Toru Ishizuka

List of Publications by Year
in descending order

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69 papers	2,664 citations	279487 23 h-index	197535 49 g-index
79 all docs	79 docs citations	79 times ranked	3137 citing authors

#	Article	IF	Citations
1	Driving Neurogenesis in Neural Stem Cells with High Sensitivity Optogenetics. NeuroMolecular Medicine, 2020, 22, 139-149.	1.8	7
2	Functional emergence of a column-like architecture in layer 5 of mouse somatosensory cortex in vivo. Journal of Physiological Sciences, 2019, 69, 65-77.	0.9	2
3	Expanding the Toolbox of Upconversion Nanoparticles for In Vivo Optogenetics and Neuromodulation. Advanced Materials, 2019, 31, e1803474.	11.1	118
4	Optogenetic study of the response interaction among multi-afferent inputs in the barrel cortex of rats. Scientific Reports, 2019, 9, 3917.	1.6	8
5	Targeted expression of step-function opsins in transgenic rats for optogenetic studies. Scientific Reports, 2018, 8, 5435.	1.6	14
6	Organelle Optogenetics: Direct Manipulation of Intracellular Ca2+ Dynamics by Light. Frontiers in Neuroscience, 2018, 12, 561.	1.4	16
7	Red-Tuning of the Channelrhodopsin Spectrum Using Long Conjugated Retinal Analogues. Biochemistry, 2018, 57, 5544-5556.	1.2	10
8	Alternative Formation of Red-Shifted Channelrhodopsins: Noncovalent Incorporation with Retinal-Based Enamine-Type Schiff Bases and Mutated Channelopsin. Chemical and Pharmaceutical Bulletin, 2017, 65, 356-358.	0.6	3
9	Kinetic characteristics of chimeric channelrhodopsins implicate the molecular identity involved in desensitization. Biophysics and Physicobiology, 2017, 14, 13-22.	0.5	8
10	Functional characterization of sodium-pumping rhodopsins with different pumping properties. PLoS ONE, 2017, 12, e0179232.	1.1	26
11	Myogenic Maturation by Optical-Training in Cultured Skeletal Muscle Cells. Methods in Molecular Biology, 2017, 1668, 135-145.	0.4	0
12	A Novel Reporter Rat Strain That Conditionally Expresses the Bright Red Fluorescent Protein tdTomato. PLoS ONE, 2016, 11, e0155687.	1.1	21
13	Position- and quantity-dependent responses in zebrafish turning behavior. Scientific Reports, 2016, 6, 27888.	1.6	23
14	The regulatory mechanism of ion permeation through a channelrhodopsin derived from Mesostigma viride (MvChR1). Photochemical and Photobiological Sciences, 2016, 15, 365-374.	1.6	8
15	A Chimera Na+-Pump Rhodopsin as an Effective Optogenetic Silencer. PLoS ONE, 2016, 11, e0166820.	1.1	28
16	Near-infrared (NIR) up-conversion optogenetics. Scientific Reports, 2015, 5, 16533.	1.6	109
17	Engineering Biological Systems for Light. Seibutsu Butsuri, 2015, 55, 311-316.	0.0	0
18	A Phox2b BAC Transgenic Rat Line Useful for Understanding Respiratory Rhythm Generator Neural Circuitry. PLoS ONE, 2015, 10, e0132475.	1.1	23

