# Masaki Fukata

## List of Publications by Citations



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|---|---|---|---|
| 99 papers | 8,799 citations | 51 h-index | 93 g-index |
| 105 ext. papers | 9,821 ext. citations | 9.4 avg, IF | 5.79 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 99 | Rac1 and Cdc42 capture microtubules through IQGAP1 and CLIP-170. *Cell*, **2002**, 109, 873-85 | 56.2 | 487 |
| 98 | Protein palmitoylation in neuronal development and synaptic plasticity. *Nature Reviews Neuroscience*, **2010**, 11, 161-75 | 13.5 | 409 |
| 97 | Identification of PSD-95 palmitoylating enzymes. *Neuron*, **2004**, 44, 987-96 | 13.9 | 400 |
| 96 | Role of IQGAP1, a target of the small GTPases Cdc42 and Rac1, in regulation of E-cadherin-mediated cell-cell adhesion. *Science*, **1998**, 281, 832-5 | 33.3 | 400 |
| 95 | Roles of Rho-family GTPases in cell polarisation and directional migration. *Current Opinion in Cell Biology*, **2003**, 15, 590-7 | 9 | 392 |
| 94 | Interaction with IQGAP1 links APC to Rac1, Cdc42, and actin filaments during cell polarization and migration. *Developmental Cell*, **2004**, 7, 871-83 | 10.2 | 381 |
| 93 | Rho-family GTPases in cadherin-mediated cell-cell adhesion. *Nature Reviews Molecular Cell Biology*, **2001**, 2, 887-97 | 48.7 | 357 |
| 92 | Epilepsy-related ligand/receptor complex LGI1 and ADAM22 regulate synaptic transmission. *Science*, **2006**, 313, 1792-5 | 33.3 | 292 |
| 91 | Identification of IQGAP as a putative target for the small GTPases, Cdc42 and Rac1. *Journal of Biological Chemistry*, **1996**, 271, 23363-7 | 5.4 | 254 |
| 90 | Autoantibodies to epilepsy-related LGI1 in limbic encephalitis neutralize LGI1-ADAM22 interaction and reduce synaptic AMPA receptors. *Journal of Neuroscience*, **2013**, 33, 18161-74 | 6.6 | 237 |
| 89 | Disruption of LGI1-linked synaptic complex causes abnormal synaptic transmission and epilepsy. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 3799-804 | 11.5 | 236 |
| 88 | Dynamic interaction of stargazin-like TARPs with cycling AMPA receptors at synapses. *Science*, **2004** , 303, 1508-11 | 33.3 | 202 |
| 87 | Differential activity-dependent secretion of brain-derived neurotrophic factor from axon and dendrite. *Journal of Neuroscience*, **2009**, 29, 14185-98 | 6.6 | 195 |
| 86 | Local palmitoylation cycles define activity-regulated postsynaptic subdomains. *Journal of Cell Biology*, **2013**, 202, 145-61 | 7.3 | 187 |
| 85 | p140Sra-1 (specifically Rac1-associated protein) is a novel specific target for Rac1 small GTPase. *Journal of Biological Chemistry*, **1998**, 273, 291-5 | 5.4 | 181 |
| 84 | Cdc42 and Rac1 regulate the interaction of IQGAP1 with beta-catenin. *Journal of Biological Chemistry*, **1999**, 274, 26044-50 | 5.4 | 175 |
| 83 | Regulation of cadherin-mediated cell-cell adhesion by the Rho family GTPases. *Current Opinion in Cell Biology*, **1999**, 11, 591-6 | 9 | 166 |

