Shigeki Kiyonaka

List of Publications by Year in Descending Order

90 papers	5,269 citations	38 h-index	72 g-index
97 ext. papers	5,863 ext. citations	9.9 avg, IF	5.07 L-index

#	Paper	IF	Citations
90	Chemogenetics of cell surface receptors: beyond genetic and pharmacological approaches.. *RSC Chemical Biology*, **2022**, 3, 269-287	3	1
89	Orthogonal Activation of Metabotropic Glutamate Receptor Using Coordination Chemogenetics.. *Frontiers in Chemistry*, **2021**, 9, 825669	5	
88	Ligand-directed two-step labeling to quantify neuronal glutamate receptor trafficking. *Nature Communications*, **2021**, 12, 831	17.4	6
87	Tethering-based chemogenetic approaches for the modulation of protein function in live cells. *Chemical Society Reviews*, **2021**, 50, 7909-7923	58.5	4
86	Molecular Technologies in Life Innovation: Novel Molecular Technologies for Labeling and Functional Control of Proteins Under Live Cell Conditions **2019**, 297-328		
85	Construction of ligand assay systems by protein-based semisynthetic biosensors. *Current Opinion in Chemical Biology*, **2019**, 50, 10-18	9.7	4
84	On-cell coordination chemistry: Chemogenetic activation of membrane-bound glutamate receptors in living cells. *Methods in Enzymology*, **2019**, 622, 411-430	1.7	4
83	Construction of a Fluorescent Screening System of Allosteric Modulators for the GABA Receptor Using a Turn-On Probe. *ACS Central Science*, **2019**, 5, 1541-1553	16.8	7
82	Ligand-Directed Chemistry of AMPA Receptors Confers Live-Cell Fluorescent Biosensors. *ACS Chemical Biology*, **2018**, 13, 1880-1889	4.9	13
81	DNA Origami Scaffolds as Templates for Functional Tetrameric Kir3 K Channels. *Angewandte Chemie - International Edition*, **2018**, 57, 2586-2591	16.4	24
80	Intracellular thermometry with fluorescent sensors for thermal biology. *Pflugers Archiv European Journal of Physiology*, **2018**, 470, 717-731	4.6	69
79	DNA Origami Scaffolds as Templates for Functional Tetrameric Kir3 K+ Channels. *Angewandte Chemie*, **2018**, 130, 2616-2621	3.6	1
78	Chemogenetic Approach Using Ni(II) Complex-Agonist Conjugates Allows Selective Activation of Class A G-Protein-Coupled Receptors. *ACS Central Science*, **2018**, 4, 1211-1221	16.8	4
77	Fluorescent imaging of in vivo H2O2 levels reveals contribution of oxidative microenvironment to tumor malignancy. *Proceedings for Annual Meeting of the Japanese Pharmacological Society*, **2018**, WCP2018, PO2-10-36	0	
76	Shank and Zinc Mediate an AMPA Receptor Subunit Switch in Developing Neurons. *Frontiers in Molecular Neuroscience*, **2018**, 11, 405	6.1	31
75	Chemical labelling for visualizing native AMPA receptors in live neurons. *Nature Communications*, **2017**, 8, 14850	17.4	50
74	Construction of Protein-Based Biosensors Using Ligand-Directed Chemistry for Detecting Analyte Binding. *Methods in Enzymology*, **2017**, 589, 253-280	1.7	3

