

# Kazuto Kobayashi

## List of Publications by Year in descending order

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114  
papers

4,772  
citations

94433

37  
h-index

118850

62  
g-index

124  
all docs

124  
docs citations

124  
times ranked

6475  
citing authors

#	ARTICLE	IF	CITATIONS
1	Genetic dissection of the circuit for hand dexterity in primates. <i>Nature</i> , 2012, 487, 235-238.	27.8	218
2	Ablation of Cerebellar Golgi Cells Disrupts Synaptic Integration Involving GABA Inhibition and NMDA Receptor Activation in Motor Coordination. <i>Cell</i> , 1998, 95, 17-27.	28.9	210
3	Targeted Disruption of the Tyrosine Hydroxylase Locus Results in Severe Catecholamine Depletion and Perinatal Lethality in Mice. <i>Journal of Biological Chemistry</i> , 1995, 270, 27235-27243.	3.4	193
4	Dynamics of tyrosine hydroxylase promoter activity during midbrain dopaminergic neuron development. <i>Journal of Neurochemistry</i> , 2002, 82, 295-304.	3.9	183
5	Structure of the Human Tyrosine Hydroxylase Gene: Alternative Splicing from a Single Gene Accounts for Generation of Four mRNA Types <sup>1</sup> . <i>Journal of Biochemistry</i> , 1988, 103, 907-912.	1.7	139
6	A Lentiviral Strategy for Highly Efficient Retrograde Gene Transfer by Pseudotyping with Fusion Envelope Glycoprotein. <i>Human Gene Therapy</i> , 2011, 22, 197-206.	2.7	132
7	Distinct neural mechanisms for the control of thirst and salt appetite in the subfornical organ. <i>Nature Neuroscience</i> , 2017, 20, 230-241.	14.8	131
8	Monitoring and Updating of Action Selection for Goal-Directed Behavior through the Striatal Direct and Indirect Pathways. <i>Neuron</i> , 2018, 99, 1302-1314.e5.	8.1	131
9	Dopamine $\beta$ -hydroxylase: two polymorphisms in linkage disequilibrium at the structural gene DBH associate with biochemical phenotypic variation. <i>Human Genetics</i> , 1998, 102, 533-540.	3.8	127
10	Population genetics of a functional variant of the dopamine $\beta$ -hydroxylase gene (DBH). <i>American Journal of Medical Genetics Part A</i> , 1997, 74, 374-379.	2.4	104
11	Transcranial direct-current stimulation increases extracellular dopamine levels in the rat striatum. <i>Frontiers in Systems Neuroscience</i> , 2013, 7, 6.	2.5	103
12	Human tyrosine hydroxylase in Parkinson's disease and in related disorders. <i>Journal of Neural Transmission</i> , 2019, 126, 397-409.	2.8	102
13	Dopamine synapse is a neuroligin-2-mediated contact between dopaminergic presynaptic and GABAergic postsynaptic structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 4206-4211.	7.1	99
14	Causal Link between the Cortico-Rubral Pathway and Functional Recovery through Forced Impaired Limb Use in Rats with Stroke. <i>Journal of Neuroscience</i> , 2016, 36, 455-467.	3.6	88
15	Dissecting the circuit for blindsight to reveal the critical role of pulvinar and superior colliculus. <i>Nature Communications</i> , 2019, 10, 135.	12.8	87
16	Phosphoproteomics of the Dopamine Pathway Enables Discovery of Rap1 Activation as a Reward Signal In Vivo. <i>Neuron</i> , 2016, 89, 550-565.	8.1	81
17	Selective Neural Pathway Targeting Reveals Key Roles of Thalamostriatal Projection in the Control of Visual Discrimination. <i>Journal of Neuroscience</i> , 2011, 31, 17169-17179.	3.6	80
18	Contribution of propriospinal neurons to recovery of hand dexterity after corticospinal tract lesions in monkeys. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 604-609.	7.1	80

