Atsu Aiba

List of Publications by Year
in descending order

107 papers	7,970 citations	66343 42 h-index	49909 87 g-index
111 all docs	111 docs citations	111 times ranked	8260 citing authors

#	Article	IF	Citations
1	Deficient cerebellar long-term depression and impaired motor learning in mGluR1 mutant mice. Cell, 1994, 79, 377-388.	28.9	855
2	Reduced hippocampal long-term potentiation and context-specific deficit in associative learning in mGluR1 mutant mice. Cell, 1994, 79, 365-375.	28.9	595
3	Presynaptic Inhibition Caused by Retrograde Signal from Metabotropic Glutamate to Cannabinoid Receptors. Neuron, 2001, 31, 463-475.	8.1	496
4	Impaired synapse elimination during cerebellar development in PKCÎ³ mutant mice. Cell, 1995, 83, 1223-1231.	28.9	426
5	mGluR1 in Cerebellar Purkinje Cells Essential for Long-Term Depression, Synapse Elimination, and Motor Coordination. Science, 2000, 288, 1832-1835.	12.6	396
6	K-Ras is essential for the development of the mouse embryo. Oncogene, 1997, 15, 1151-1159.	5.9	315
7	FSP27 contributes to efficient energy storage in murine white adipocytes by promoting the formation of unilocular lipid droplets. Journal of Clinical Investigation, 2008, 118, 2808-21.	8.2	310
8	Rac1 is required for the formation of three germ layers during gastrulation. Oncogene, 1998, 17, 3427-3433.	5.9	301
9	Persistent Multiple Climbing Fiber Innervationof Cerebellar Purkinje Cellsin Mice Lacking mGluR1. Neuron, 1997, 18, 71-79.	8.1	288
10	Synaptically Driven Endocannabinoid Release Requires Ca2+-Assisted Metabotropic Glutamate Receptor Subtype 1 to Phospholipase C Â4 Signaling Cascade in the Cerebellum. Journal of Neuroscience, 2005, 25, 6826-6835.	3.6	223
11	Signaling complex formation of phospholipase CÎ²4 with metabotropic glutamate receptor type 1Î± and 1,4,5-trisphosphate receptor at the perisynapse and endoplasmic reticulum in the mouse brain. European Journal of Neuroscience, 2004, 20, 2929-2944.	2.6	156
12	Roles of Glutamate Receptor Î´2 Subunit (GluRÎ´2) and Metabotropic Glutamate Receptor Subtype 1 (mGluR1) in Climbing Fiber Synapse Elimination during Postnatal Cerebellar Development. Journal of Neuroscience, 2001, 21, 9701-9712.	3.6	152
13	Pioglitazone improves the phenotype and molecular defects of a targeted Pkd1 mutant. Human Molecular Genetics, 2002, 11, 1731-1742.	2.9	139
14	Targeted deletion of the H-ras gene decreases tumor formation in mouse skin carcinogenesis. Oncogene, 2000, 19, 2951-2956.	5.9	120
15	Sequential Arrival and Graded Secretion of Sema3F by Olfactory Neuron Axons Specify Map Topography at the Bulb. Cell, 2010, 141, 1056-1067.	28.9	120
16	Retrograde semaphorin signaling regulates synapse elimination in the developing mouse brain. Science, 2014, 344, 1020-1023.	12.6	115
17	Regulation of Long-Term Potentiation by H-Ras through NMDA Receptor Phosphorylation. Journal of Neuroscience, 2000, 20, 2504-2511.	3.6	107
18	Crucial role of the small GTPase Rac1 in insulinâ€stimulated translocation of glucose transporter 4 to the mouse skeletal muscle sarcolemma. FASEB Journal, 2010, 24, 2254-2261.	0.5	103

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19	Dynamic distribution of muscle-specific calpain in mice has a key role in physical-stress adaptation and is impaired in muscular dystrophy. Journal of Clinical Investigation, 2010, 120, 2672-2683.	8.2	85
20	Ras-related C3 botulinum toxin substrate 1 (RAC1) regulates glucose-stimulated insulin secretion via modulation of F-actin. Diabetologia, 2013, 56, 1088-1097.	6.3	82
