

# Masaki Fukata

## List of Publications by Year in descending order

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100  
papers

10,631  
citations

28274  
55  
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40979  
93  
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105  
all docs

105  
docs citations

105  
times ranked

10283  
citing authors

#	ARTICLE	IF	CITATIONS
1	Rac1 and Cdc42 Capture Microtubules through IQGAP1 and CLIP-170. <i>Cell</i> , 2002, 109, 873-885.	28.9	537
2	Protein palmitoylation in neuronal development and synaptic plasticity. <i>Nature Reviews Neuroscience</i> , 2010, 11, 161-175.	10.2	532
3	Identification of PSD-95 Palmitoylating Enzymes. <i>Neuron</i> , 2004, 44, 987-996.	8.1	483
4	Role of IQGAP1, a Target of the Small GTPases Cdc42 and Rac1, in Regulation of E-Cadherin-Mediated Cell-Cell Adhesion. <i>J Cell Biol</i> , 1998, 281, 832-835.		454
5	Roles of Rho-family GTPases in cell polarisation and directional migration. <i>Current Opinion in Cell Biology</i> , 2003, 15, 590-597.	5.4	421
6	Interaction with IQGAP1 Links APC to Rac1, Cdc42, and Actin Filaments during Cell Polarization and Migration. <i>Developmental Cell</i> , 2004, 7, 871-883.	7.0	421
7	Rho-family GTPases in cadherin-mediated cell-cell adhesion. <i>Nature Reviews Molecular Cell Biology</i> , 2001, 2, 887-897.	37.0	394
8	Epilepsy-Related Ligand/Receptor Complex LGI1 and ADAM22 Regulate Synaptic Transmission. <i>Science</i> , 2006, 313, 1792-1795.	12.6	352
9	Identification of IQGAP as a Putative Target for the Small GTPases, Cdc42 and Rac1. <i>Journal of Biological Chemistry</i> , 1996, 271, 23363-23367.	3.4	290
10	Autoantibodies to Epilepsy-Related LGI1 in Limbic Encephalitis Neutralize LGI1-ADAM22 Interaction and Reduce Synaptic AMPA Receptors. <i>Journal of Neuroscience</i> , 2013, 33, 18161-18174.	3.6	288
11	Disruption of LGI1-linked synaptic complex causes abnormal synaptic transmission and epilepsy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 3799-3804.	7.1	287
12	Local palmitoylation cycles define activity-regulated postsynaptic subdomains. <i>Journal of Cell Biology</i> , 2013, 202, 145-161.	5.2	239
13	Differential Activity-Dependent Secretion of Brain-Derived Neurotrophic Factor from Axon and Dendrite. <i>Journal of Neuroscience</i> , 2009, 29, 14185-14198.	3.6	226
14	Dynamic Interaction of Stargazin-like TARPs with Cycling AMPA Receptors at Synapses. <i>Science</i> , 2004, 303, 1508-1511.	12.6	221
15	Cdc42 and Rac1 Regulate the Interaction of IQGAP1 with $\beta$ -Catenin. <i>Journal of Biological Chemistry</i> , 1999, 274, 26044-26050.	3.4	205
16	p140Sra-1 (Specifically Rac1-associated Protein) Is a Novel Specific Target for Rac1 Small GTPase. <i>Journal of Biological Chemistry</i> , 1998, 273, 291-295.	3.4	203
17	Mobile DHHC palmitoylating enzyme mediates activity-sensitive synaptic targeting of PSD-95. <i>Journal of Cell Biology</i> , 2009, 186, 147-160.	5.2	194
18	Identification of PSD-95 Depalmitoylating Enzymes. <i>Journal of Neuroscience</i> , 2016, 36, 6431-6444.	3.6	189