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19	Role of Catecholamine Signaling in Brain and Nervous System Functions: New Insights from Mouse Molecular Genetic Study. <i>Journal of Investigative Dermatology Symposium Proceedings</i> , 2001, 6, 115-121.	0.8	79
20	Survival of Developing Motor Neurons Mediated by Rho GTPase Signaling Pathway through Rho-Kinase. <i>Journal of Neuroscience</i> , 2004, 24, 3480-3488.	3.6	79
21	Conditional Ablation of Striatal Neuronal Types Containing Dopamine D2 Receptor Disturbs Coordination of Basal Ganglia Function. <i>Journal of Neuroscience</i> , 2003, 23, 9078-9088.	3.6	75
22	Differential roles of dopamine D1 and D2 receptor-containing neurons of the nucleus accumbens shell in behavioral sensitization. <i>Journal of Neurochemistry</i> , 2015, 135, 1232-1241.	3.9	73
23	Enhanced flexibility of place discrimination learning by targeting striatal cholinergic interneurons. <i>Nature Communications</i> , 2014, 5, 3778.	12.8	71
24	[Na <sup>+</sup> ] Increases in Body Fluids Sensed by Central Nax Induce Sympathetically Mediated Blood Pressure Elevations via H <sup>+</sup> -Dependent Activation of ASIC1a. <i>Neuron</i> , 2019, 101, 60-75.e6.	8.1	70
25	Impaired cortico-striatal excitatory transmission triggers epilepsy. <i>Nature Communications</i> , 2019, 10, 1917.	12.8	68
26	Efficient Gene Transfer via Retrograde Transport in Rodent and Primate Brains Using a Human Immunodeficiency Virus Type 1-Based Vector Pseudotyped with Rabies Virus Glycoprotein. <i>Human Gene Therapy</i> , 2007, 18, 1141-1152.	2.7	66
27	Neuron-Specific Gene Transfer Through Retrograde Transport of Lentiviral Vector Pseudotyped with a Novel Type of Fusion Envelope Glycoprotein. <i>Human Gene Therapy</i> , 2011, 22, 1511-1523.	2.7	66
28	Macaques Exhibit Implicit Gaze Bias Anticipating Others' False-Belief-Driven Actions via Medial Prefrontal Cortex. <i>Cell Reports</i> , 2020, 30, 4433-4444.e5.	6.4	66
29	Modest Neuropsychological Deficits Caused by Reduced Noradrenaline Metabolism in Mice Heterozygous for a Mutated Tyrosine Hydroxylase Gene. <i>Journal of Neuroscience</i> , 2000, 20, 2418-2426.	3.6	59
30	Skeletal muscle-specific HMG-CoA reductase knockout mice exhibit rhabdomyolysis: A model for statin-induced myopathy. <i>Biochemical and Biophysical Research Communications</i> , 2015, 466, 536-540.	2.1	59
31	Action Selection and Flexible Switching Controlled by the Intralaminar Thalamic Neurons. <i>Cell Reports</i> , 2018, 22, 2370-2382.	6.4	57
32	The bHLH transcription factor Hand2 is essential for the maintenance of noradrenergic properties in differentiated sympathetic neurons. <i>Developmental Biology</i> , 2009, 329, 191-200.	2.0	55
33	Improved transduction efficiency of a lentiviral vector for neuron-specific retrograde gene transfer by optimizing the junction of fusion envelope glycoprotein. <i>Journal of Neuroscience Methods</i> , 2014, 227, 151-158.	2.5	53
34	Distinct roles of basal forebrain cholinergic neurons in spatial and object recognition memory. <i>Scientific Reports</i> , 2015, 5, 13158.	3.3	50
35	Different Effects of Eicosapentaenoic and Docosahexaenoic Acids on Atherogenic High-Fat Diet-Induced Non-Alcoholic Fatty Liver Disease in Mice. <i>PLoS ONE</i> , 2016, 11, e0157580.	2.5	50
36	Survival of corticostriatal neurons by Rho/Rho-kinase signaling pathway. <i>Neuroscience Letters</i> , 2016, 630, 45-52.	2.1	46