73	TRP channels in oxygen physiology: distinctive functional properties and roles of TRPA1 in O sensing. *Proceedings of the Japan Academy Series B: Physical and Biological Sciences*, **2017**, 93, 464-482	4	13
72	Affinity-Guided Oxime Chemistry for Selective Protein Acylation in Live Tissue Systems. *Journal of the American Chemical Society*, **2017**, 139, 14181-14191	16.4	30
71	Discovery of allosteric modulators for GABAA receptors by ligand-directed chemistry. *Nature Chemical Biology*, **2016**, 12, 822-30	11.7	37
70	A conditional proteomics approach to identify proteins involved in zinc homeostasis. *Nature Methods*, **2016**, 13, 931-937	21.6	28
69	Allosteric activation of membrane-bound glutamate receptors using coordination chemistry within living cells. *Nature Chemistry*, **2016**, 8, 958-67	17.6	20
68	Screening of Transient Receptor Potential Canonical Channel Activators Identifies Novel Neurotrophic Piperazine Compounds. *Molecular Pharmacology*, **2016**, 89, 348-63	4.3	13
67	Structure-activity relations of leucine derivatives reveal critical moieties for cellular uptake and activation of mTORC1-mediated signaling. *Amino Acids*, **2016**, 48, 1045-1058	3.5	38
66	A Set of Organelle-Localizable Reactive Molecules for Mitochondrial Chemical Proteomics in Living Cells and Brain Tissues. *Journal of the American Chemical Society*, **2016**, 138, 7592-602	16.4	35
65	Rab3 interacting molecule 3 mutations associated with autism alter regulation of voltage-dependent Ca□+ channels. *Cell Calcium*, **2015**, 58, 296-306	4	6
64	Validating subcellular thermal changes revealed by fluorescent thermosensors. *Nature Methods*, **2015**, 12, 801-2	21.6	57
63	Fluorescent sensors reveal subcellular thermal changes. *Current Opinion in Biotechnology*, **2015**, 31, 57-64	11.4	30
62	Compromised maturation of GABAergic inhibition underlies abnormal network activity in the hippocampus of epileptic Ca2+ channel mutant mice, tottering. *Pflugers Archiv European Journal of Physiology*, **2015**, 467, 737-52	4.6	9
61	TRPV4 channel activity is modulated by direct interaction of the ankyrin domain to PI(4,5)P□*Nature Communications*, **2014**, 5, 4994	17.4	69
60	LDAI-based chemical labeling of intact membrane proteins and its pulse-chase analysis under live cell conditions. *Chemistry and Biology*, **2014**, 21, 1013-22		49
59	Inhibition of N-type Ca2+ channels ameliorates an imbalance in cardiac autonomic nerve activity and prevents lethal arrhythmias in mice with heart failure. *Cardiovascular Research*, **2014**, 104, 183-93	9.9	20
58	Transnitrosylation directs TRPA1 selectivity in N-nitrosamine activators. *Molecular Pharmacology*, **2014**, 85, 175-85	4.3	21
57	Visualization of Intracellular Temperature Distribution Using A Thermoresponsive Fluorescent Protein. *Seibutsu Butsuri*, **2014**, 54, 253-256	0	
56	Live cell off-target identification of lapatinib using ligand-directed tosyl chemistry. *Chemical Communications*, **2014**, 50, 14097-100	5.8	13

55	Genetically encoded fluorescent thermosensors visualize subcellular thermoregulation in living cells. *Nature Methods*, **2013**, 10, 1232-8	21.6	160
54	Molecular determinants for cardiovascular TRPC6 channel regulation by Ca2+/calmodulin-dependent kinase II. *Journal of Physiology*, **2013**, 591, 2851-66	3.9	18
53	Supramolecular hydrogels based on bola-amphiphilic glycolipids showing color change in response to glycosidases. *Chemical Communications*, **2013**, 49, 2115-7	5.8	42
52	Nuclear life of the voltage-gated Cacnb4 subunit and its role in gene transcription regulation. *Channels*, **2013**, 7, 119-25	3	22
51	Zinc-finger proteins for site-specific protein positioning on DNA-origami structures. *Angewandte Chemie - International Edition*, **2012**, 51, 2421-4	16.4	106
50	Zinc-Finger Proteins for Site-Specific Protein Positioning on DNA-Origami Structures. *Angewandte Chemie*, **2012**, 124, 2471-2474	3.6	22
49	The juvenile myoclonic epilepsy-related protein EFHC1 interacts with the redox-sensitive TRPM2 channel linked to cell death. *Cell Calcium*, **2012**, 51, 179-85	4	35
48	Cacnb4 directly couples electrical activity to gene expression, a process defective in juvenile epilepsy. *EMBO Journal*, **2012**, 31, 3730-44	13	48
47	Physical and functional interaction of the active zone protein CAST/ERC2 and the □-subunit of the voltage-dependent Ca(2+) channel. *Journal of Biochemistry*, **2012**, 152, 149-59	3.1	46
46	TRPA1 underlies a sensing mechanism for O2. *Nature Chemical Biology*, **2011**, 7, 701-11	11.7	197
45	Receptor signaling integration by TRP channelsomes. *Advances in Experimental Medicine and Biology*, **2011**, 704, 373-89	3.6	8
44	Genetic and pharmacologic inhibition of the Ca2+ influx channel TRPC3 protects secretory epithelia from Ca2+-dependent toxicity. *Gastroenterology*, **2011**, 140, 2107-15, 2115.e1-4	13.3	77
43	TRPC3-mediated Ca2+ influx contributes to Rac1-mediated production of reactive oxygen species in MLP-deficient mouse hearts. *Biochemical and Biophysical Research Communications*, **2011**, 409, 108-13	3.4	53
42	Chemical cell-surface receptor engineering using affinity-guided, multivalent organocatalysts. *Journal of the American Chemical Society*, **2011**, 133, 12220-8	16.4	91
41	Transportsomes and channelsomes: are they functional units for physiological responses?. *Channels* , **2011**, 5, 387-90	3	6
40	Molecular basis for species-selective insecticidal actitiy of flubendiamide. *Journal of Pesticide Sciences*, **2011**, 36, 102-105	2.7	
39	Ca2+ influx and protein scaffolding via TRPC3 sustain PKCbeta and ERK activation in B cells. *Journal of Cell Science*, **2010**, 123, 927-38	5.3	56
38	Inhibition of TRPC6 channel activity contributes to the antihypertrophic effects of natriuretic peptides-guanylyl cyclase-A signaling in the heart. *Circulation Research*, **2010**, 106, 1849-60	15.7	112

