Xinzhong Dong

List of Publications by Year in descending order

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134 papers	13,038 citations	30070 54 h-index	25787 108 g-index
144 all docs	144 docs citations	144 times ranked	10942 citing authors

#	Article	IF	Citations
1	Identification of a mast-cell-specific receptor crucial for pseudo-allergic drug reactions. Nature, 2015, 519, 237-241.	27.8	926
2	Sensory Neuron-Specific GPCR Mrgprs Are Itch Receptors Mediating Chloroquine-Induced Pruritus. Cell, 2009, 139, 1353-1365.	28.9	681
3	A Diverse Family of GPCRs Expressed in Specific Subsets of Nociceptive Sensory Neurons. Cell, 2001, 106, 619-632.	28.9	611
4	TRPA1 is required for histamine-independent, Mas-related G proteinâ€“coupled receptorâ€“mediated itch. Nature Neuroscience, 2011, 14, 595-602.	14.8	523
5	Polyglutamine-Expanded Human Huntingtin Transgenes Induce Degeneration of Drosophila Photoreceptor Neurons. Neuron, 1998, 21, 633-642.	8.1	490
6	A subpopulation of nociceptors specifically linked to itch. Nature Neuroscience, 2013, 16, 174-182.	14.8	477
7	A long noncoding RNA contributes to neuropathic pain by silencing Kcna2 in primary afferent neurons. Nature Neuroscience, 2013, 16, 1024-1031.	14.8	319
8	Different activation signals induce distinct mast cell degranulation strategies. Journal of Clinical Investigation, 2016, 126, 3981-3998.	8.2	285
9	Selective Stimulation of Astrocyte Calcium InÂSituÂDoes Not Affect Neuronal ExcitatoryÂSynaptic Activity. Neuron, 2007, 54, 611-626.	8.1	275
10	Mechanisms of Itch Evoked by Î²-Alanine. Journal of Neuroscience, 2012, 32, 14532-14537.	3.6	275
11	Central Terminal Sensitization of TRPV1 by Descending Serotonergic Facilitation Modulates Chronic Pain. Neuron, 2014, 81, 873-887.	8.1	262
12	Sensory neurons and circuits mediating itch. Nature Reviews Neuroscience, 2014, 15, 19-31.	10.2	259
13	Peripheral and Central Mechanisms of Itch. Neuron, 2018, 98, 482-494.	8.1	250
14	Subchondral bone osteoclasts induce sensory innervation and osteoarthritis pain. Journal of Clinical Investigation, 2019, 129, 1076-1093.	8.2	239
15	A Mast-Cell-Specific Receptor Mediates Neurogenic Inflammation and Pain. Neuron, 2019, 101, 412-420.e3.	8.1	237
16	Atypical expansion in mice of the sensory neuron-specific Mrg G protein-coupled receptor family. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 10043-10048.	7.1	227
17	Coupled Activation of Primary Sensory Neurons Contributes to Chronic Pain. Neuron, 2016, 91, 1085-1096.	8.1	216
18	Activation of Mast-Cell-Expressed Mas-Related G-Protein-Coupled Receptors Drives Non-histaminergic Itch. Immunity, 2019, 50, 1163-1171.e5.	14.3	213

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19	Adult enteric nervous system in health is maintained by a dynamic balance between neuronal apoptosis and neurogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E3709-E3718.	7.1	208
20	House dust mites activate nociceptorâ€“mast cell clusters to drive type 2 skin inflammation. Nature Immunology, 2019, 20, 1435-1443.	14.5	196
21	The Distinct Roles of Two GPCRs, MrgprC11 and PAR2, in Itch and Hyperalgesia. Science Signaling, 2011, 4, ra45.	3.6	195
22	Molecular genetic visualization of a rare subset of unmyelinated sensory neurons that may detect gentle touch. Nature Neuroscience, 2007, 10, 946-948.	14.8	185
