Vadim Y Arshavsky

List of Publications by Year
in descending order

100 papers	6,921 citations	57758 44 h-index	69250 77 g-index
104 all docs	104 docs citations	104 times ranked	4788 citing authors

#	Article	IF	Citations
1	Absence of S100A4 in the mouse lens induces an aberrant retina-specific differentiation program and cataract. Scientific Reports, 2021, 11, 2203.	3.3	8
2	Deletion of the phosphatase INPP5E in the murine retina impairs photoreceptor axoneme formation and prevents disc morphogenesis. Journal of Biological Chemistry, 2021, 296, 100529.	3.4	15
3	TMEM67, TMEM237, and Embigin in Complex With Monocarboxylate Transporter MCT1 Are Unique Components of the Photoreceptor Outer Segment Plasma Membrane. Molecular and Cellular Proteomics, 2021, 20, 100088.	3.8	14
4	The GARP Domain of the Rod CNG Channel's Î²1-Subunit Contains Distinct Sites for Outer Segment Targeting and Connecting to the Photoreceptor Disk Rim. Journal of Neuroscience, 2021, 41, 3094-3104.	3.6	10
5	Photoreceptor Disc Enclosure Is Tightly Controlled by Peripherin-2 Oligomerization. Journal of Neuroscience, 2021, 41, 3588-3596.	3.6	14
6	Unusual mode of dimerization of retinitis pigmentosa-associated F220C rhodopsin. Scientific Reports, 2021, 11, 10536.	3.3	7
7	Apical CLCâ€2 in retinal pigment epithelium is crucial for survival of the outer retina. FASEB Journal, 2021, 35, e21689.	0.5	6
8	Highly photostable fluorescent labeling of proteins in live cells using exchangeable coiled coils heterodimerization. Cellular and Molecular Life Sciences, 2020, 77, 4429-4440.	5.4	10
9	Photoreceptor Discs: Built Like Ectosomes. Trends in Cell Biology, 2020, 30, 904-915.	7.9	50
10	Advancing Clinical Trials for Inherited Retinal Diseases: Recommendations from the Second Monaciano Symposium. Translational Vision Science and Technology, 2020, 9, 2.	2.2	56
11	Progressive optic atrophy in a retinal ganglion cell-specific mouse model of complex I deficiency. Scientific Reports, 2020, 10, 16326.	3.3	8
12	The F220C and F45L rhodopsin mutations identified in retinitis pigmentosa patients do not cause pathology in mice. Scientific Reports, 2020, 10, 7538.	3.3	7
13	Multimodal Coherent Imaging of Retinal Biomarkers of Alzheimerâ€™s Disease in a Mouse Model. Scientific Reports, 2020, 10, 7912.	3.3	16
14	Photoreceptor Disc Enclosure Occurs in the Absence of Normal Peripherin-2/rds Oligomerization. Frontiers in Cellular Neuroscience, 2020, 14, 92.	3.7	12
15	Phosphoinositide Profile of the Mouse Retina. Cells, 2020, 9, 1417.	4.1	17
16	Comprehensive identification of mRNA isoforms reveals the diversity of neural cell-surface molecules with roles in retinal development and disease. Nature Communications, 2020, 11, 3328.	12.8	69
17	Probing Proteostatic Stress in Degenerating Photoreceptors Using Two Complementary<i>In Vivo</i>Reporters of Proteasomal Activity. ENeuro, 2020, 7, ENEURO.0428-19.2019.	1.9	7
18	Photoreceptors in a mouse model of Leigh syndrome are capable of normal light-evoked signaling. Journal of Biological Chemistry, 2019, 294, 12432-12443.	3.4	11

