

Nikolai O Artemyev

List of Publications by Year in descending order

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108
papers

3,391
citations

109321

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h-index

182427

51
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109
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109
docs citations

109
times ranked

2319
citing authors

#	ARTICLE	IF	CITATIONS
1	A homologous genetic basis of the murine <i>cpfl1</i> mutant and human achromatopsia linked to mutations in the <i>PDE6C</i> gene. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 19581-19586.	7.1	178
2	A site on rod G protein alpha subunit that mediates effector activation. Science, 1992, 256, 1031-1033.	12.6	106
3	AGS3 Inhibits GDP Dissociation from G $\beta\gamma$ Subunits of the Gi Family and Rhodopsin-dependent Activation of Transducin. Journal of Biological Chemistry, 2000, 275, 40981-40985.	3.4	102
4	Intrinsically disordered β -subunit of cGMP phosphodiesterase encodes functionally relevant transient secondary and tertiary structure. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1505-1510.	7.1	89
5	Inhibition of GDP/GTP Exchange on G $\beta\gamma$ Subunits by Proteins Containing G-Protein Regulatory Motifs. Biochemistry, 2001, 40, 5322-5328.	2.5	88
6	Dysregulation of Ca _v 1.4 channels disrupts the maturation of photoreceptor synaptic ribbons in congenital stationary night blindness type 2. Channels, 2013, 7, 514-523.	2.8	87
7	A nonhuman primate model of inherited retinal disease. Journal of Clinical Investigation, 2019, 129, 863-874.	8.2	78
8	Active sites of the cyclic GMP phosphodiesterase β -subunit of retinal rod outer segments. FEBS Letters, 1988, 234, 287-290.	2.8	71
9	The β Subunit of Rod cGMP-Phosphodiesterase Blocks the Enzyme Catalytic Site. Journal of Biological Chemistry, 1997, 272, 11686-11689.	3.4	68
10	An Effector Site That Stimulates G-protein GTPase in Photoreceptors. Journal of Biological Chemistry, 1995, 270, 14319-14324.	3.4	67
11	The Carboxyl Terminus of the β -Subunit of Rod cGMP Phosphodiesterase Contains Distinct Sites of Interaction with the Enzyme Catalytic Subunits and the α -Subunit of Transducin. Journal of Biological Chemistry, 1995, 270, 13210-13215.	3.4	65
12	Characterization of the G $\beta\gamma$ s Regulator Cysteine String Protein. Journal of Biological Chemistry, 2005, 280, 30236-30241.	3.4	62
13	Decreased catalytic activity and altered activation properties of PDE6C mutants associated with autosomal recessive achromatopsia. Human Molecular Genetics, 2011, 20, 719-730.	2.9	61
14	Mechanism of photoreceptor cGMP phosphodiesterase inhibition by its gamma-subunits.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 5407-5412.	7.1	59
15	Probing Domain Functions of Chimeric PDE6 β /PDE5 cGMP-Phosphodiesterase. Journal of Biological Chemistry, 1998, 273, 24485-24490.	3.4	58
16	The Trimeric GTP-binding Protein (Gq/G11) β Subunit Is Required for Insulin-stimulated GLUT4 Translocation in 3T3L1 Adipocytes. Journal of Biological Chemistry, 2000, 275, 7167-7175.	3.4	58
17	Structural basis of phosphodiesterase 6 inhibition by the C-terminal region of the β -subunit. EMBO Journal, 2009, 28, 3613-3622.	7.8	57
18	β -4 Is Required for the Molecular and Structural Organization of Rod and Cone Photoreceptor Synapses. Journal of Neuroscience, 2018, 38, 6145-6160.	3.6	56

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19	Transducin Activation State Controls Its Light-dependent Translocation in Rod Photoreceptors. <i>Journal of Biological Chemistry</i> , 2005, 280, 41069-41076.	3.4	54
20	The PDE6 mutation in the rd10 retinal degeneration mouse model causes protein mislocalization and instability and promotes cell death through increased ion influx. <i>Journal of Biological Chemistry</i> , 2018, 293, 15332-15346.	3.4	53
21	Regulation of Transducin GTPase Activity by Human Retinal RGS. <i>Journal of Biological Chemistry</i> , 1997, 272, 17444-17449.	3.4	51
22	Light-Dependent Compartmentalization of Transducin in Rod Photoreceptors. <i>Molecular Neurobiology</i> , 2008, 37, 44-51.	4.0	48
23	Direct Interaction of the Inhibitory $\hat{\Gamma}^3$ -Subunit of Rod cGMP Phosphodiesterase (PDE6) with the PDE6 GAFa Domains. <i>Biochemistry</i> , 2002, 41, 3884-3890.	2.5	47
24	Mutational Analysis of the Asn Residue Essential for RGS Protein Binding to G-proteins. <i>Journal of Biological Chemistry</i> , 1998, 273, 6731-6735.	3.4	43
25	The Inhibitory $\hat{\Gamma}^3$ Subunit of the Rod cGMP Phosphodiesterase Binds the Catalytic Subunits in an Extended Linear Structure*. <i>Journal of Biological Chemistry</i> , 2006, 281, 15412-15422.	3.4	42
26	Rod phosphodiesterase-6 PDE6A and PDE6B Subunits Are Enzymatically Equivalent. <i>Journal of Biological Chemistry</i> , 2010, 285, 39828-39834.	3.4	42
27	Interaction of Transducin with Uncoordinated 119 Protein (UNC119). <i>Journal of Biological Chemistry</i> , 2011, 286, 28954-28962.	3.4	42
28	Rhodopsin Determinants for Transducin Activation. <i>Journal of Biological Chemistry</i> , 2003, 278, 37574-37581.	3.4	40
29	Asymmetric Interaction between Rod Cyclic GMP Phosphodiesterase $\hat{\Gamma}^3$ Subunits and $\hat{\Gamma}^2$ Subunits. <i>Journal of Biological Chemistry</i> , 2005, 280, 12585-12592.	3.4	40
30	Identification of Effector Residues on Photoreceptor G Protein, Transducin. <i>Journal of Biological Chemistry</i> , 1998, 273, 21808-21815.	3.4	39
31	Probing the mechanism of rhodopsin-catalyzed transducin activation. <i>Journal of Neurochemistry</i> , 2001, 77, 202-210.	3.9	39
32	The GAFa Domains of Rod cGMP-phosphodiesterase 6 Determine the Selectivity of the Enzyme Dimerization. <i>Journal of Biological Chemistry</i> , 2003, 278, 10594-10601.	3.4	39
33	Transducin translocation contributes to rod survival and enhances synaptic transmission from rods to rod bipolar cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 12468-12473.	7.1	39
34	Luteinizing Hormone Causes Phosphorylation and Activation of the cGMP Phosphodiesterase PDE5 in Rat Ovarian Follicles, Contributing, Together with PDE1 Activity, to the Resumption of Meiosis I. <i>Biology of Reproduction</i> , 2016, 94, 110.	2.7	39
35	Mutation in Rod PDE6 Linked to Congenital Stationary Night Blindness Impairs the Enzyme Inhibition by Its $\hat{\Gamma}^3$ -Subunit. <i>Biochemistry</i> , 2003, 42, 3305-3310.	2.5	38
36	Mechanisms of dominant negative $\hat{\Gamma}$ protein $\hat{\Gamma}^2$ subunits. <i>Journal of Neuroscience Research</i> , 2007, 85, 3505-3514.	2.9	38