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|---|---|---|---|
| 82 | Regulation of cross-linking of actin filament by IQGAP1, a target for Cdc42. *Journal of Biological Chemistry*, **1997**, 272, 29579-83 | 5.4 | 157 |
| 81 | Mobile DHHC palmitoylating enzyme mediates activity-sensitive synaptic targeting of PSD-95. *Journal of Cell Biology*, **2009**, 186, 147-60 | 7.3 | 154 |
| 80 | GODZ-mediated palmitoylation of GABA(A) receptors is required for normal assembly and function of GABAergic inhibitory synapses. *Journal of Neuroscience*, **2006**, 26, 12758-68 | 6.6 | 137 |
| 79 | Identification of PSD-95 Depalmitoylating Enzymes. *Journal of Neuroscience*, **2016**, 36, 6431-44 | 6.6 | 134 |
| 78 | Identification of Golgi-localized acyl transferases that palmitoylate and regulate endothelial nitric oxide synthase. *Journal of Cell Biology*, **2006**, 174, 369-77 | 7.3 | 131 |
| 77 | Alzheimer disease Abeta production in the absence of S-palmitoylation-dependent targeting of BACE1 to lipid rafts. *Journal of Biological Chemistry*, **2009**, 284, 3793-803 | 5.4 | 119 |
| 76 | 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, 1065-76 | 3.5 | 118 |
| 75 | IQGAP3, a novel effector of Rac1 and Cdc42, regulates neurite outgrowth. *Journal of Cell Science*, **2007**, 120, 567-77 | 5.3 | 117 |
| 74 | Neurotransmitter release regulated by a MALS-liprin-alpha presynaptic complex. *Journal of Cell Biology*, **2005**, 170, 1127-34 | 7.3 | 106 |
| 73 | Identification of G protein alpha subunit-palmitoylating enzyme. *Molecular and Cellular Biology*, **2009**, 29, 435-47 | 4.8 | 100 |
| 72 | Molecular constituents of neuronal AMPA receptors. *Journal of Cell Biology*, **2005**, 169, 399-404 | 7.3 | 97 |
| 71 | Impaired activation and localization of LAT in anergic T cells as a consequence of a selective palmitoylation defect. *Immunity*, **2006**, 24, 513-22 | 32.3 | 96 |
| 70 | Phosphorylation of ERM proteins at filopodia induced by Cdc42. *Genes To Cells*, **2000**, 5, 571-81 | 2.3 | 95 |
| 69 | 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, 10346-51 | 11.5 | 94 |
| 68 | Identification of the stef gene that encodes a novel guanine nucleotide exchange factor specific for Rac1. *Journal of Biological Chemistry*, **1999**, 274, 17837-44 | 5.4 | 93 |
| 67 | Regulation of cell-cell adhesion of MDCK cells by Cdc42 and Rac1 small GTPases. *Biochemical and Biophysical Research Communications*, **1997**, 240, 430-5 | 3.4 | 91 |
| 66 | Systematic screening for palmitoyl transferase activity of the DHHC protein family in mammalian cells. *Methods*, **2006**, 40, 177-82 | 4.6 | 90 |
| 65 | Palmitoylation and membrane interactions of the neuroprotective chaperone cysteine-string protein. *Journal of Biological Chemistry*, **2008**, 283, 25014-26 | 5.4 | 89 |

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|---|---|---|---|
| 64 | Dynamic protein palmitoylation in cellular signaling. *Progress in Lipid Research*, **2009**, 48, 117-27 | 14.3 | 84 |
| 63 | Involvement of IQGAP1, an effector of Rac1 and Cdc42 GTPases, in cell-cell dissociation during cell scattering. *Molecular and Cellular Biology*, **2001**, 21, 2165-83 | 4.8 | 81 |
| 62 | Discovery of protein-palmitoylating enzymes. *Pflugers Archiv European Journal of Physiology*, **2008**, 456, 1199-206 | 4.6 | 74 |
| 61 | Identification and characterization of GABA(A) receptor autoantibodies in autoimmune encephalitis. *Journal of Neuroscience*, **2014**, 34, 8151-63 | 6.6 | 73 |
| 60 | LGI2 truncation causes a remitting focal epilepsy in dogs. *PLoS Genetics*, **2011**, 7, e1002194 | 6 | 71 |
| 59 | Palmitoylation regulates epidermal homeostasis and hair follicle differentiation. *PLoS Genetics*, **2009**, 5, e1000748 | 6 | 70 |
| 58 | Cell adhesion and Rho small GTPases. *Journal of Cell Science*, **1999**, 112, 4491-4500 | 5.3 | 69 |
| 57 | 2-Bromopalmitate analogues as activity-based probes to explore palmitoyl acyltransferases. *Journal of the American Chemical Society*, **2013**, 135, 7082-5 | 16.4 | 68 |
| 56 | The hydrophobic cysteine-rich domain of SNAP25 couples with downstream residues to mediate membrane interactions and recognition by DHHC palmitoyl transferases. *Molecular Biology of the Cell*, **2009**, 20, 1845-54 | 3.5 | 62 |
| 55 | Fibroblast growth factor-regulated palmitoylation of the neural cell adhesion molecule determines neuronal morphogenesis. *Journal of Neuroscience*, **2008**, 28, 8897-907 | 6.6 | 61 |
| 54 | Dynamic Palmitoylation Targets MAP6 to the Axon to Promote Microtubule Stabilization during Neuronal Polarization. *Neuron*, **2017**, 94, 809-825.e7 | 13.9 | 60 |
| 53 | Cdc42, Rac1, and their effector IQGAP1 as molecular switches for cadherin-mediated cell-cell adhesion. *Biochemical and Biophysical Research Communications*, **1999**, 262, 1-6 | 3.4 | 60 |
| 52 | Phosphatidylinositol 4-kinase IIα is palmitoylated by Golgi-localized palmitoyltransferases in cholesterol-dependent manner. *Journal of Biological Chemistry*, **2012**, 287, 21856-65 | 5.4 | 59 |
| 51 | The LGI1-ADAM22 protein complex directs synapse maturation through regulation of PSD-95 function. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E4129-37 | 11.5 | 55 |
| 50 | Identification of a novel beta-catenin-interacting protein. *Biochemical and Biophysical Research Communications*, **2000**, 273, 712-7 | 3.4 | 55 |
| 49 | BAI1 regulates spatial learning and synaptic plasticity in the hippocampus. *Journal of Clinical Investigation*, **2015**, 125, 1497-508 | 15.9 | 51 |
| 48 | Chemical corrector treatment ameliorates increased seizure susceptibility in a mouse model of familial epilepsy. *Nature Medicine*, **2015**, 21, 19-26 | 50.5 | 48 |
| 47 | Epilepsy and synaptic proteins. *Current Opinion in Neurobiology*, **2017**, 45, 1-8 | 7.6 | 46 |