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19	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.	7.1	44
20	Microglial Function Is Distinct in Different Anatomical Locations during Retinal Homeostasis and Degeneration. Immunity, 2019, 50, 723-737.e7.	14.3	235
21	Photoreceptor disc membranes are formed through an Arp2/3-dependent lamellipodium-like mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 27043-27052.	7.1	43
22	Disrupted Blood-Retina Lysophosphatidylcholine Transport Impairs Photoreceptor Health But Not Visual Signal Transduction. Journal of Neuroscience, 2019, 39, 9689-9701.	3.6	38
23	PRCD Is a Small Disc-Specific Rhodopsin-Binding Protein of Unknown Function. Advances in Experimental Medicine and Biology, 2019, 1185, 531-535.	1.6	3
24	C8ORF37 Is Required for Photoreceptor Outer Segment Disc Morphogenesis by Maintaining Outer Segment Membrane Protein Homeostasis. Journal of Neuroscience, 2018, 38, 3160-3176.	3.6	14
25	Increased proteasomal activity supports photoreceptor survival in inherited retinal degeneration. Nature Communications, 2018, 9, 1738.	12.8	65
26	Dopamine-Dependent Sensitization of Rod Bipolar Cells by GABA Is Conveyed through Wide-Field Amacrine Cells. Journal of Neuroscience, 2018, 38, 723-732.	3.6	21
27	Transducin Î²-Subunit Can Interact with Multiple G-Protein Î³-Subunits to Enable Light Detection by Rod Photoreceptors. ENeuro, 2018, 5, ENEURO.0144-18.2018.	1.9	7
28	Photoreceptor discs form through peripherin-dependent suppression of ciliary ectosome release. Journal of Cell Biology, 2017, 216, 1489-1499.	5.2	118
29	Loss of Arf4 causes severe degeneration of the exocrine pancreas but not cystic kidney disease or retinal degeneration. PLoS Genetics, 2017, 13, e1006740.	3.5	27
30	Analyzing spatial correlations in tissue using angle-resolved low coherence interferometry measurements guided by co-located optical coherence tomography. Biomedical Optics Express, 2016, 7, 1400.	2.9	14
31	Progressive Rodâ€"Cone Degeneration (PRCD) Protein Requires N-Terminal S-Acylation and Rhodopsin Binding for Photoreceptor Outer Segment Localization and Maintaining Intracellular Stability. Biochemistry, 2016, 55, 5028-5037.	2.5	28
32	Dimerization deficiency of enigmatic retinitis pigmentosa-linked rhodopsin mutants. Nature Communications, 2016, 7, 12832.	12.8	54
33	Discs of mammalian rod photoreceptors form through the membrane evagination mechanism. Journal of Cell Biology, 2015, 211, 495-502.	5.2	96
34	Guanylate cyclase 1 relies on rhodopsin for intracellular stability and ciliary trafficking. ELife, 2015, 4, .	6.0	30
35	R9AP targeting to rod outer segments is independent of rhodopsin and is guided by the SNARE homology domain. Molecular Biology of the Cell, 2014, 25, 2644-2649.	2.1	16
36	Current understanding of signal amplification in phototransduction. Cellular Logistics, 2014, 4, e29390.	0.9	55

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37	Automatic segmentation of up to ten layer boundaries in SD-OCT images of the mouse retina with and without missing layers due to pathology. Biomedical Optics Express, 2014, 5, 348.	2.9	104
38	Protein sorting, targeting and trafficking in photoreceptor cells. Progress in Retinal and Eye Research, 2013, 36, 24-51.	15.5	167
39	Proteomic Identification of Unique Photoreceptor Disc Components Reveals the Presence of PRCD, a Protein Linked to Retinal Degeneration. Journal of Proteome Research, 2013, 12, 3010-3018.	3.7	53
40	Proteasome overload is a common stress factor in multiple forms of inherited retinal degeneration. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9986-9991.	7.1	94
41	A Single Valine Residue Plays an Essential Role in Peripherin/rds Targeting to Photoreceptor Outer Segments. PLoS ONE, 2013, 8, e54292.	2.5	36
42	Absence of Synaptic Regulation by Phosducin in Retinal Slices. PLoS ONE, 2013, 8, e83970.	2.5	4
43	The Relationship between Slow Photoresponse Recovery Rate and Temporal Resolution of Vision. Journal of Neuroscience, 2012, 32, 14364-14373.	3.6	26
44	Regulator of G-protein Signaling-21 (RGS21) Is an Inhibitor of Bitter Gustatory Signaling Found in Lingual and Airway Epithelia. Journal of Biological Chemistry, 2012, 287, 41706-41719.	3.4	28
45	CNG-Modulin: A Novel Ca-Dependent Modulator of Ligand Sensitivity in Cone Photoreceptor cGMP-Gated Ion Channels. Journal of Neuroscience, 2012, 32, 3142-3153.	3.6	37
46	Photoreceptor Signaling: Supporting Vision across a Wide Range of Light Intensities. Journal of Biological Chemistry, 2012, 287, 1620-1626.	3.4	176
47	Phosphorylation of G Protein-coupled Receptor Kinase 1 (GRK1) Is Regulated by Light but Independent of Phototransduction in Rod Photoreceptors. Journal of Biological Chemistry, 2011, 286, 20923-20929.	3.4	16
48	Rod Vision Is Controlled by Dopamine-Dependent Sensitization of Rod Bipolar Cells by GABA. Neuron, 2011, 72, 101-110.	8.1	93
49	Membrane Attachment Is Key to Protecting Transducin GTPase-Activating Complex from Intracellular Proteolysis in Photoreceptors. Journal of Neuroscience, 2011, 31, 14660-14668.	3.6	19
50	Integrating energy calculations with functional assays to decipher the specificity of G proteinâ€“RGS protein interactions. Nature Structural and Molecular Biology, 2011, 18, 846-853.	8.2	41
51	Facilitative glucose transporter Glut1 is actively excluded from rod outer segments. Journal of Cell Science, 2010, 123, 3639-3644.	2.0	53
52	Mechanistic Basis for the Failure of Cone Transducin to Translocate: Why Cones Are Never Blinded by Light. Journal of Neuroscience, 2010, 30, 6815-6824.	3.6	54
53	Phosducin Regulates Transmission at thePhotoreceptor-to-ON-Bipolar Cell Synapse. Journal of Neuroscience, 2010, 30, 3239-3253.	3.6	42
54	Heparan Sulfate, Including That in Bruchâ€™s Membrane, Inhibits the Complement Alternative Pathway: Implications for Age-Related Macular Degeneration. Journal of Immunology, 2010, 185, 5486-5494.	0.8	45