23	Pirt, a Phosphoinositide-Binding Protein, Functions as a Regulatory Subunit of TRPV1. Cell, 2008, 133, 475-485.	28.9	185
24	BAM8â€“22 Peptide Produces Itch and Nociceptive Sensations in Humans Independent of Histamine Release. Journal of Neuroscience, 2011, 31, 7563-7567.	3.6	176
25	Conventional and Kilohertz-frequency Spinal Cord Stimulation Produces Intensity- and Frequency-dependent Inhibition of Mechanical Hypersensitivity in a Rat Model of Neuropathic Pain. Anesthesiology, 2013, 119, 422-432.	2.5	160
26	Orphan G protein-coupled receptors MrgA1 and MrgC11 are distinctively activated by RF-amide-related peptides through the GÂq/11 pathway. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 14740-14745.	7.1	152
27	Prostaglandin E2 mediates sensory nerve regulation of bone homeostasis. Nature Communications, 2019, 10, 181.	12.8	152
28	Itch Mechanisms and Circuits. Annual Review of Biophysics, 2014, 43, 331-355.	10.0	148
29	Tmem100 Is a Regulator of TRPA1-TRPV1 Complex and Contributes to Persistent Pain. Neuron, 2015, 85, 833-846.	8.1	143
30	TLR3 deficiency impairs spinal cord synaptic transmission, central sensitization, and pruritus in mice. Journal of Clinical Investigation, 2012, 122, 2195-2207.	8.2	143
31	Leaky Gate Model: Intensity-Dependent Coding of Pain and Itch in the Spinal Cord. Neuron, 2017, 93, 840-853.e5.	8.1	131
32	An Intrinsic Epigenetic Barrier for Functional Axon Regeneration. Neuron, 2017, 94, 337-346.e6.	8.1	130
33	A basophil-neuronal axis promotes itch. Cell, 2021, 184, 422-440.e17.	28.9	130
34	Generation of Multipotent Induced Neural Crest by Direct Reprogramming of Human Postnatal Fibroblasts with a Single Transcription Factor. Cell Stem Cell, 2014, 15, 497-506.	11.1	128
35	Selective keratinocyte stimulation is sufficient to evoke nociception in mice. Pain, 2015, 156, 656-665.	4.2	121
36	MRGPRX4 is a G protein-coupled receptor activated by bile acids that may contribute to cholestatic pruritus. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10525-10530.	7.1	100

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37	Enhanced excitability of MRGPRA3- and MRGPRD-positive nociceptors in a model of inflammatory itch and pain. Brain, 2014, 137, 1039-1050.	7.6	97
38	Mas-Related G Proteinâ€“Coupled Receptors and the Biology of Itch Sensation. Annual Review of Genetics, 2017, 51, 103-121.	7.6	97
39	Redefining the concept of protease-activated receptors: cathepsin S evokes itch via activation of Mrgprs. Nature Communications, 2015, 6, 7864.	12.8	95
40	Functional Coupling with Cardiac Muscle Promotes Maturation of hPSC-Derived Sympathetic Neurons. Cell Stem Cell, 2016, 19, 95-106.	11.1	91
41	A Connective Tissue Mast-Cell-Specific Receptor Detects Bacterial Quorum-Sensing Molecules and Mediates Antibacterial Immunity. Cell Host and Microbe, 2019, 26, 114-122.e8.	11.0	89
42	In vivo characterization of distinct modality-specific subsets of somatosensory neurons using GCaMP. Science Advances, 2016, 2, e1600990.	10.3	87
43	Identification of a bilirubin receptor that may mediate a component of cholestatic itch. ELife, 2019, 8, .	6.0	86
44	Three functionally distinct classes of C-fibre nociceptors in primates. Nature Communications, 2014, 5, 4122.	12.8	85
45	Mechanisms of Compartmentalized Expression of Mrg Class G-Protein-Coupled Sensory Receptors. Journal of Neuroscience, 2008, 28, 125-132.	3.6	84