21	Selective Activation of mTORC1 Signaling Recapitulates Microcephaly, Tuberous Sclerosis, and Neurodegenerative Diseases. Cell Reports, 2014, 7, 1626-1639.	6.4	80
22	Glutamate Receptor Î´2 Is Essential for Input Pathway-Dependent Regulation of Synaptic AMPAR Contents in Cerebellar Purkinje Cells. Journal of Neuroscience, 2011, 31, 3362-3374.	3.6	79
23	In vivo imaging visualizes discoid platelet aggregations without endothelium disruption and implicates contribution of inflammatory cytokine and integrin signaling. Blood, 2012, 119, e45-e56.	1.4	71
24	The Synaptic Targeting of mGluR1 by Its Carboxyl-Terminal Domain Is Crucial for Cerebellar Function. Journal of Neuroscience, 2014, 34, 2702-2712.	3.6	71
25	mGluR1 in cerebellar Purkinje cells is required for normal association of temporally contiguous stimuli in classical conditioning. European Journal of Neuroscience, 2002, 16, 2416-2424.	2.6	70
26	Territories of heterologous inputs onto Purkinje cell dendrites are segregated by mGluR1-dependent parallel fiber synapse elimination. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2282-2287.	7.1	66
27	Identification and sequence analysis of Escherichia coli purE and purK genes encoding 5'-phosphoribosyl-5-amino-4-imidazole carboxylase for de novo purine biosynthesis. Journal of Bacteriology, 1989, 171, 198-204.	2.2	65
28	Subcellular and subsynaptic localization of group I metabotropic glutamate receptors in the monkey subthalamic nucleus. Journal of Comparative Neurology, 2004, 474, 589-602.	1.6	65
29	Metabotropic glutamate receptor subtype-1 is essential for in vivo growth of melanoma. Oncogene, 2008, 27, 7162-7170.	5.9	65
30	Rac1 in cortical projection neurons is selectively required for midline crossing of commissural axonal formation. European Journal of Neuroscience, 2008, 28, 257-267.	2.6	65
31	Disruption of protein kinase Ceta results in impairment of wound healing and enhancement of tumor formation in mouse skin carcinogenesis. Cancer Research, 2003, 63, 2404-8.	0.9	65
32	A gene-targeted mouse model for chorea-acanthocytosis. Journal of Neurochemistry, 2005, 92, 759-766.	3.9	55
33	Rac1-Mediated Activation of Mineralocorticoid Receptor in Pressure Overloadâ€“Induced Cardiac Injury. Hypertension, 2016, 67, 99-106.	2.7	54
34	Protection Against Insulin Resistance by Apolipoprotein M/Sphingosine-1-Phosphate. Diabetes, 2020, 69, 867-881.	0.6	54
35	Suppression of a Neocortical Potassium Channel Activity by Intracellular Amyloid-Â and Its Rescue with Homer1a. Journal of Neuroscience, 2011, 31, 11100-11109.	3.6	53
36	Maintenance of stereocilia and apical junctional complexes by Cdc42 in cochlear hair cells. Journal of Cell Science, 2014, 127, 2040-52.	2.0	53

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37	The M-Ras-RA-GEF-2-Rap1 Pathway Mediates Tumor Necrosis Factor-Î±â€"dependent Regulation of Integrin Activation in Splenocytes. Molecular Biology of the Cell, 2007, 18, 2949-2959.	2.1	52
38	Essential mesenchymal role of small GTPase Rac1 in interdigital programmed cell death during limb development. Developmental Biology, 2009, 335, 396-406.	2.0	48
39	Apolipoprotein M Protects Lipopolysaccharide-Treated Mice from Death and Organ Injury. Thrombosis and Haemostasis, 2018, 118, 1021-1035.	3.4	48
40	Requirement of the immediate early gene vesl-1S/homer-1a for fear memory formation. Molecular Brain, 2009, 2, 7.	2.6	46
41	A Crucial Role for CDC42 in Senescence-Associated Inflammation and Atherosclerosis. PLoS ONE, 2014, 9, e102186.	2.5	46