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55	Ankyrin-G Promotes Cyclic Nucleotideâ€"Gated Channel Transport to Rod Photoreceptor Sensory Cilia. Science, 2009, 323, 1614-1617.	12.6	70
56	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.	7.1	27
57	Transducin Î³-Subunit Sets Expression Levels of Î±- and Î²-Subunits and Is Crucial for Rod Viability. Journal of Neuroscience, 2008, 28, 3510-3520.	3.6	86
58	Electrostatic and Lipid Anchor Contributions to the Interaction of Transducin with Membranes. Journal of Biological Chemistry, 2008, 283, 31197-31207.	3.4	36
59	Direct Allosteric Regulation between the GAF Domain and Catalytic Domain of Photoreceptor Phosphodiesterase PDE6. Journal of Biological Chemistry, 2008, 283, 29699-29705.	3.4	20
60	The outer segment serves as a default destination for the trafficking of membrane proteins in photoreceptors. Journal of Cell Biology, 2008, 183, 485-498.	5.2	83
61	Transducin Translocation in Rods Is Triggered by Saturation of the GTPase-Activating Complex. Journal of Neuroscience, 2007, 27, 1151-1160.	3.6	80
62	Structure and function of the visual arrestin oligomer. EMBO Journal, 2007, 26, 1726-1736.	7.8	104
63	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.	1.9	30
64	RGS Expression Rate-Limits Recovery of Rod Photoresponses. Neuron, 2006, 51, 409-416.	8.1	244
65	Light-driven translocation of signaling proteins in vertebrate photoreceptors. Trends in Cell Biology, 2006, 16, 560-568.	7.9	202
66	The N Terminus of GTPÎ³S-activated Transducin Î±-Subunit Interacts with the C Terminus of the cGMP Phosphodiesterase Î³-Subunit. Journal of Biological Chemistry, 2006, 281, 6194-6202.	3.4	20
67	Arrestin Translocation Is Induced at a Critical Threshold of Visual Signaling and Is Superstoichiometric to Bleached Rhodopsin. Journal of Neuroscience, 2006, 26, 1146-1153.	3.6	135
68	R7BP, a Novel Neuronal Protein Interacting with RGS Proteins of the R7 Family. Journal of Biological Chemistry, 2005, 280, 5133-5136.	3.4	136
69	Recoverin Undergoes Light-dependent Intracellular Translocation in Rod Photoreceptors. Journal of Biological Chemistry, 2005, 280, 29250-29255.	3.4	95
70	Sulfhydryl-Reactive, Cleavable, and Radioiodinatable Benzophenone Photoprobes for Study of Proteinâ˘'Protein Interaction. Bioconjugate Chemistry, 2005, 16, 685-693.	3.6	26
71	Recoverin Improves Rod-Mediated Vision by Enhancing Signal Transmission in the Mouse Retina. Neuron, 2005, 46, 413-420.	8.1	101
72	Beyond Counting Photons: Trials and Trends in Vertebrate Visual Transduction. Neuron, 2005, 48, 387-401.	8.1	226