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37	Highly Efficient Retrograde Gene Transfer into Motor Neurons by a Lentiviral Vector Pseudotyped with Fusion Glycoprotein. PLoS ONE, 2013, 8, e75896.	2.5	44
38	Motor and learning dysfunction during postnatal development in mice defective in dopamine neuronal transmission. Journal of Neuroscience Research, 1998, 54, 450-464.	2.9	43
39	Viral vector-mediated selective and reversible blockade of the pathway for visual orienting in mice. Frontiers in Neural Circuits, 2013, 7, 162.	2.8	38
40	Analysis of the human tyrosine hydroxylase promoter-chloramphenicol acetyltransferase chimeric gene expression in transgenic mice. Molecular Brain Research, 1992, 16, 274-286.	2.3	37
41	Involvement of mesolimbic dopaminergic network in neuropathic pain relief by treadmill exercise. Molecular Pain, 2016, 12, 174480691668156.	2.1	37
42	Segregated Excitatoryâ€“Inhibitory Recurrent Subnetworks in Layer 5 of the Rat Frontal Cortex. Cerebral Cortex, 2017, 27, 5846-5857.	2.9	36
43	Dissecting the Tectal Output Channels for Orienting and Defense Responses. ENeuro, 2020, 7, ENEURO.0271-20.2020.	1.9	33
44	Molecular genetics of tyrosine 3-monooxygenase and inherited diseases. Biochemical and Biophysical Research Communications, 2005, 338, 267-270.	2.1	32
45	Immunotoxin-Mediated Tract Targeting in the Primate Brain: Selective Elimination of the Cortico-Subthalamic â€œHyperdirectâ€•Pathway. PLoS ONE, 2012, 7, e39149.	2.5	31
46	Hyperlipidemia and hepatitis in liver-specific CREB3L3 knockout mice generated using a one-step CRISPR/Cas9 system. Scientific Reports, 2016, 6, 27857.	3.3	31
47	Double Virus Vector Infection to the Prefrontal Network of the Macaque Brain. PLoS ONE, 2015, 10, e0132825.	2.5	31
48	Striatal Indirect Pathway Contributes to Selection Accuracy of Learned Motor Actions. Journal of Neuroscience, 2012, 32, 13421-13432.	3.6	30
49	Motor skills mediated through cerebellothalamic tracts projecting to the central lateral nucleus. Molecular Brain, 2019, 12, 13.	2.6	30
50	The 5â€²-flanking region of the human dopamine ð²-hydroxylase gene promotes neuron subtype-specific gene expression in the central nervous system of transgenic mice. Molecular Brain Research, 1993, 17, 239-244.	2.3	29
51	Subthalamic Neurons Coordinate Basal Ganglia Function through Differential Neural Pathways. Journal of Neuroscience, 2005, 25, 7743-7753.	3.6	27
52	Involvement of Cholinergic System in Hyperactivity in Dopamine-Deficient Mice. Neuropsychopharmacology, 2015, 40, 1141-1150.	5.4	27
53	Genetic evidence for noradrenergic control of long-term memory consolidation. Brain and Development, 2001, 23, S16-S23.	1.1	26
54	The Central Noradrenaline System and Memory Consolidation. Neuroscientist, 2001, 7, 371-376.	3.5	26

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55	Simultaneous visualization of extrinsic and intrinsic axon collaterals in Golgi-like detail for mouse corticothalamic and corticocortical cells: a double viral infection method. <i>Frontiers in Neural Circuits</i> , 2014, 8, 110.	2.8	26
56	Using a novel PV-Cre rat model to characterize pallidonigral cells and their terminations. <i>Brain Structure and Function</i> , 2017, 222, 2359-2378.	2.3	25
57	Altering Entry Site Preference of Lentiviral Vectors into Neuronal Cells by Pseudotyping with Envelope Glycoproteins. <i>Methods in Molecular Biology</i> , 2016, 1382, 175-186.	0.9	22
58	Effect of sodium-glucose cotransporter 2 (SGLT2) inhibition on weight loss is partly mediated by liver-brain-adipose neurocircuitry. <i>Biochemical and Biophysical Research Communications</i> , 2017, 493, 40-45.	2.1	22
59	Neurotransmitter identity and electrophysiological phenotype are genetically coupled in midbrain dopaminergic neurons. <i>Scientific Reports</i> , 2018, 8, 13637.	3.3	21
60	Glucocorticoid receptor suppresses gene expression of Rev $\alpha$ erb $\beta$ 1 (Nr1d1) through interaction with the $\alpha$ CLOCK complex. <i>FEBS Letters</i> , 2019, 593, 423-432.	2.8	21
61	A Novel Birthdate-Labeling Method Reveals Segregated Parallel Projections of Mitral and External Tufted Cells in the Main Olfactory System. <i>ENeuro</i> , 2019, 6, ENEURO.0234-19.2019.	1.9	21
62	Fate of transient catecholaminergic cell types revealed by site-specific recombination in transgenic mice. <i>Journal of Neuroscience Research</i> , 2004, 78, 7-15.	2.9	20
63	Identification of human ELOVL5 enhancer regions controlled by SREBP. <i>Biochemical and Biophysical Research Communications</i> , 2015, 465, 857-863.	2.1	20
64	The use of an optimized chimeric envelope glycoprotein enhances the efficiency of retrograde gene transfer of a pseudotyped lentiviral vector in the primate brain. <i>Neuroscience Research</i> , 2017, 120, 45-52.	1.9	20
65	The Emergence of a Stable Neuronal Ensemble from a Wider Pool of Activated Neurons in the Dorsal Medial Prefrontal Cortex during Appetitive Learning in Mice. <i>Journal of Neuroscience</i> , 2020, 40, 395-410.	3.6	20
66	Dopaminergic Signaling in the Nucleus Accumbens Modulates Stress-Coping Strategies during Inescapable Stress. <i>Journal of Neuroscience</i> , 2020, 40, 7241-7254.	3.6	20
67	Absence of Elovl6 attenuates steatohepatitis but promotes gallstone formation in a lithogenic diet-fed Ldlr $\alpha$ / $\alpha$ mouse model. <i>Scientific Reports</i> , 2015, 5, 17604.	3.3	20
68	Striatal direct pathway modulates response time in execution of visual discrimination. <i>European Journal of Neuroscience</i> , 2012, 35, 784-797.	2.6	19
69	Pseudotyped Lentiviral Vectors for Retrograde Gene Delivery into Target Brain Regions. <i>Frontiers in Neuroanatomy</i> , 2017, 11, 65.	1.7	19
70	Task-dependent function of striatal cholinergic interneurons in behavioural flexibility. <i>European Journal of Neuroscience</i> , 2018, 47, 1174-1183.	2.6	18
71	Chemogenetic inactivation reveals the inhibitory control function of the prefronto-striatal pathway in the macaque brain. <i>Communications Biology</i> , 2021, 4, 1088.	4.4	18
72	Up-regulation of dopamine D1 receptor in the hippocampus after establishment of conditioned place preference by cocaine. <i>Neuropharmacology</i> , 2011, 61, 842-848.	4.1	17