42	Dopamine 02 receptor plays a critical role in cell proliferation and proopiomelanocortin expression in the pituitary. Genes To Cells, 1996, 1, 253-268.	1.2	45
43	Dephosphorylated parafibromin is a transcriptional coactivator of the Wnt/Hedgehog/Notch pathways. Nature Communications, 2016, 7, 12887.	12.8	45
44	Functional coupling of the metabotropic glutamate receptor, Ins<i>P</i>₃ receptor and Lâ€type Ca²⁺ channel in mouse CA1 pyramidal cells. Journal of Physiology, 2012, 590, 3019-3034.	2.9	44
45	Setd1a Insufficiency in Mice Attenuates Excitatory Synaptic Function and Recapitulates Schizophrenia-Related Behavioral Abnormalities. Cell Reports, 2020, 32, 108126.	6.4	44
46	Evidence against a role for metabotropic glutamate receptors in mossy fiber LTP: the use of mutant mice and pharmacological antagonists. Neuropharmacology, 1995, 34, 1567-1572.	4.1	43
47	Farnesylation of Retinal Transducin Underlies Its Translocation during Light Adaptation. Neuron, 2005, 47, 529-539.	8.1	43
48	Cdc42 is required for chondrogenesis and interdigital programmed cell death during limb development. Mechanisms of Development, 2012, 129, 38-50.	1.7	43
49	Efficient generation of Knock-in/Knock-out marmoset embryo via CRISPR/Cas9 gene editing. Scientific Reports, 2019, 9, 12719.	3.3	42
50	Extracellular Calcium Controls the Dynamic Range of Neuronal Metabotropic Glutamate Receptor Responses. Molecular and Cellular Neurosciences, 2002, 20, 56-68.	2.2	40
51	Dorsal telencephalonâ€specific <i>RAâ€GEFâ€1</i> knockout mice develop heterotopic cortical mass and commissural fiber defect. European Journal of Neuroscience, 2009, 29, 1994-2008.	2.6	38
52	Loss of adaptability of horizontal optokinetic response eye movements in mGluR1 knockout mice. Neuroscience Research, 2002, 42, 141-145.	1.9	35
53	Semaphorin 3F Confines Ventral Tangential Migration of Lateral Olfactory Tract Neurons onto the Telencephalon Surface. Journal of Neuroscience, 2008, 28, 4414-4422.	3.6	35
54	Metabotropic glutamate receptor subtype-1 is essential for motor coordination in the adult cerebellum. Neuroscience Research, 2007, 57, 538-543.	1.9	34

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55	Localization of Phospholipase CÎ² Isozymes in the Mouse Cerebellum. Biochemical and Biophysical Research Communications, 1999, 265, 473-478.	2.1	31
56	The Metabotropic Glutamate Receptor Subtype 1 Mediates Experience-Dependent Maintenance of Mature Synaptic Connectivity in the Visual Thalamus. Neuron, 2016, 91, 1097-1109.	8.1	30
57	Critical role of Ror2 receptor tyrosine kinase in regulating cell cycle progression of reactive astrocytes following brain injury. Glia, 2017, 65, 182-197.	4.9	30
58	Comprehensive analysis of a novel mouse model of the 22q11.2 deletion syndrome: a model with the most common 3.0-Mb deletion at the human 22q11.2 locus. Translational Psychiatry, 2020, 10, 35.	4.8	30
59	Odor-Induced Persistent Discharge of Mitral Cells in the Mouse Olfactory Bulb. Journal of Neurophysiology, 2009, 101, 1890-1900.	1.8	29
60	A possible aid in targeted insertion of large DNA elements by CRISPR/Cas in mouse zygotes. Genesis, 2016, 54, 65-77.	1.6	29
61	Comprehensive behavioral phenotyping of a new Semaphorin 3ÂF mutant mouse. Molecular Brain, 2016, 9, 15.	2.6	28
62	A Novel Rac1-GSPT1 Signaling Pathway Controls Astrogliosis Following Central Nervous System Injury. Journal of Biological Chemistry, 2017, 292, 1240-1250.	3.4	28
63	G protein-independent neuromodulatory action of adenosine on metabotropic glutamate signalling in mouse cerebellar Purkinje cells. Journal of Physiology, 2007, 581, 693-708.	2.9	27