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73	Kinetic Approaches to Study the Function of RGS9 Isoforms. Methods in Enzymology, 2004, 390, 196-209.	1.0	12
74	Phosducin Facilitates Light-driven Transducin Translocation in Rod Photoreceptors. Journal of Biological Chemistry, 2004, 279, 19149-19156.	3.4	108
75	Absence of the RGS9Â·GÎ²5 GTPase-activating Complex in Photoreceptors of the R9AP Knockout Mouse. Journal of Biological Chemistry, 2004, 279, 1581-1584.	3.4	90
76	Defects in RGS9 or its anchor protein R9AP in patients with slow photoreceptor deactivation. Nature, 2004, 427, 75-78.	27.8	159
77	Specificity of G Protein-RGS Protein Recognition Is Regulated by Affinity Adapters. Neuron, 2003, 38, 857-862.	8.1	41
78	RPGR Isoforms in Photoreceptor Connecting Cilia and the Transitional Zone of Motile Cilia. , 2003, 44, 2413.		205
79	The DEP Domain Determines Subcellular Targeting of the GTPase Activating Protein RGS9<i>In Vivo</i>. Journal of Neuroscience, 2003, 23, 10175-10181.	3.6	113
80	G Proteins and Phototransduction. Annual Review of Physiology, 2002, 64, 153-187.	13.1	593
81	Ubiquitylation of the Transducin Î²Î³ Subunit Complex. Journal of Biological Chemistry, 2002, 277, 44566-44575.	3.4	54
82	Two Temporal Phases of Light Adaptation in Retinal Rods. Journal of General Physiology, 2002, 119, 129-146.	1.9	56
83	Noncatalytic Domains of RGS9-1Â·GÎ²5L Play a Decisive Role in Establishing Its Substrate Specificity. Journal of Biological Chemistry, 2002, 277, 32843-32848.	3.4	23
84	Specific Binding of RGS9-GÎ²5L to Protein Anchor in Photoreceptor Membranes Greatly Enhances Its Catalytic Activity. Journal of Biological Chemistry, 2002, 277, 24376-24381.	3.4	67
85	Massive Light-Driven Translocation of Transducin between the Two Major Compartments of Rod Cells. Neuron, 2002, 34, 95-106.	8.1	334
86	Like Night and Day. Neuron, 2002, 36, 1-3.	8.1	54
87	Rhodopsin phosphorylation: from terminating single photon responses to photoreceptor dark adaptation. Trends in Neurosciences, 2002, 25, 124-126.	8.6	58
88	RGS9-GÎ²5 Substrate Selectivity in Photoreceptors. Journal of Biological Chemistry, 2001, 276, 37365-37372.	3.4	59
89	[35] Enzymology of GTPase acceleration in phototransduction. Methods in Enzymology, 2000, 315, 524-538.	1.0	31
90	The Effector Enzyme Regulates the Duration of G Protein Signaling in Vertebrate Photoreceptors by Increasing the Affinity between Transducin and RGS Protein. Journal of Biological Chemistry, 2000, 275, 32716-32720.	3.4	63

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91	Photoreceptor Light Adaptation. Journal of General Physiology, 2000, 116, 791-794.	1.9	25
92	The Gain of Rod Phototransduction. Neuron, 2000, 27, 525-537.	8.1	176
93	Lifetime Regulation of G Proteinâ€"Effector Complex: Emerging Importance of RGS Proteins. Neuron, 1998, 20, 11-14.	8.1	95
94	Role for the Target Enzyme in Deactivation of Photoreceptor G Protein in Vivo. , 1998, 282, 117-121.		180
95	Onset of Feedback Reactions Underlying Vertebrate Rod Photoreceptor Light Adaptation. Journal of General Physiology, 1998, 111, 39-51.	1.9	54
96	The Regulation of the cGMP-binding cGMP Phosphodiesterase by Proteins That Are Immunologically Related to Î³ Subunit of the Photoreceptor cGMP Phosphodiesterase. Journal of Biological Chemistry, 1997, 272, 18397-18403.	3.4	43
97	Interaction Sites of the COOH-terminal Region of the Î³ Subunit of cGMP Phosphodiesterase with the GTP-bound Î± Subunit of Transducin. Journal of Biological Chemistry, 1996, 271, 26900-26907.	3.4	35
98	Phosphorylation of Non-bleached Rhodopsin in Intact Retinas and Living Frogs. Journal of Biological Chemistry, 1996, 271, 19826-19830.	3.4	30
99	What are the mechanisms of photoreceptor adaptation?. Behavioral and Brain Sciences, 1995, 18, 415-424.	0.7	41
100	An Effector Site That Stimulates G-protein GTPase in Photoreceptors. Journal of Biological Chemistry, 1995, 270, 14319-14324.	3.4	67