46	Preso1 dynamically regulates group I metabotropic glutamate receptors. Nature Neuroscience, 2012, 15, 836-844.	14.8	79
47	Clonal VÎ³6 ⁺ VÎ´4 ⁺ T cells promote IL-17â€“mediated immunity against Staphylococcus aureus skin infection. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10917-10926.	7.1	75
48	Distinct and common expression of receptors for inflammatory mediators in vagal nodose versus jugular capsaicin-sensitive/TRPV1-positive neurons detected by low input RNA sequencing. PLoS ONE, 2017, 12, e0185985.	2.5	75
49	Mas-related G-proteinâ€“coupled receptors inhibit pathological pain in mice. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15933-15938.	7.1	74
50	Sensory innervation in porous endplates by Netrin-1 from osteoclasts mediates PGE2-induced spinal hypersensitivity in mice. Nature Communications, 2019, 10, 5643.	12.8	72
51	Development of a Mouse Pain Scale Using Sub-second Behavioral Mapping and Statistical Modeling. Cell Reports, 2019, 28, 1623-1634.e4.	6.4	65
52	Trp channels and itch. Seminars in Immunopathology, 2016, 38, 293-307.	6.1	63
53	Electrical stimulation of low-threshold afferent fibers induces a prolonged synaptic depression in lamina II dorsal horn neurons to high-threshold afferent inputs in mice. Pain, 2015, 156, 1008-1017.	4.2	63
54	Typical antimicrobials induce mast cell degranulation and anaphylactoid reactions via MRGPRX2 and its murine homologue MRGPRB2. European Journal of Immunology, 2017, 47, 1949-1958.	2.9	62

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55	Activation of pruritogenic TGR5, MrgprA3, and MrgprC11 on colon-innervating afferents induces visceral hypersensitivity. JCI Insight, 2019, 4, .	5.0	59
56	The cell biology of acute itch. Journal of Cell Biology, 2016, 213, 155-161.	5.2	58
57	Saikosaponin A inhibits compound 48/80-induced pseudo-allergy via the Mrgprx2 pathway in vitro and in vivo. Biochemical Pharmacology, 2018, 148, 147-154.	4.4	56
58	An Itch To Be Scratched. Neuron, 2010, 68, 334-339.	8.1	55
59	Facilitation of MrgprD by TRPâ€A1 promotes neuropathic pain. FASEB Journal, 2019, 33, 1360-1373.	0.5	55
60	MRGPRX2 is essential for sinomenine hydrochloride induced anaphylactoid reactions. Biochemical Pharmacology, 2017, 146, 214-223.	4.4	54
61	Neural Mechanisms of Itch. Annual Review of Neuroscience, 2020, 43, 187-205.	10.7	54
62	Prurigo Nodularis Is Characterized by Systemic and Cutaneous T Helper 22 Immune Polarization. Journal of Investigative Dermatology, 2021, 141, 2208-2218.e14.	0.7	54
63	Targeting human Mas-related G protein-coupled receptor X1 to inhibit persistent pain. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E1996-E2005.	7.1	53
64	Simultaneous optical and electrical in vivo analysis of the enteric nervous system. Nature Communications, 2016, 7, 11800.	12.8	51
65	Pirt, a TRPV1 Modulator, Is Required for Histamine-Dependent and -Independent Itch. PLoS ONE, 2011, 6, e20559.	2.5	51
66	Activation of cannabinoid CB1 receptor contributes to suppression of spinal nociceptive transmission and inhibition of mechanical hypersensitivity by Aî²-fiber stimulation. Pain, 2016, 157, 2582-2593.	4.2	50
67	Peripheral mechanisms of itch. Neuroscience Bulletin, 2012, 28, 100-110.	2.9	47
68	Mrgprs on vagal sensory neurons contribute to bronchoconstriction and airway hyper-responsiveness. Nature Neuroscience, 2018, 21, 324-328.	14.8	46
