Marie E Burns

List of Publications by Year
in descending order

62 papers	4,413 citations	136740 32 h-index	143772 57 g-index
63 all docs	63 docs citations	63 times ranked	3356 citing authors

#	Article	IF	Citations
1	Slowed recovery of rod photoresponse in mice lacking the GTPase accelerating protein RGS9-1. Nature, 2000, 403, 557-560.	13.7	452
2	Activation, Deactivation, and Adaptation in Vertebrate Photoreceptor Cells. Annual Review of Neuroscience, 2001, 24, 779-805.	5.0	371
3	RGS Expression Rate-Limits Recovery of Rod Photoresponses. Neuron, 2006, 51, 409-416.	3.8	244
4	Rapid and Reproducible Deactivation of Rhodopsin Requires Multiple Phosphorylation Sites. Neuron, 2000, 28, 153-164.	3.8	243
5	Beyond Counting Photons: Trials and Trends in Vertebrate Visual Transduction. Neuron, 2005, 48, 387-401.	3.8	226
6	Dynamics of Cyclic GMP Synthesis in Retinal Rods. Neuron, 2002, 36, 81-91.	3.8	207
7	Role for the Target Enzyme in Deactivation of Photoreceptor G Protein in Vivo. , 1998, 282, 117-121.		180
8	Enhanced Arrestin Facilitates Recovery and Protects Rods Lacking Rhodopsin Phosphorylation. Current Biology, 2009, 19, 700-705.	1.8	178
9	Targeting CD38 with Daratumumab in Refractory Systemic Lupus Erythematosus. New England Journal of Medicine, 2020, 383, 1149-1155.	13.9	178
10	Photoreceptor Signaling: Supporting Vision across a Wide Range of Light Intensities. Journal of Biological Chemistry, 2012, 287, 1620-1626.	1.6	176
11	Synaptic structure and function: Dynamic organization yields architectural precision. Cell, 1995, 83, 187-194.	13.5	149
12	The DEP Domain Determines Subcellular Targeting of the GTPase Activating Protein RGS9<i>In Vivo</i>. Journal of Neuroscience, 2003, 23, 10175-10181.	1.7	113
13	In vivo optophysiology reveals that G-protein activation triggers osmotic swelling and increased light scattering of rod photoreceptors. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2937-E2946.	3.3	106
14	Absence of the RGS9Â·GÎ²5 GTPase-activating Complex in Photoreceptors of the R9AP Knockout Mouse. Journal of Biological Chemistry, 2004, 279, 1581-1584.	1.6	90
15	Prolonged Photoresponses and Defective Adaptation in Rods of GÎ²5-/- Mice. Journal of Neuroscience, 2003, 23, 6965-6971.	1.7	89
16	Transducin Î³-Subunit Sets Expression Levels of Î±- and Î²-Subunits and Is Crucial for Rod Viability. Journal of Neuroscience, 2008, 28, 3510-3520.	1.7	86
17	Lessons from Photoreceptors: Turning Off G-Protein Signaling in Living Cells. Physiology, 2010, 25, 72-84.	1.6	72
18	Control of Rhodopsin's Active Lifetime by Arrestin-1 Expression in Mammalian Rods. Journal of Neuroscience, 2010, 30, 3450-3457.	1.7	71

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19	Molecular profiling of resident and infiltrating mononuclear phagocytes during rapid adult retinal degeneration using single-cell RNA sequencing. Scientific Reports, 2019, 9, 4858.	1.6	67
20	<i>In vivo</i>wide-field multispectral scanning laser ophthalmoscopyâ€"optical coherence tomography mouse retinal imager: longitudinal imaging of ganglion cells, microglia, and MÃ¼ller glia, and mapping of the mouse retinal and choroidal vasculature. Journal of Biomedical Optics, 2015, 20, 126005.	1.4	64
21	Calcium Feedback to cGMP Synthesis Strongly Attenuates Single-Photon Responses Driven by Long Rhodopsin Lifetimes. Neuron, 2012, 76, 370-382.	3.8	55
22	Current understanding of signal amplification in phototransduction. Cellular Logistics, 2014, 4, e29390.	0.9	55
23	Adaptive-optics SLO imaging combined with widefield OCT and SLO enables precise 3D localization of fluorescent cells in the mouse retina. Biomedical Optics Express, 2015, 6, 2191.	1.5	53
24	Novel Form of Adaptation in Mouse Retinal Rods Speeds Recovery of Phototransduction. Journal of General Physiology, 2003, 122, 703-712.	0.9	52
25	RGS9 Concentration Matters in Rod Phototransduction. Biophysical Journal, 2009, 97, 1538-1547.	0.2	47
26	Deactivation of Phosphorylated and Nonphosphorylated Rhodopsin by Arrestin Splice Variants. Journal of Neuroscience, 2006, 26, 1036-1044.	1.7	46
27	Monocyte infiltration rather than microglia proliferation dominates the early immune response to rapid photoreceptor degeneration. Journal of Neuroinflammation, 2018, 15, 344.	3.1	46
28	In vivo imaging reveals transient microglia recruitment and functional recovery of photoreceptor signaling after injury. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16603-16612.	3.3	46
29	PRCD is essential for high-fidelity photoreceptor disc formation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13087-13096.	3.3	44
30	Phosducin Regulates Transmission at thePhotoreceptor-to-ON-Bipolar Cell Synapse. Journal of Neuroscience, 2010, 30, 3239-3253.	1.7	42
31	Functional Comparisons of Visual Arrestins in Rod Photoreceptors of Transgenic Mice. , 2007, 48, 1968.		41
32	Spatiotemporal cGMP Dynamics in Living Mouse Rods. Biophysical Journal, 2012, 102, 1775-1784.	0.2	40
33	In vivo multimodal retinal imaging of disease-related pigmentary changes in retinal pigment epithelium. Scientific Reports, 2021, 11, 16252.	1.6	40
34	Disrupted Blood-Retina Lysophosphatidylcholine Transport Impairs Photoreceptor Health But Not Visual Signal Transduction. Journal of Neuroscience, 2019, 39, 9689-9701.	1.7	38
35	Rapid light-induced activation of retinal microglia in mice lacking Arrestin-1. Vision Research, 2014, 102, 71-79.	0.7	37
36	Phosducin Regulates the Expression of Transducin Î²Î³ Subunits in Rod Photoreceptors and Does Not Contribute to Phototransduction Adaptation. Journal of General Physiology, 2007, 130, 303-312.	0.9	30