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| 46 | Ndel1 palmitoylation: a new mean to regulate cytoplasmic dynein activity. *EMBO Journal*, **2010**, 29, 107-19 | 13 | 43 |
| 45 | GM1-ganglioside-induced Abeta assembly on synaptic membranes of cultured neurons. *Biochimica Et Biophysica Acta - Biomembranes*, **2007**, 1768, 1128-37 | 3.8 | 40 |
| 44 | Renal defects associated with improper polarization of the CRB and DLG polarity complexes in MALS-3 knockout mice. *Journal of Cell Biology*, **2007**, 179, 151-64 | 7.3 | 38 |
| 43 | Local Palmitoylation Cycles and Specialized Membrane Domain Organization. *Current Topics in Membranes*, **2016**, 77, 97-141 | 2.2 | 37 |
| 42 | Secreted Metalloproteinase ADAMTS-3 Inactivates Reelin. *Journal of Neuroscience*, **2017**, 37, 3181-3191 | 6.6 | 36 |
| 41 | ABHD10 is an S-depalmitoylase affecting redox homeostasis through peroxiredoxin-5. *Nature Chemical Biology*, **2019**, 15, 1232-1240 | 11.7 | 36 |
| 40 | ELMOD2 is anchored to lipid droplets by palmitoylation and regulates adipocyte triglyceride lipase recruitment. *Molecular Biology of the Cell*, **2015**, 26, 2333-42 | 3.5 | 34 |
| 39 | Human Cerebrospinal Fluid Monoclonal LGI1 Autoantibodies Increase Neuronal Excitability. *Annals of Neurology*, **2020**, 87, 405-418 | 9.4 | 32 |
| 38 | 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. *Journal of Biological Chemistry*, **2013**, 288, 19816-29 | 5.4 | 31 |
| 37 | Dysfunctional ADAM22 implicated in progressive encephalopathy with cortical atrophy and epilepsy. *Neurology: Genetics*, **2016**, 2, e46 | 3.8 | 28 |
| 36 | Structural basis of epilepsy-related ligand-receptor complex LGI1-ADAM22. *Nature Communications* , **2018**, 9, 1546 | 17.4 | 27 |
| 35 | Synaptic plasticity regulated by protein-protein interactions and posttranslational modifications. *International Review of Cell and Molecular Biology*, **2012**, 297, 1-43 | 6 | 25 |
| 34 | Subcellular Golgi localization of stathmin family proteins is promoted by a specific set of DHHC palmitoyl transferases. *Molecular Biology of the Cell*, **2011**, 22, 1930-42 | 3.5 | 25 |
| 33 | Functional phylogenetic analysis of LGI proteins identifies an interaction motif crucial for myelination. *Development (Cambridge)*, **2014**, 141, 1749-56 | 6.6 | 24 |
| 32 | The LGI1-ADAM22 protein complex in synaptic transmission and synaptic disorders. *Neuroscience Research*, **2017**, 116, 39-45 | 2.9 | 23 |
| 31 | Neurobiology of autoimmune encephalitis. *Current Opinion in Neurobiology*, **2018**, 48, 1-8 | 7.6 | 22 |
| 30 | Neuronal major histocompatibility complex class I molecules are implicated in the generation of asymmetries in hippocampal circuitry. *Journal of Physiology*, **2013**, 591, 4777-91 | 3.9 | 20 |
| 29 | LGI1-ADAM22-MAGUK configures transsynaptic nanoalignment for synaptic transmission and epilepsy prevention. *Proceedings of the National Academy of Sciences of the United States of America* , **2021**, 118, | 11.5 | 16 |