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19	Regulation of Cross-linking of Actin Filament by IQGAP1, a Target for Cdc42. Journal of Biological Chemistry, 1997, 272, 29579-29583.	3.4	184
20	Regulation of cadherin-mediated cell-cell adhesion by the Rho family GTPases. Current Opinion in Cell Biology, 1999, 11, 591-596.	5.4	181
21	GODZ-Mediated Palmitoylation of GABAA Receptors Is Required for Normal Assembly and Function of GABAergic Inhibitory Synapses. Journal of Neuroscience, 2006, 26, 12758-12768.	3.6	148
22	Identification of Golgi-localized acyl transferases that palmitoylate and regulate endothelial nitric oxide synthase. Journal of Cell Biology, 2006, 174, 369-377.	5.2	146
23	IQGAP3, a novel effector of Rac1 and Cdc42, regulates neurite outgrowth. Journal of Cell Science, 2007, 120, 567-577.	2.0	138
24	Alzheimer Disease A $\beta$ Production in the Absence of S-Palmitoylation-dependent Targeting of BACE1 to Lipid Rafts. Journal of Biological Chemistry, 2009, 284, 3793-3803.	3.4	137
25	Identification of G Protein $\alpha$ Subunit-Palmitoylating Enzyme. Molecular and Cellular Biology, 2009, 29, 435-447.	2.3	127
26	Positive Role of IQGAP1, an Effector of Rac1, in Actin-Meshwork Formation at Sites of Cell-Cell Contact. Molecular Biology of the Cell, 2004, 15, 1065-1076.	2.1	122
27	Neurotransmitter release regulated by a MAL- $\alpha$ liprin- $\alpha$ presynaptic complex. Journal of Cell Biology, 2005, 170, 1127-1134.	5.2	116
28	Palmitoylation and Membrane Interactions of the Neuroprotective Chaperone Cysteine-string Protein. Journal of Biological Chemistry, 2008, 283, 25014-25026.	3.4	110
29	Phosphorylation of ERM proteins at filopodia induced by Cdc42. Genes To Cells, 2000, 5, 571-581.	1.2	108
30	Impaired Activation and Localization of LAT in Anergic T Cells as a Consequence of a Selective Palmitoylation Defect. Immunity, 2006, 24, 513-522.	14.3	108
31	Systematic screening for palmitoyl transferase activity of the DHHC protein family in mammalian cells. Methods, 2006, 40, 177-182.	3.8	108
32	Identification and Characterization of GABAA Receptor Autoantibodies in Autoimmune Encephalitis. Journal of Neuroscience, 2014, 34, 8151-8163.	3.6	108
33	Molecular constituents of neuronal AMPA receptors. Journal of Cell Biology, 2005, 169, 399-404.	5.2	105
34	Structural basis for tubulin recognition by cytoplasmic linker protein 170 and its autoinhibition. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 10346-10351.	7.1	101
35	Regulation of Cell-Cell Adhesion of MDCK Cells by Cdc42 and Rac1 Small GTPases. Biochemical and Biophysical Research Communications, 1997, 240, 430-435.	2.1	98
36	Identification of the stef Gene That Encodes a Novel Guanine Nucleotide Exchange Factor Specific for Rac1. Journal of Biological Chemistry, 1999, 274, 17837-17844.	3.4	98

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37	Dynamic protein palmitoylation in cellular signaling. <i>Progress in Lipid Research</i> , 2009, 48, 117-127.	11.6	95
38	Dynamic Palmitoylation Targets MAP6 to the Axon to Promote Microtubule Stabilization during Neuronal Polarization. <i>Neuron</i> , 2017, 94, 809-825.e7.	8.1	94
39	LGI2 Truncation Causes a Remitting Focal Epilepsy in Dogs. <i>PLoS Genetics</i> , 2011, 7, e1002194.	3.5	88
40	Cell adhesion and Rho small GTPases. <i>Journal of Cell Science</i> , 1999, 112, 4491-4500.	2.0	88
41	Involvement of IQGAP1, an Effector of Rac1 and Cdc42 GTPases, in Cell-Cell Dissociation during Cell Scattering. <i>Molecular and Cellular Biology</i> , 2001, 21, 2165-2183.	2.3	87
42	Discovery of protein-palmitoylating enzymes. <i>Pflügers Archiv European Journal of Physiology</i> , 2008, 456, 1199-1206.	2.8	84
43	Palmitoylation Regulates Epidermal Homeostasis and Hair Follicle Differentiation. <i>PLoS Genetics</i> , 2009, 5, e1000748.	3.5	81
44	2-Bromopalmitate Analogues as Activity-Based Probes To Explore Palmitoyl Acyltransferases. <i>Journal of the American Chemical Society</i> , 2013, 135, 7082-7085.	13.7	81
45	The LGI1-ADAM22 protein complex directs synapse maturation through regulation of PSD-95 function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E4129-37.	7.1	80
46	Phosphatidylinositol 4-Kinase III $\alpha$ Is Palmitoylated by Golgi-localized Palmitoyltransferases in Cholesterol-dependent Manner. <i>Journal of Biological Chemistry</i> , 2012, 287, 21856-21865.	3.4	77
47	The Hydrophobic Cysteine-rich Domain of SNAP25 Couples with Downstream Residues to Mediate Membrane Interactions and Recognition by DHHC Palmitoyl Transferases. <i>Molecular Biology of the Cell</i> , 2009, 20, 1845-1854.	2.1	75
48	ABHD10 is an S-depalmitoylase affecting redox homeostasis through peroxiredoxin-5. <i>Nature Chemical Biology</i> , 2019, 15, 1232-1240.	8.0	72
49	Human Cerebrospinal Fluid Monoclonal LGI1 Autoantibodies Increase Neuronal Excitability. <i>Annals of Neurology</i> , 2020, 87, 405-418.	5.3	72
50	BAI1 regulates spatial learning and synaptic plasticity in the hippocampus. <i>Journal of Clinical Investigation</i> , 2015, 125, 1497-1508.	8.2	71
51	Epilepsy and synaptic proteins. <i>Current Opinion in Neurobiology</i> , 2017, 45, 1-8.	4.2	68
52	Cdc42, Rac1, and Their Effector IQGAP1 as Molecular Switches for Cadherin-Mediated Cell-Cell Adhesion. <i>Biochemical and Biophysical Research Communications</i> , 1999, 262, 1-6.	2.1	65
53	Secreted Metalloproteinase ADAMTS-3 Inactivates Reelin. <i>Journal of Neuroscience</i> , 2017, 37, 3181-3191.	3.6	65
54	Fibroblast Growth Factor-Regulated Palmitoylation of the Neural Cell Adhesion Molecule Determines Neuronal Morphogenesis. <i>Journal of Neuroscience</i> , 2008, 28, 8897-8907.	3.6	63