64	Novel role of Rac-Mid1 signaling in medial cerebellar development. Development (Cambridge), 2017, 144, 1863-1875.	2.5	27
65	A critical role of the small <scp>GTP</scp>ase Rac1 in Akt2â€mediated <scp>GLUT</scp>4 translocation in mouse skeletal muscle. FEBS Journal, 2014, 281, 1493-1504.	4.7	26
66	Autophagy Is Required for Maturation of Surfactant-Containing Lamellar Bodies in the Lung and Swim Bladder. Cell Reports, 2020, 33, 108477.	6.4	25
67	Defective vascular morphogenesis and mid-gestation embryonic death in mice lacking RA-GEF-1. Biochemical and Biophysical Research Communications, 2007, 363, 106-112.	2.1	24
68	Cdc42 Is Critical for Cartilage Development During Endochondral Ossification. Endocrinology, 2015, 156, 314-322.	2.8	24
69	Role of the guanine nucleotide exchange factor in Akt2-mediated plasma membrane translocation of GLUT4 in insulin-stimulated skeletal muscle. Cellular Signalling, 2014, 26, 2460-2469.	3.6	23
70	Role for RalA downstream of Rac1 in skeletal muscle insulin signalling. Biochemical Journal, 2015, 469, 445-454.	3.7	22
71	The anatomical pathway from the mesodiencephalic junction to the inferior olive relays perioral sensory signals to the cerebellum in the mouse. Journal of Physiology, 2018, 596, 3775-3791.	2.9	22
72	Deletion of Rac1GTPase in the Myeloid Lineage Protects against Inflammation-Mediated Kidney Injury in Mice. PLoS ONE, 2016, 11, e0150886.	2.5	21

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73	Conditional mutant mice using tetracycline-controlled gene expression system in the brain. Neuroscience Research, 2007, 58, 113-117.	1.9	20
74	Temporal requirement of dystroglycan glycosylation during brain development and rescue of severe cortical dysplasia via gene delivery in the fetal stage. Human Molecular Genetics, 2018, 27, 1174-1185.	2.9	20
75	Identification of GLUT12/SLC2A12 as a urate transporter that regulates the blood urate level in hyperuricemia model mice. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18175-18177.	7.1	20
76	Generation of Cloned Mice from Adult Neurons by Direct Nuclear Transfer1. Biology of Reproduction, 2015, 92, 81.	2.7	19
77	mGluR1 signaling in cerebellar Purkinje cells: Subcellular organization and involvement in cerebellar function and disease. Neuropharmacology, 2021, 194, 108629.	4.1	16
78	Hyperactivation of mTORC1 disrupts cellular homeostasis in cerebellar Purkinje cells. Scientific Reports, 2019, 9, 2799.	3.3	15
79	Guidepost neurons for the lateral olfactory tract: Expression of metabotropic glutamate receptor 1 and innervation by glutamatergic olfactory bulb axons. Developmental Neurobiology, 2012, 72, 1559-1576.	3.0	14
80	The glutamate receptor <scp>G</scp>lu<scp>N</scp>2 subunit regulates synaptic trafficking of <scp>AMPA</scp> receptors in the neonatal mouse brain. European Journal of Neuroscience, 2014, 40, 3136-3146.	2.6	14
81	Hyperactive mTOR induces neuroendocrine differentiation in prostate cancer cell with concurrent upâ€regulation of IRF1. Prostate, 2017, 77, 1489-1498.	2.3	14
82	Chromosome 22q11.2 deletion causes PERK-dependent vulnerability in dopaminergic neurons. EBioMedicine, 2021, 63, 103138.	6.1	14
83	LAMP5 in presynaptic inhibitory terminals in the hindbrain and spinal cord: a role in startle response and auditory processing. Molecular Brain, 2019, 12, 20.	2.6	13
84	Receptor Knock-Out and Knock-In Strategies. , 2004, 259, 379-390.		12
85	Role of neuropilinâ€2 in the ipsilateral growth of midbrain dopaminergic axons. European Journal of Neuroscience, 2013, 37, 1573-1583.	2.6	12