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| 28 | Forelimb movements evoked by optogenetic stimulation of the macaque motor cortex. *Nature Communications*, **2020**, 11, 3253 | 17.4 | 14 |
| 27 | Astrocyte-mediated infantile-onset leukoencephalopathy mouse model. *Glia*, **2017**, 65, 150-168 | 9 | 14 |
| 26 | Targeting CCR5 trafficking to inhibit HIV-1 infection. *Science Advances*, **2019**, 5, eaax0821 | 14.3 | 13 |
| 25 | Dynamic palmitoylation controls the microdomain localization of the DKK1 receptors CKAP4 and LRP6. *Science Signaling*, **2019**, 12, | 8.8 | 13 |
| 24 | 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. *European Journal of Neuroscience*, **2012**, 36, 2284-92 | 3.5 | 11 |
| 23 | Effects of Rho family GTPases on cell-cell adhesion. *Methods in Molecular Biology*, **2002**, 189, 121-8 | 1.4 | 10 |
| 22 | The extracellular domain of angulin-1 and palmitoylation of its cytoplasmic region are required for angulin-1 assembly at tricellular contacts. *Journal of Biological Chemistry*, **2020**, 295, 4289-4302 | 5.4 | 8 |
| 21 | Systematic Screening of Depalmitoylating Enzymes and Evaluation of Their Activities by the Acyl-PEGyl Exchange Gel-Shift (APEGS) Assay. *Methods in Molecular Biology*, **2019**, 2009, 83-98 | 1.4 | 7 |
| 20 | Postsynaptic nanodomains generated by local palmitoylation cycles. *Biochemical Society Transactions*, **2015**, 43, 199-204 | 5.1 | 7 |
| 19 | Non-microtubular localizations of microtubule-associated protein 6 (MAP6). *PLoS ONE*, **2014**, 9, e114905 | 3.7 | 7 |
| 18 | Deleted in colorectal cancer (netrin-1 receptor) antibodies and limbic encephalitis in a cat with hippocampal necrosis. *Journal of Veterinary Internal Medicine*, **2019**, 33, 1440-1445 | 3.1 | 6 |
| 17 | Protein Palmitoylation by DHHC Protein Family. *Frontiers in Neuroscience*, **2006**, 83-89 | | 6 |
| 16 | Long-term clinical follow-up of a patient with non-paraneoplastic cerebellar ataxia associated with anti-mGluR1 autoantibodies. *Journal of Neuroimmunology*, **2018**, 319, 63-67 | 3.5 | 5 |
| 15 | Coupling of a voltage-gated Ca channel homologue with a plasma membrane H -ATPase in yeast. *Genes To Cells*, **2017**, 22, 94-104 | 2.3 | 4 |
| 14 | Canonical versus non-canonical transsynaptic signaling of neuroligin 3 tunes development of sociality in mice. *Nature Communications*, **2021**, 12, 1848 | 17.4 | 4 |
| 13 | Encephalitis patient derived monoclonal GABAA receptor antibodies cause catatonia and epileptic seizures | | 4 |
| 12 | Trans-synaptic LGI1-ADAM22-MAGUK in AMPA and NMDA receptor regulation. *Neuropharmacology*, **2021**, 194, 108628 | 5.5 | 3 |
| 11 | Encephalitis patient-derived monoclonal GABAA receptor antibodies cause epileptic seizures. *Journal of Experimental Medicine*, **2021**, 218, | 16.6 | 3 |

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| 10 | In situ screening for postsynaptic cell adhesion molecules during synapse formation. *Journal of Biochemistry*, **2017**, 162, 295-302 | 3.1 | 2 |
| 9 | A genetically encoded red fluorescence dopamine biosensor enables dual imaging of dopamine and norepinephrine | | |
| 8 | MAGUKs are essential, but redundant, in long-term potentiation. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118, | 11.5 | 1 |
| 7 | A novel red fluorescence dopamine biosensor selectively detects dopamine in the presence of norepinephrine in vitro. *Molecular Brain*, **2021**, 14, 173 | 4.5 | 1 |
| 6 | Palmitoylation of the small GTPase Cdc42 by DHHC5 modulates spine formation and gene transcription. *Journal of Biological Chemistry*, **2022**, 102048 | 5.4 | 1 |
| 5 | 14-3-3 proteins stabilize LGI1-ADAM22 levels to regulate seizure thresholds in mice.. *Cell Reports*, **2021**, 37, 110107 | 10.6 | 0 |
| 4 | 2P021 Structural and functional studies of CLIP-170(Proteins-structure and structure-function relationship,Poster Presentations). *Seibutsu Butsuri*, **2007**, 47, S118 | 0 | |
| 3 | Functional phylogenetic analysis of LGI proteins identifies an interaction motif crucial for myelination. *Journal of Cell Science*, **2014**, 127, e1-e1 | 5.3 | |
| 2 | Local palmitoylation cycles define activity-regulated postsynaptic subdomains. *Journal of General Physiology*, **2013**, 142, 1422OIA19 | 3.4 | |
| 1 | Acyl-PEGyl exchange gel-shift (APEGS) assay for palmitoylation quantification **2021**, 65, 41-45 | | |