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55	Chemical corrector treatment ameliorates increased seizure susceptibility in a mouse model of familial epilepsy. <i>Nature Medicine</i> , 2015, 21, 19-26.	30.7	63
56	Identification of a Novel $\beta$ -Catenin-Interacting Protein. <i>Biochemical and Biophysical Research Communications</i> , 2000, 273, 712-717.	2.1	62
57	Structural basis of epilepsy-related ligand-receptor complex LGI1-ADAM22. <i>Nature Communications</i> , 2018, 9, 1546.	12.8	54
58	Local Palmitoylation Cycles and Specialized Membrane Domain Organization. <i>Current Topics in Membranes</i> , 2016, 77, 97-141.	0.9	52
59	GM1-ganglioside-induced $\beta$ assembly on synaptic membranes of cultured neurons. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 1128-1137.	2.6	51
60	Ndel1 palmitoylation: a new mean to regulate cytoplasmic dynein activity. <i>EMBO Journal</i> , 2010, 29, 107-119.	7.8	49
61	LGI1-ADAM22-MAGUK configures transsynaptic nanoalignment for synaptic transmission and epilepsy prevention. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	49
62	Renal defects associated with improper polarization of the CRB and DLG polarity complexes in MALS-3 knockout mice. <i>Journal of Cell Biology</i> , 2007, 179, 151-164.	5.2	42
63	ELMOD2 is anchored to lipid droplets by palmitoylation and regulates adipocyte triglyceride lipase recruitment. <i>Molecular Biology of the Cell</i> , 2015, 26, 2333-2342.	2.1	40
64	Forelimb movements evoked by optogenetic stimulation of the macaque motor cortex. <i>Nature Communications</i> , 2020, 11, 3253.	12.8	36
65	Synaptic Plasticity Regulated by Protein-Protein Interactions and Posttranslational Modifications. <i>International Review of Cell and Molecular Biology</i> , 2012, 297, 1-43.	3.2	35
66	In Silico Screening for Palmitoyl Substrates Reveals a Role for DHHC1/3/10 (zDHHC1/3/11)-mediated Neurochondrin Palmitoylation in Its Targeting to Rab5-positive Endosomes. <i>Journal of Biological Chemistry</i> , 2013, 288, 19816-19829.	3.4	35
67	The LGI1-ADAM22 protein complex in synaptic transmission and synaptic disorders. <i>Neuroscience Research</i> , 2017, 116, 39-45.	1.9	34
68	Dysfunctional ADAM22 implicated in progressive encephalopathy with cortical atrophy and epilepsy. <i>Neurology: Genetics</i> , 2016, 2, e46.	1.9	33
69	Functional phylogenetic analysis of LGI proteins identifies an interaction motif crucial for myelination. <i>Development (Cambridge)</i> , 2014, 141, 1749-1756.	2.5	30
70	Neurobiology of autoimmune encephalitis. <i>Current Opinion in Neurobiology</i> , 2018, 48, 1-8.	4.2	30
71	Subcellular Golgi localization of stathmin family proteins is promoted by a specific set of DHHC palmitoyl transferases. <i>Molecular Biology of the Cell</i> , 2011, 22, 1930-1942.	2.1	29
72	Targeting CCR5 trafficking to inhibit HIV-1 infection. <i>Science Advances</i> , 2019, 5, eaax0821.	10.3	26