37	Rab3-interacting molecule gamma isoforms lacking the Rab3-binding domain induce long lasting currents but block neurotransmitter vesicle anchoring in voltage-dependent P/Q-type Ca2+ channels. *Journal of Biological Chemistry*, **2010**, 285, 21750-67	5.4	40
36	Involvement of Ca2+ channel synprint site in synaptic vesicle endocytosis. *Journal of Neuroscience*, **2010**, 30, 655-60	6.6	25
35	An In Vivo Fluorescent Sensor Reveals Intracellular Ins(1,3,4,5)P4 Dynamics in Single Cells. *Angewandte Chemie*, **2010**, 122, 2196-2199	3.6	7
34	An in vivo fluorescent sensor reveals intracellular ins(1,3,4,5)P4 dynamics in single cells. *Angewandte Chemie - International Edition*, **2010**, 49, 2150-3	16.4	13
33	A pathogenic C terminus-truncated polycystin-2 mutant enhances receptor-activated Ca2+ entry via association with TRPC3 and TRPC7. *Journal of Biological Chemistry*, **2009**, 284, 34400-12	5.4	24
32	Selective and direct inhibition of TRPC3 channels underlies biological activities of a pyrazole compound. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 5400-5	11.5	299
31	Reply to Thinnes: Is There Competition in Trafficking of VDAC-cored VRAC and SOC in NE Differentiation of Cells?. *Journal of Biological Chemistry*, **2009**, 284, le4	5.4	78
30	Tetrameric Orai1 is a teardrop-shaped molecule with a long, tapered cytoplasmic domain. *Journal of Biological Chemistry*, **2009**, 284, 13676-13685	5.4	71
29	Changes in temperature preferences and energy homeostasis in dystroglycan mutants. *Science*, **2009**, 323, 1740-3	33.3	47
28	Ca2+-dependent induction of TRPM2 currents in hippocampal neurons. *Journal of Physiology*, **2009**, 587, 965-79	3.9	95
27	Suppression of hippocampal TRPM7 protein prevents delayed neuronal death in brain ischemia. *Nature Neuroscience*, **2009**, 12, 1300-7	25.5	211
26	A single circularly permuted GFP sensor for inositol-1,3,4,5-tetrakisphosphate based on a split PH domain. *Bioorganic and Medicinal Chemistry*, **2009**, 17, 7381-6	3.4	22
25	Molecular characterization of flubendiamide sensitivity in the lepidopterous ryanodine receptor Ca(2+) release channel. *Biochemistry*, **2009**, 48, 10342-52	3.2	78
24	3P-005 3D structure of tetrameric Orai1 channel; a teardrop-shaped structure with a long, tapered cytoplasmic domain(Protein:Structure,The 47th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2009**, 49, S151	0	
23	TRPM2-mediated Ca2+influx induces chemokine production in monocytes that aggravates inflammatory neutrophil infiltration. *Nature Medicine*, **2008**, 14, 738-47	50.5	434
22	A CACNB4 mutation shows that altered Ca(v)2.1 function may be a genetic modifier of severe myoclonic epilepsy in infancy. *Neurobiology of Disease*, **2008**, 32, 349-54	7.5	39
21	Molecular characterization of TRPA1 channel activation by cysteine-reactive inflammatory mediators. *Channels*, **2008**, 2, 287-98	3	184
20	RIM1 confers sustained activity and neurotransmitter vesicle anchoring to presynaptic Ca2+ channels. *Nature Neuroscience*, **2007**, 10, 691-701	25.5	186