69	miR-365 targets Î²-arrestin 2 to reverse morphine tolerance in rats. Scientific Reports, 2016, 6, 38285.	3.3	44
70	Activation of Âμ-Î´ opioid receptor heteromers inhibits neuropathic pain behavior in rodents. Pain, 2020, 161, 842-855.	4.2	43
71	MRGPRX2 Activation Causes Increased Skin Reactivity in Patients with Chronic Spontaneous Urticaria. Journal of Investigative Dermatology, 2021, 141, 678-681.e2.	0.7	43
72	Investigation of Pain Mechanisms by Calcium Imaging Approaches. Neuroscience Bulletin, 2018, 34, 194-199.	2.9	42

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73	A disease mutation reveals a role for NaV1.9 in acute itch. Journal of Clinical Investigation, 2018, 128, 5434-5447.	8.2	42
74	Visualization of Peripheral Neuron Sensitization in a Surgical Mouse Model of Osteoarthritis by In Vivo Calcium Imaging. Arthritis and Rheumatology, 2018, 70, 88-97.	5.6	41
75	Activation of Peripheral Î¼-opioid Receptors by Dermorphin [<scp>d</scp>-Arg2, Lys4] (1â€“4) Amide Leads to Modality-preferred Inhibition of Neuropathic Pain. Anesthesiology, 2016, 124, 706-720.	2.5	40
76	Astrocytes contribute to pain gating in the spinal cord. Science Advances, 2021, 7, eabi6287.	10.3	40
77	Agonists of the Mas-Related Gene (Mrgs) Orphan Receptors as Novel Mediators of Mast Cell-Sensory Nerve Interactions. Journal of Immunology, 2008, 180, 2251-2255.	0.8	39
78	Peripherally Acting Î¼-Opioid Receptor Agonists Attenuate Ongoing Pain-associated Behavior and Spontaneous Neuronal Activity after Nerve Injury in Rats. Anesthesiology, 2018, 128, 1220-1236.	2.5	39
79	Synchronized cluster firing, a distinct form of sensory neuron activation, drives spontaneous pain. Neuron, 2022, 110, 209-220.e6.	8.1	38
80	Electroacupuncture Promotes Central Nervous System-Dependent Release of Mesenchymal Stem Cells. Stem Cells, 2017, 35, 1303-1315.	3.2	37
81	Use of the relative release index for histamine in LAD2 cells to evaluate the potential anaphylactoid effects of drugs. Scientific Reports, 2017, 7, 13714.	3.3	37
82	Parathyroid hormone attenuates osteoarthritis pain by remodeling subchondral bone in mice. ELife, 2021, 10, .	6.0	34
83	Aberrant subchondral osteoblastic metabolism modifies NaV1.8 for osteoarthritis. ELife, 2020, 9, .	6.0	34
84	Pruriception and neuronal coding in nociceptor subtypes in human and nonhuman primates. ELife, 2021, 10, .	6.0	32
85	Neuronal FcÎ³RI mediates acute and chronic joint pain. Journal of Clinical Investigation, 2019, 129, 3754-3769.	8.2	30
86	A group of cationic amphiphilic drugs activates MRGPRX2 and induces scratching behavior in mice. Journal of Allergy and Clinical Immunology, 2021, 148, 506-522.e8.	2.9	29
87	Transcriptomic analysis of atopic dermatitis in African Americans is characterized by Th2/Th17-centered cutaneous immune activation. Scientific Reports, 2021, 11, 11175.	3.3	28
88	Itch: Cells, Molecules, and Circuits. ACS Chemical Neuroscience, 2011, 2, 17-25.	3.5	27
89	A Mast Cellâ€“Specific Receptor Is Critical for Granuloma Induced by Intrathecal Morphine Infusion. Journal of Immunology, 2019, 203, 1701-1714.	0.8	26
90	Acute activation of bronchopulmonary vagal nociceptors by type I interferons. Journal of Physiology, 2020, 598, 5541-5554.	2.9	24

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91	Cholestatic pruritus: Emerging mechanisms and therapeutics. Journal of the American Academy of Dermatology, 2019, 81, 1371-1378.	1.2	23