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73	Dynamic palmitoylation controls the microdomain localization of the DKK1 receptors CKAP4 and LRP6. <i>Science Signaling</i> , 2019, 12, .	3.6	26
74	Neuronal major histocompatibility complex class I molecules are implicated in the generation of asymmetries in hippocampal circuitry. <i>Journal of Physiology</i> , 2013, 591, 4777-4791.	2.9	23
75	Astrocyte-mediated infantile-onset leukoencephalopathy mouse model. <i>Glia</i> , 2017, 65, 150-168.	4.9	20
76	Trans-synaptic LGI1-ADAM22-MAGUK in AMPA and NMDA receptor regulation. <i>Neuropharmacology</i> , 2021, 194, 108628.	4.1	20
77	Canonical versus non-canonical transsynaptic signaling of neuroligin 3 tunes development of sociality in mice. <i>Nature Communications</i> , 2021, 12, 1848.	12.8	19
78	Encephalitis patient-derived monoclonal GABAA receptor antibodies cause epileptic seizures. <i>Journal of Experimental Medicine</i> , 2021, 218, .	8.5	19
79	The extracellular domain of angulin-1 and palmitoylation of its cytoplasmic region are required for angulin-1 assembly at tricellular contacts. <i>Journal of Biological Chemistry</i> , 2020, 295, 4289-4302.	3.4	16
80	Systematic Screening of Depalmitoylating Enzymes and Evaluation of Their Activities by the Acyl-PEGyl Exchange Gel-Shift (APEGS) Assay. <i>Methods in Molecular Biology</i> , 2019, 2009, 83-98.	0.9	15
81	A novel red fluorescence dopamine biosensor selectively detects dopamine in the presence of norepinephrine in vitro. <i>Molecular Brain</i> , 2021, 14, 173.	2.6	15
82	Long-term clinical follow-up of a patient with non-paraneoplastic cerebellar ataxia associated with anti-mGluR1 autoantibodies. <i>Journal of Neuroimmunology</i> , 2018, 319, 63-67.	2.3	13
83	Leucine-rich glioma inactivated 1 (Lgi1), an epilepsy-related secreted protein, has a nuclear localization signal and localizes to both the cytoplasm and the nucleus of the caudal ganglionic eminence neurons. <i>European Journal of Neuroscience</i> , 2012, 36, 2284-2292.	2.6	12
84	Effects of Rho Family GTPases on Cell-Cell Adhesion. , 2002, 189, 121-128.		10
85	Non-Microtubular Localizations of Microtubule-Associated Protein 6 (MAP6). <i>PLoS ONE</i> , 2014, 9, e114905.	2.5	10
86	Protein Palmitoylation by DHHC Protein Family. <i>Frontiers in Neuroscience</i> , 2006, , 83-89.	0.0	10
87	14-3-3 proteins stabilize LGI1-ADAM22 levels to regulate seizure thresholds in mice. <i>Cell Reports</i> , 2021, 37, 110107.	6.4	10
88	Postsynaptic nanodomains generated by local palmitoylation cycles. <i>Biochemical Society Transactions</i> , 2015, 43, 199-204.	3.4	9
89	Deleted in colorectal cancer (netrin-1 receptor) antibodies and limbic encephalitis in a cat with hippocampal necrosis. <i>Journal of Veterinary Internal Medicine</i> , 2019, 33, 1440-1445.	1.6	9
90	MAGUKs are essential, but redundant, in long-term potentiation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	8

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91	Biallelic <i>ADAM22</i> pathogenic variants cause progressive encephalopathy and infantile-onset refractory epilepsy. <i>Brain</i> , 2022, 145, 2301-2312.	7.6	8
92	Palmitoylation of the small GTPase Cdc42 by DHHC5 modulates spine formation and gene transcription. <i>Journal of Biological Chemistry</i> , 2022, 298, 102048.	3.4	8
93	Coupling of a voltage-gated $Ca^{2+}$ channel homologue with a plasma membrane $H^{+}$ -ATPase in yeast. <i>Genes To Cells</i> , 2017, 22, 94-104.	1.2	5
94	In situ screening for postsynaptic cell adhesion molecules during synapse formation. <i>Journal of Biochemistry</i> , 2017, 162, 295-302.	1.7	2
95	Insight into the function of a unique voltage-sensor protein (TMEM266) and its short form in mouse cerebellum. <i>Biochemical Journal</i> , 2022, , .	3.7	1
96	2P021 Structural and functional studies of CLIP-170(Proteins-structure and structure-function) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 54	0.1	0
97	Acyl-PEGyl exchange gel-shift (APEGS) assay for palmitoylation quantification. <i>Denki Eido</i> , 2021, 65, 41-45.	0.0	0
98	Local palmitoylation cycles define activity-regulated postsynaptic subdomains. <i>Journal of General Physiology</i> , 2013, 142, 1422OIA19.	1.9	0
99	Functional phylogenetic analysis of LGI proteins identifies an interaction motif crucial for myelination. <i>Journal of Cell Science</i> , 2014, 127, e1-e1.	2.0	0
100	DHHC Proteins. , 2018, , 1367-1372.		0