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73	Methylglyoxal (MG) and Cerebro-Renal Interaction: Does Long-Term Orally Administered MG Cause Cognitive Impairment in Normal Sprague-Dawley Rats?. <i>Toxins</i> , 2014, 6, 254-269.	3.4	17
74	Visualization of Cortical Projection Neurons with Retrograde TET-Off Lentiviral Vector. <i>PLoS ONE</i> , 2012, 7, e46157.	2.5	17
75	Dopamine deficiency in mice. <i>Brain and Development</i> , 2000, 22, 54-60.	1.1	16
76	Neuronal circuits and physiological roles of the basal ganglia in terms of transmitters, receptors and related disorders. <i>Journal of Physiological Sciences</i> , 2016, 66, 435-446.	2.1	16
77	Ablation of Elov16 protects pancreatic islets from high-fat diet-induced impairment of insulin secretion. <i>Biochemical and Biophysical Research Communications</i> , 2014, 450, 318-323.	2.1	15
78	Distinct CCK-positive SFO neurons are involved in persistent or transient suppression of water intake. <i>Nature Communications</i> , 2020, 11, 5692.	12.8	15
79	Dissecting circuit mechanisms by genetic manipulation of specific neural pathways. <i>Reviews in the Neurosciences</i> , 2013, 24, 1-8.	2.9	14
80	Genetic manipulation of specific neural circuits by use of a viral vector system. <i>Journal of Neural Transmission</i> , 2018, 125, 67-75.	2.8	14
81	Autonomic neuropathy in transgenic mice caused by immunotoxin targeting of the peripheral nervous system. , 1998, 51, 162-173.		12
82	Direct imaging of phosphorylation-dependent conformational change and DNA binding of CREB by electron microscopy. <i>Genes To Cells</i> , 2000, 5, 515-522.	1.2	12
83	Avian sarcoma leukosis virus receptor-envelope system for simultaneous dissection of multiple neural circuits in mammalian brain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E2947-E2956.	7.1	12
84	A note on retrograde gene transfer efficiency and inflammatory response of lentiviral vectors pseudotyped with FuG-E vs. FuG-B2 glycoproteins. <i>Scientific Reports</i> , 2019, 9, 3567.	3.3	12
85	Elucidating information processing in primate basal ganglia circuitry: a novel technique for pathway-selective ablation mediated by immunotoxin. <i>Frontiers in Neural Circuits</i> , 2013, 7, 140.	2.8	11
86	Malondialdehyde-modified LDL-related variables are associated with diabetic kidney disease in type 2 diabetes. <i>Diabetes Research and Clinical Practice</i> , 2018, 141, 237-243.	2.8	11
87	Enhancement of the transduction efficiency of a lentiviral vector for neuron-specific retrograde gene delivery through the point mutation of fusion glycoprotein type E. <i>Journal of Neuroscience Methods</i> , 2019, 311, 147-155.	2.5	11
88	Different cholinergic cell groups in the basal forebrain regulate social interaction and social recognition memory. <i>Scientific Reports</i> , 2021, 11, 13589.	3.3	11
89	Rho/Rho-kinase signaling pathway controls axon patterning of a specified subset of cranial motor neurons. <i>European Journal of Neuroscience</i> , 2011, 33, 612-621.	2.6	10
90	Pseudotyped lentiviral vectors for tract-targeting and application for the functional control of selective neural circuits. <i>Journal of Neuroscience Methods</i> , 2020, 344, 108854.	2.5	10