86	mGluR1 in cerebellar Purkinje cells is essential for the formation but not expression of associative eyeblink memory. Scientific Reports, 2019, 9, 7353.	3.3	10
87	Cdc42 is crucial for facial and palatal formation during craniofacial development. Bone Reports, 2016, 5, 1-6.	0.4	9
88	Development of the somatosensory cortex, the cerebellum, and the main olfactory system in Semaphorin 3F knockout mice. Neuroscience Research, 2010, 66, 321-329.	1.9	8
89	The metabotropic glutamate receptor subtype 1 regulates development and maintenance of lemniscal synaptic connectivity in the somatosensory thalamus. PLoS ONE, 2019, 14, e0226820.	2.5	8
90	New Features on the Expression and Trafficking of mGluR1 Splice Variants Exposed by Two Novel Mutant Mouse Lines. Frontiers in Molecular Neuroscience, 2018, 11, 439.	2.9	7

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91	Mouse liaison for integrative brain research. Neuroscience Research, 2007, 58, 103-104.	1.9	6
92	Rho GTPase protein Cdc42 is critical for postnatal cartilage development. Biochemical and Biophysical Research Communications, 2016, 470, 813-817.	2.1	6
93	mGlu1 Receptors Monopolize the Synaptic Control of Cerebellar Purkinje Cells by Epigenetically Down-Regulating mGlu5 Receptors. Scientific Reports, 2018, 8, 13361.	3.3	6
94	Rac-Dependent Signaling from Keratinocytes Promotes Differentiation of Intradermal White Adipocytes. Journal of Investigative Dermatology, 2020, 140, 75-84.e6.	0.7	6
95	Two novel mouse models mimicking minor deletions in 22q11.2 deletion syndrome revealed the contribution of each deleted region to psychiatric disorders. Molecular Brain, 2021, 14, 68.	2.6	6
96	Generation of RGS8 null mutant mice by Cre/loxP system. Kobe Journal of Medical Sciences, 2008, 53, 275-81.	0.2	6
97	Oocyteâ€activating capacity of fresh and frozenâ€“thawed spermatids in the common marmoset (<i>Callithrix jacchus</i>). Molecular Reproduction and Development, 2018, 85, 376-386.	2.0	5
98	mGluR5 Is Substitutable for mGluR1 in Cerebellar Purkinje Cells for Motor Coordination, Developmental Synapse Elimination, and Motor Learning. Cells, 2022, 11, 2004.	4.1	5
99	Telencephalonâ€specific <i>Alkbh1</i> conditional knockout mice display hippocampal atrophy and impaired learning. FEBS Letters, 2021, 595, 1671-1680.	2.8	4
100	Use of human methylation arrays for epigenome research in the common marmoset (Callithrix) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 38	1.9	3
101	Efficient marmoset genome engineering by autologous embryo transfer and CRISPR/Cas9 technology. Scientific Reports, 2021, 11, 20234.	3.3	3
102	Birth of a marmoset following injection of elongated spermatid from a prepubertal male. Molecular Reproduction and Development, 2019, 86, 928-930.	2.0	2
103	Atrophy of White Adipose Tissue Accompanied with Decreased Insulin-Stimulated Glucose Uptake in Mice Lacking the Small GTPase Rac1 Specifically in Adipocytes. International Journal of Molecular Sciences, 2021, 22, 10753.	4.1	2
104	Rho family small G proteins: Lessons from tissue-specific gene knockout studies. Journal of Oral Biosciences, 2014, 56, 23-29.	2.2	1
105	Generation of transgenic mouse line with prostate-specific expression of codon-improved Cre recombinase. Prostate International, 2018, 6, 99-103.	2.3	1
106	Loss of calsyntenin paralogs disrupts interneuron stability and mouse behavior. Molecular Brain, 2022, 15, 23.	2.6	1
107	Generation of Rac1 conditional mutant mice by Cre/loxP system. , 2009, , 175-178.		0