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19	Membrane depolarization regulates intracellular RANKL transport in non-excitable osteoblasts. Bone, 2015, 81, 306-314.	1.4	6
20	Chimeras of Channelrhodopsin-1 and -2 from Chlamydomonas reinhardtii Exhibit Distinctive Light-induced Structural Changes from Channelrhodopsin-2. Journal of Biological Chemistry, 2015, 290, 11623-11634.	1.6	31
21	Near-infrared (NIR) optogenetics using up-conversion system. , 2015, , .		1
22	Structural basis for Na+ transport mechanism by a light-driven Na+ pump. Nature, 2015, 521, 48-53.	13.7	224
23	Optogenetic induction of contractile ability in immature C2C12 myotubes. Scientific Reports, 2015, 5, 8317.	1.6	50
24	Development of biotrandcusers driven by photostimulation. , 2015, , .		1
25	Kinetic Evaluation of Photosensitivity in Bi-Stable Variants of Chimeric Channelrhodopsins. PLoS ONE, 2015, 10, e0119558.	1.1	23
26	Strategies to Probe Mechanoreception: From Mechanical to Optogenetic Approaches. , 2015, , 305-314.		0
27	Optogenetic Patterning of Whisker-Barrel Cortical System in Transgenic Rat Expressing Channelrhodopsin-2. PLoS ONE, 2014, 9, e93706.	1.1	17
28	Optically controllable muscle for cell-based microdevice. , 2014, , .		0
29	Regulation of later neurogenic stages of adultâ€derived neural stem/progenitor cells by <scp>L</scp>â€type <scp>C</scp>a²⁺ channels. Development Growth and Differentiation, 2014, 56, 583-594.	0.6	16
30	Improvements in the performance of an incubation-type planar patch clamp biosensor using a salt bridge electrode and a plastic (PMMA) substrate. Sensors and Actuators B: Chemical, 2014, 193, 660-668.	4.0	4
31	Optogenetic manipulation of neural and nonâ€neural functions. Development Growth and Differentiation, 2013, 55, 474-490.	0.6	49
32	Parallel and patterned optogenetic manipulation of neurons in the brain slice using a DMD-based projector. Neuroscience Research, 2013, 75, 59-64.	1.0	39
33	Paired stimulation between CA3 and CA1 alters excitability of CA3 in the rat hippocampus. Neuroscience Letters, 2013, 534, 182-187.	1.0	7
34	Channelrhodopsinsâ€"Their potential in gene therapy for neurological disorders. Neuroscience Research, 2013, 75, 6-12.	1.0	10
35	Involvement of glutamate 97 in ion influx through photo-activated channelrhodopsin-2. Neuroscience Research, 2013, 75, 13-22.	1.0	18
36	Hindbrain V2a Neurons in the Excitation of Spinal Locomotor Circuits during Zebrafish Swimming. Current Biology, 2013, 23, 843-849.	1.8	180

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37	Targeted expression of a chimeric channelrhodopsin in zebrafish under regulation of Gal4-UAS system. Neuroscience Research, 2013, 75, 69-75.	1.0	27
38	Optogenetic Probing and Manipulation of the Calyx-Type Presynaptic Terminal in the Embryonic Chick Ciliary Ganglion. PLoS ONE, 2013, 8, e59179.	1.1	16
39	Optogenetically Induced Seizure and the Longitudinal Hippocampal Network Dynamics. PLoS ONE, 2013, 8, e60928.	1.1	75
40	Channelrhodopsin as a Noble Biomaterial Useful for the Operation and Performance Test of the Ionchannel Devices. Materials Transactions, 2012, 53, 1305-1309.	0.4	0
41	Remodeling of hippocampal network in pilocarpine-treated mice expressing synaptopHluorin in the mossy fiber terminals. Neuroscience Research, 2012, 74, 25-31.	1.0	2
42	Expression of a Truncated Form of the Endoplasmic Reticulum Chaperone Protein, Ïƒ1 Receptor, Promotes Mitochondrial Energy Depletion and Apoptosis. Journal of Biological Chemistry, 2012, 287, 23318-23331.	1.6	71
43	Light-evoked Somatosensory Perception of Transgenic Rats That Express Channelrhodopsin-2 in Dorsal Root Ganglion Cells. PLoS ONE, 2012, 7, e32699.	1.1	62
44	Positioning of the sensor cell on the sensing area using cell trapping pattern in incubation type planar patch clamp biosensor. Colloids and Surfaces B: Biointerfaces, 2012, 96, 44-49.	2.5	9
45	Molecular Dynamics of Photo-electrical Transducing Proteins, Channelrhodopsins. Seibutsu Butsuri, 2012, 52, 226-229.	0.0	1
46	Controlling Neuronal Circuits with Light. The Review of Laser Engineering, 2012, 40, 254.	0.0	0
47	APACOP, a FRET apoptosis probe with manipulation of neuronal acitivity. Neuroscience Research, 2011, 71, e343.	1.0	0
48	A new optogenetic probe for evaluating the activity dependent survival of the newborn neurons in hippocampal slice culture. Neuroscience Research, 2011, 71, e239.	1.0	0
49	Frequency response characterization of hippocampal CA3 dendrites: Opto-current clamp analysis. Neuroscience Research, 2011, 71, e120.	1.0	0
50	A background correction method for Raman spectra of mixed neurotransmitters: Toward a new label-free imaging technology of brain activity. Neuroscience Research, 2011, 71, e205.	1.0	0
51	Evaluation of a Sindbis virus vector displaying an immunoglobulin-binding domain: Antibody-dependent infection of neurons in living mice. Neuroscience Research, 2011, 71, 328-334.	1.0	4
52	Lineage analysis of newly generated neurons in organotypic culture of rat hippocampus. Neuroscience Research, 2011, 69, 223-233.	1.0	11
53	Opto-Current-Clamp Actuation of Cortical Neurons Using a Strategically Designed Channelrhodopsin. PLoS ONE, 2010, 5, e12893.	1.1	74
54	Visual Properties of Transgenic Rats Harboring the Channelrhodopsin-2 Gene Regulated by the Thy-1.2 Promoter. PLoS ONE, 2009, 4, e7679.	1.1	143

