.	3.8	3
118	Food functionality research as a new national project in special reference to improvement of cognitive and locomotive abilities. Bioscience, Biotechnology and Biochemistry, 2018, 82, 573-583.	1.3	2
119	Change in Taste Preference to Capsaicin and Catechin Due to Aging in Mice. Journal of Nutritional Science and Vitaminology, 2021, 67, 196-200.	0.6	2
120	A large increase of sour taste receptor cells in Skn-1 -deficient mice does not alter the number of their sour taste signal-transmitting gustatory neurons. Neuroscience Letters, 2017, 648, 53-58.	2.1	1
121	Expression of Olfactory-Related Genes in the Olfactory Epithelium of an Alzheimerâ€™s Disease Mouse Model. Journal of Alzheimer's Disease, 2022, , 1-7.	2.6	1
122	3PT189 Functional diversity of bitter taste receptor TAS2R16 by amino acid substitution(The 50th) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.1	0
123	Title is missing!. Kagaku To Seibutsu, 2016, 54, 246-247.	0.0	0
124	De novo transcriptome analysis and comparative expression profiling of genes associated with the taste-modifying protein neoculin in Curculigo latifolia and Curculigo capitulata fruits. BMC Genomics, 2021, 22, 347.	2.8	0