92	Sphingosineâ€1â€phosphate activates mouse vagal airway afferent Câ€fibres via S1PR3 receptors. Journal of Physiology, 2019, 597, 2007-2019.	2.9	23
93	Nociceptorâ€“Mast Cell Sensory Clusters as Regulators of Skin Homeostasis. Trends in Neurosciences, 2020, 43, 130-132.	8.6	22
94	Calcium imaging in population of dorsal root ganglion neurons unravels novel mechanisms of visceral pain sensitization and referred somatic hypersensitivity. Pain, 2021, 162, 1068-1081.	4.2	22
95	Cluster Analysis of Circulating Plasma Biomarkers in Prurigo Nodularis Reveals a Distinct Systemic Inflammatory Signature in African Americans. Journal of Investigative Dermatology, 2022, 142, 1300-1308.e3.	0.7	21
96	FAM19A1, a brainâ€enriched and metabolically responsive neurokine, regulates food intake patterns and mouse behaviors. FASEB Journal, 2019, 33, 14734-14747.	0.5	20
97	Diacylglycerol kinase Î¶ promotes allergic airway inflammation and airway hyperresponsiveness through distinct mechanisms. Science Signaling, 2019, 12, .	3.6	20
98	Discovery of Benzamidine- and 1-Aminoisoquinoline-Based Human MAS-Related G-Protein-Coupled Receptor X1 (MRGPRX1) Agonists. Journal of Medicinal Chemistry, 2019, 62, 8631-8641.	6.4	19
99	Mas-Related G Protein-Coupled Receptors Offer Potential New Targets for Pain Therapy. Advances in Experimental Medicine and Biology, 2016, 904, 87-103.	1.6	18
100	Pirt Contributes to Uterine Contraction-Induced Pain in Mice. Molecular Pain, 2015, 11, s12990-015-0054.	2.1	17
101	Matrine inhibits itching by lowering the activity of calcium channel. Scientific Reports, 2018, 8, 11328.	3.3	17
102	STIM1 thermosensitivity defines the optimal preference temperature for warm sensation in mice. Cell Research, 2019, 29, 95-109.	12.0	17
103	Development and Evaluation of Small Peptidomimetic Ligands to Protease-Activated Receptor-2 (PAR2) through the Use of Lipid Tethering. PLoS ONE, 2014, 9, e99140.	2.5	16
104	Oligomerization of MrgC11 and Î¼-opioid receptors in sensory neurons enhances morphine analgesia. Science Signaling, 2018, 11, .	3.6	16
105	MrgprX1 mediates neuronal excitability and itch through tetrodotoxin-resistant sodium channels. Itch (Philadelphia, Pa), 2019, 4, e28-e28.	0.2	16
106	Role of P2X3 receptors in scratching behavior in mouse models. Journal of Allergy and Clinical Immunology, 2019, 143, 1252-1254.e8.	2.9	15
107	Supporting itch: a new role for astrocytes in chronic itch. Nature Medicine, 2015, 21, 841-842.	30.7	14
108	Development and application of a high-content virion display human GPCR array. Nature Communications, 2019, 10, 1997.	12.8	13

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109	A hypomorphic PIGA gene mutation causes severe defects in neuron development and susceptibility to complement-mediated toxicity in a human iPSC model. PLoS ONE, 2017, 12, e0174074.	2.5	13
110	Miswiring of Merkel cell and pruriceptive C fiber drives the itch-scratch cycle. Science Translational Medicine, 2022, 14, .	12.4	13
111	Discovery and Characterization of 2â€(Cyclopropanesulfonamido)â€Nâ€(2â€ethoxyphenyl)benzamide, ML382: a Potent and Selective Positive Allosteric Modulator of MrgX1. ChemMedChem, 2015, 10, 57-61.	3.2	11
112	Voltage-gated potassium channels involved in regulation of physiological function in MrgprA3-specific itch neurons. Brain Research, 2016, 1636, 161-171.	2.2	11