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55	Molecular Determinants Differentiating Photocurrent Properties of Two Channelrhodopsins from Chlamydomonas. Journal of Biological Chemistry, 2009, 284, 5685-5696.	1.6	160
56	Î²-Phorbol ester-induced enhancement of exocytosis in large mossy fiber boutons of mouse hippocampus. Journal of Physiological Sciences, 2009, 59, 263-274.	0.9	1
57	Photocurrent attenuation by a single polar-to-nonpolar point mutation of channelrhodopsin-2. Photochemical and Photobiological Sciences, 2009, 8, 328-336.	1.6	55
58	Glu-97 of channelrhodopsin-2 is one of the molecular determinants involved in the ion flux. Neuroscience Research, 2009, 65, S196.	1.0	0
59	Molecular determinant differenciating Chlamydomonas channelrhodopsins. Neuroscience Research, 2009, 65, S196.	1.0	0
60	Synaptic vesicle dynamics in the mossy fiber-CA3 presynaptic terminals of mouse hippocampus. Neuroscience Research, 2007, 59, 481-490.	1.0	20
61	Activation of presynaptically silent synapsesâ€"One of underlying mechanisms enhancing mossy fiber transmission in the hippocampus. Neuroscience Research, 2007, 58, S190.	1.0	0
62	Restoration of Visual Response in Aged Dystrophic RCS Rats Using AAV-Mediated Channelopsin-2 Gene Transfer. , 2007, 48, 3821.		144
63	Kinetic evaluation of photosensitivity in genetically engineered neurons expressing green algae light-gated channels. Neuroscience Research, 2006, 54, 85-94.	1.0	360
64	Transgenic mouse lines expressing synaptopHluorin in hippocampus and cerebellar cortex. Genesis, 2005, 42, 53-60.	0.8	14
65	Intrinsic and spontaneous neurogenesis in the postnatal slice culture of rat hippocampus. European Journal of Neuroscience, 2004, 20, 2499-2508.	1.2	48
66	Pharmacological dissection of calcium channel subtype-related components of strontium inflow in large mossy fiber boutons of mouse hippocampus. Hippocampus, 2004, 14, 570-585.	0.9	26
67	SNARE Complex Oligomerization by Synaphin/Complexin Is Essential for Synaptic Vesicle Exocytosis. Cell, 2001, 104, 421-432.	13.5	149
68	Molecular cloning of synaphins/complexins, cytosolic proteins involved in transmitter release, in the electric organ of an electric ray (Narke japonica). Neuroscience Letters, 1997, 232, 107-110.	1.0	12
69	A complex of rab3A, SNAP-25, VAMP/synaptobrevin-2 and syntaxins in brain presynaptic terminals. FEBS Letters, 1993, 330, 236-240.	1.3	80