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91	Maternal dietary imbalance between omega-6 and omega-3 fatty acids triggers the offspring's overeating in mice. <i>Communications Biology</i> , 2020, 3, 473.	4.4	10
92	Enhanced Retrieval of Taste Associative Memory by Chemogenetic Activation of Locus Coeruleus Norepinephrine Neurons. <i>Journal of Neuroscience</i> , 2020, 40, 8367-8385.	3.6	10
93	A candidate functional <scp>SNP</scp> rs7074440 in <i><scp>TCF</scp>7L2</i> alters gene expression through <scp>FOS</scp> in hepatocytes. <i>FEBS Letters</i> , 2018, 592, 422-433.	2.8	9
94	Effects of storytelling on the childhood brain: near-infrared spectroscopic comparison with the effects of picture-book reading. <i>Fukushima Journal of Medical Sciences</i> , 2018, 64, 125-132.	0.4	9
95	Efficient ablation by immunotoxin-mediated cell targeting of the cell types that express human interleukin-2 receptor depending on the internal ribosome entry site. <i>Journal of Gene Medicine</i> , 2001, 3, 505-510.	2.8	8
96	Altered gene expression in the subdivisions of the amygdala of Fyn-deficient mice as revealed by laser capture microdissection and mKIAA cDNA array analysis. <i>Brain Research</i> , 2006, 1073-1074, 60-70.	2.2	8
97	Guidance cues from the embryonic dorsal spinal cord chemoattract dorsal root ganglion axons. <i>NeuroReport</i> , 2007, 18, 1645-1649.	1.2	8
98	Transient silencing of synaptic transmitter release from specific neuronal types by recombinant tetanus toxin light chain fused to antibody variable region. <i>Journal of Neuroscience Methods</i> , 2008, 175, 125-132.	2.5	8
99	Tyrosine Hydroxylase. , 2012, , 45-47.		8
100	Controlled cell targeting system to study the brain neural circuitry. <i>Neuroscience Research</i> , 2007, 58, 118-123.	1.9	7
101	Transcriptional and structural plasticity of tyrosine hydroxylase expressing neurons in both striatum and nucleus accumbens following dopaminergic denervation. <i>Journal of Chemical Neuroanatomy</i> , 2014, 61-62, 169-175.	2.1	7
102	Light/dark phase-dependent spontaneous activity is maintained in dopamine-deficient mice. <i>Molecular Brain</i> , 2017, 10, 49.	2.6	7
103	Ras-like GTPase induced by Npas4 promotes activity-dependent neuronal tolerance for ischemic stroke. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	7
104	Mouse liaison for integrative brain research. <i>Neuroscience Research</i> , 2007, 58, 103-104.	1.9	6
105	Circulating Malondialdehyde-Modified LDL-Related Variables and Coronary Artery Stenosis in Asymptomatic Patients with Type 2 Diabetes. <i>Journal of Diabetes Research</i> , 2015, 2015, 1-8.	2.3	6
106	The hypothalamus to brainstem circuit suppresses late-onset body weight gain. <i>Scientific Reports</i> , 2019, 9, 18360.	3.3	6
107	Functional Circuitry Analysis in Rodents Using Neurotoxins/Immunotoxins. <i>Neuromethods</i> , 2012, , 193-205.	0.3	5
108	Thalamostriatal System Controls the Acquisition, Performance, and Flexibility of Learning Behavior. <i>Frontiers in Systems Neuroscience</i> , 2021, 15, 729389.	2.5	5

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109	Increase in excitability of hippocampal neurons during novelty-induced hyperlocomotion in dopamine-deficient mice. Molecular Brain, 2020, 13, 126.	2.6	3
110	Impaired wakefulness and rapid eye movement sleep in dopamine-deficient mice. Molecular Brain, 2021, 14, 170.	2.6	3
111	Neural Circuit Mechanism for Learning Dependent on Dopamine Transmission. Advances in Pharmacology, 2013, 68, 143-153.	2.0	2
112	Optimisation of murine organotypic slice culture preparation for a novel sagittal-frontal co-culture system. Journal of Neuroscience Methods, 2017, 285, 49-57.	2.5	2
113	Retrograde Transgene Expression via Neuron-Specific Lentiviral Vector Depends on Both Species and Input Projections. Viruses, 2021, 13, 1387.	3.3	2
114	Transgenic Strategies in Autonomic Research. , 2004, , 435-XI.		0