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37	Loss of cone function without degeneration in a novel Gnat2 knock-out mouse. Experimental Eye Research, 2018, 171, 111-118.	1.2	30
38	N-Terminal Fatty Acylation of Transducin Profoundly Influences Its Localization and the Kinetics of Photoresponse in Rods. Journal of Neuroscience, 2007, 27, 10270-10277.	1.7	29
39	Functional comparison of RGS9 splice isoforms in a living cell. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20988-20993.	3.3	27
40	Lack of proteinâ€tyrosine sulfation disrupts photoreceptor outer segment morphogenesis, retinal function and retinal anatomy. European Journal of Neuroscience, 2010, 32, 1461-1472.	1.2	24
41	Phototransduction in a Transgenic Mouse Model of Nougaret Night Blindness. Journal of Neuroscience, 2006, 26, 6863-6872.	1.7	21
42	cGMP in mouse rods: the spatiotemporal dynamics underlying single photon responses. Frontiers in Molecular Neuroscience, 2015, 8, 6.	1.4	20
43	Microglia Activation and Inflammation During the Death of Mammalian Photoreceptors. Annual Review of Vision Science, 2020, 6, 149-169.	2.3	20
44	Membrane Attachment Is Key to Protecting Transducin GTPase-Activating Complex from Intracellular Proteolysis in Photoreceptors. Journal of Neuroscience, 2011, 31, 14660-14668.	1.7	19
45	Rapid monocyte infiltration following retinal detachment is dependent on non-canonical IL6 signaling through gp130. Journal of Neuroinflammation, 2017, 14, 121.	3.1	18
46	In Situ Morphologic and Spectral Characterization of Retinal Pigment Epithelium Organelles in Mice Using Multicolor Confocal Fluorescence Imaging. , 2020, 61, 1.		16
47	RBX2 maintains final retinal cell position in a DAB1-dependent and -independent fashion. Development (Cambridge), 2018, 145, .	1.2	13
48	Novel window for cancer nanotheranostics: non-invasive ocular assessments of tumor growth and nanotherapeutic treatment efficacy in vivo. Biomedical Optics Express, 2019, 10, 151.	1.5	13
49	Bright flash response recovery of mammalian rods in vivo is rate limited by RGS9. Journal of General Physiology, 2017, 149, 443-454.	0.9	12
50	From Molecules to Behavior. Neuron, 2003, 38, 853-856.	3.8	11
51	Loss of the K+ channel Kv2.1 greatly reduces outward dark current and causes ionic dysregulation and degeneration in rod photoreceptors. Journal of General Physiology, 2021, 153, .	0.9	11
52	Deactivation Mechanisms of Rod Phototransduction: The Cogan Lecture. , 2010, 51, 1283.		10
53	Report on the National Eye Instituteâ€™s Audacious Goals Initiative: Creating a Cellular Environment for Neuroregeneration. ENeuro, 2018, 5, ENEURO.0035-18.2018.	0.9	9
54	The F220C and F45L rhodopsin mutations identified in retinitis pigmentosa patients do not cause pathology in mice. Scientific Reports, 2020, 10, 7538.	1.6	7

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55	Rhodopsin in the rod surface membrane regenerates more rapidly than bulk rhodopsin in the disc membranes <i>in vivo</i>. Journal of Physiology, 2014, 592, 2785-2797.	1.3	6
56	Speeding rod recovery improves temporal resolution in the retina. Vision Research, 2015, 110, 57-67.	0.7	6
57	Biological Role of Arrestin-1 Oligomerization. Journal of Neuroscience, 2020, 40, 8055-8069.	1.7	5
58	Absence of Synaptic Regulation by Phosducin in Retinal Slices. PLoS ONE, 2013, 8, e83970.	1.1	4
59	Harnessing the Sun to See Anew. Neuron, 2019, 102, 1093-1095.	3.8	3
60	Tracking distinct microglia subpopulations with photoconvertible Dendra2 in vivo. Journal of Neuroinflammation, 2021, 18, 235.	3.1	3
61	New Developments in Murine Imaging for Assessing Photoreceptor Degeneration In Vivo. Advances in Experimental Medicine and Biology, 2016, 854, 269-275.	0.8	2
62	Enhanced Arrestin Facilitates Recovery and Protects Rods Lacking Rhodopsin Phosphorylation. Current Biology, 2009, 19, 798.	1.8	0