113	Adjacent intact nociceptive neurons drive the acute outburst of pain following peripheral axotomy. Scientific Reports, 2019, 9, 7651.	3.3	11
114	The odorant receptor OR2W3 on airway smooth muscle evokes bronchodilation via a cooperative chemosensory tradeoff between TMEM16A and CFTR. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 28485-28495.	7.1	11
115	Neuropathic Itch. Cells, 2020, 9, 2263.	4.1	10
116	Sensory neuronâ€“expressed TRPC3 mediates acute and chronic itch. Pain, 2023, 164, 98-110.	4.2	10
117	Peripheral mechanisms of chronic pain. Medical Review, 2022, 2, 251-270.	1.2	10
118	Activation of MrgprA3 and MrgprC11 on Bladder-Innervating Afferents Induces Peripheral and Central Hypersensitivity to Bladder Distension. Journal of Neuroscience, 2021, 41, 3900-3916.	3.6	9
119	Role of peripheral sensory neuron mu-opioid receptors in nociceptive, inflammatory, and neuropathic pain. Regional Anesthesia and Pain Medicine, 2020, 45, 907-916.	2.3	9
120	Investigating the role of MRGPRC11 and capsaicin-sensitive afferent nerves in the anti-influenza effects exerted by SLIGRL-amide in murine airways. Respiratory Research, 2016, 17, 62.	3.6	7
121	Melanotan II causes hypothermia in mice by activation of mast cells and stimulation of histamine 1 receptors. American Journal of Physiology - Endocrinology and Metabolism, 2018, 315, E357-E366.	3.5	7
122	Calcium imaging approaches in investigation of pain mechanism in the spinal cord. Experimental Neurology, 2019, 317, 129-132.	4.1	7
123	Effects of ginger constituent 6â€shogaol on gastroesophageal vagal afferent Câ€fibers. Neurogastroenterology and Motility, 2019, 31, e13585.	3.0	7
124	Pirt deficiency has subtle female-specific effects on energy and glucose metabolism in mice. Molecular Metabolism, 2019, 23, 75-81.	6.5	6
125	Peptidomimetics of Arg-Phe-NH2 as small molecule agonists of Mas-related gene C (MrgC) receptors. Bioorganic and Medicinal Chemistry, 2014, 22, 5831-5837.	3.0	5
126	Secondary (iso)BAs cooperate with endogenous ligands to activate FXR under physiological and pathological conditions. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2021, 1867, 166153.	3.8	5

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127	A Pungent and Painful Toxin. Cell, 2019, 178, 1279-1281.	28.9	4
128	Population Coding of Capsaicin Concentration by Sensory Neurons Revealed Using Ca2+ Imaging of Dorsal Root Ganglia Explants from Adult pirt-GCaMP3 Mouse. Cellular Physiology and Biochemistry, 2021, 55, 428-448.	1.6	4
129	Biliverdin reductase bridges focal adhesion kinase to Src to modulate synaptic signaling. Science Signaling, 2022, 15, eabh3066.	3.6	4
130	Spicy Immunity: Pain to Gain. Immunity, 2019, 51, 426-428.	14.3	3
131	Scratching the surface of itch receptors. Trends in Pharmacological Sciences, 2022, 43, 168-170.	8.7	3
132	Role of primary sensory neurone cannabinoid type-1 receptors in pain and the analgesic effects of the peripherally acting agonist CB-13 in mice. British Journal of Anaesthesia, 2021, , .	3.4	2
133	Synthesis and Biological Characterization of a Series of 2-Sulfonamidebenzamides as Allosteric Modulators of MrgX1. ACS Medicinal Chemistry Letters, 2022, 13, 841-847.	2.8	1
134	Transcription Factor MAFA Regulates Mechanical Sensation by Modulating Piezo2 Expression. Neuroscience Bulletin, 2022, , .	2.9	1