19	Three-dimensional reconstruction using transmission electron microscopy reveals a swollen, bell-shaped structure of transient receptor potential melastatin type 2 cation channel. *Journal of Biological Chemistry*, **2007**, 282, 36961-70	5.4	55
18	Mutation associated with an autosomal dominant cone-rod dystrophy CORD7 modifies RIM1-mediated modulation of voltage-dependent Ca2+ channels. *Channels*, **2007**, 1, 144-7	3	24
17	Subunit dissociation of TRPC3 ion channel under high-salt condition. *Journal of Electron Microscopy*, **2007**, 56, 111-7		5
16	The TRPC3 channel has a large internal chamber surrounded by signal sensing antennas. *Journal of Molecular Biology*, **2007**, 367, 373-83	6.5	77
15	Blocker-resistant presynaptic voltage-dependent Ca2+ channels underlying glutamate release in mice nucleus tractus solitarii. *Brain Research*, **2006**, 1104, 103-13	3.7	7
14	Oligo-Asp tag/Zn(II) complex probe as a new pair for labeling and fluorescence imaging of proteins. *Journal of the American Chemical Society*, **2006**, 128, 10452-9	16.4	153
13	pH-Responsive shrinkage/swelling of a supramolecular hydrogel composed of two small amphiphilic molecules. *Chemistry - A European Journal*, **2005**, 11, 1130-6	4.8	144
12	Three distinct read-out modes for enzyme activity can operate in a semi-wet supramolecular hydrogel. *Chemistry - A European Journal*, **2005**, 11, 7294-304	4.8	42
11	Activation of RasGRP3 by phosphorylation of Thr-133 is required for B cell receptor-mediated Ras activation. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 16612-7	11.5	70
10	Semi-wet peptide/protein array using supramolecular hydrogel. *Nature Materials*, **2004**, 3, 58-64	27	509
9	pH-Responsive Phase Transition of Supramolecular Hydrogel Consisting of Glycosylated Amino Acetate and Carboxylic Acid Derivative. *Supramolecular Chemistry*, **2003**, 15, 521-528	1.8	18
8	Combinatorial library of low molecular-weight organo- and hydrogelators based on glycosylated amino acid derivatives by solid-phase synthesis. *Chemistry - A European Journal*, **2003**, 9, 976-83	4.8	125
7	First thermally responsive supramolecular polymer based on glycosylated amino acid. *Journal of the American Chemical Society*, **2002**, 124, 10954-5	16.4	312
6	Pd(en) as a Sequence-Selective Molecular Pinch for □Helical Peptides. *Chemistry Letters*, **2001**, 30, 16-17	1.7	8
5	Solid-phase lipid synthesis (SPLS)-2: incidental discovery of organogelators based on artificial glycolipids. *Tetrahedron Letters*, **2001**, 42, 6141-6145	2	15
4	The Synthesis of a Reconstituted C60-Modified Protein. *Chemistry Letters*, **2000**, 29, 46-47	1.7	5
3	Solid phase lipid synthesis (SPLS) for construction of an artificial glycolipid library. *Chemical Communications*, **2000**, 1281-1282	5.8	17
2	Facile Preparation of Robust Organic Gels by Cross-link of a Sugar-integrated Gelator by Toluene-2,4-diisocyanate. *Chemistry Letters*, **1999**, 28, 225-226	1.7	18

List of Publications

1 Coordination chemogenetics for activation of GPCR-type glutamate receptors in brain tissue 2