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37	A Single Mutation Asp229 → Ser Confers upon Gs α the Ability To Interact with Regulators of G Protein Signaling. <i>Biochemistry</i> , 1998, 37, 13776-13780.	2.5	35
38	Rhodopsin Recognition by Mutant Gs α Containing C-terminal Residues of Transducin. <i>Journal of Biological Chemistry</i> , 2000, 275, 2669-2675.	3.4	35
39	Aryl Hydrocarbon Receptor-interacting Protein-like 1 Is an Obligate Chaperone of Phosphodiesterase 6 and Is Assisted by the β -Subunit of Its Client. <i>Journal of Biological Chemistry</i> , 2016, 291, 16282-16291.	3.4	35
40	An Interface of Interaction between Photoreceptor cGMP Phosphodiesterase Catalytic Subunits and Inhibitory β Subunits. <i>Journal of Biological Chemistry</i> , 1996, 271, 19964-19969.	3.4	34
41	A Conformational Switch in the Inhibitory β -Subunit of PDE6 upon Enzyme Activation by Transducin. <i>Biochemistry</i> , 2001, 40, 13209-13215.	2.5	34
42	Mechanisms of mutant PDE6 proteins underlying retinal diseases. <i>Cellular Signalling</i> , 2017, 37, 74-80.	3.6	33
43	Photoreceptor Phosphodiesterase: Interaction of Inhibitory β Subunit and Cyclic GMP with Specific Binding Sites on Catalytic Subunits. <i>Methods</i> , 1998, 14, 93-104.	3.8	32
44	Structural determinants of the PDE6 GAF A domain for binding the inhibitory β -subunit and noncatalytic cGMP. <i>Vision Research</i> , 2004, 44, 2437-2444.	1.4	32
45	Interaction of Aryl Hydrocarbon Receptor-interacting Protein-like 1 with the Farnesyl Moiety. <i>Journal of Biological Chemistry</i> , 2013, 288, 21320-21328.	3.4	32
46	Roles of the Transducin β -Subunit Helix β 4 Loop in the Receptor and Effector Interactions. <i>Journal of Biological Chemistry</i> , 1999, 274, 7865-7869.	3.4	31
47	Loss of the Effector Function in a Transducin- β Mutant Associated with Nougaret Night Blindness. <i>Journal of Biological Chemistry</i> , 2000, 275, 6969-6974.	3.4	31
48	Identification of the β Subunit-interacting Residues on Photoreceptor cGMP Phosphodiesterase, PDE6. <i>Journal of Biological Chemistry</i> , 2000, 275, 41258-41262.	3.4	31
49	N-Terminal Fatty Acylation of Transducin Profoundly Influences Its Localization and the Kinetics of Photoresponse in Rods. <i>Journal of Neuroscience</i> , 2007, 27, 10270-10277.	3.6	29
50	Exchange of Cone for Rod Phosphodiesterase 6 Catalytic Subunits in Rod Photoreceptors Mimics in Part Features of Light Adaptation. <i>Journal of Neuroscience</i> , 2015, 35, 9225-9235.	3.6	29
51	Substitution of Transducin Ser202 by Asp Abolishes G-protein/RGS Interaction. <i>Journal of Biological Chemistry</i> , 1998, 273, 4300-4303.	3.4	27
52	Modulation of Transducin GTPase Activity by Chimeric RGS16 and RGS9 Regulators of G Protein Signaling and the Effector Molecule. <i>Biochemistry</i> , 1999, 38, 4931-4937.	2.5	27
53	Partial Reconstitution of Photoreceptor cGMP Phosphodiesterase Characteristics in cGMP Phosphodiesterase-5. <i>Journal of Biological Chemistry</i> , 2001, 276, 21698-21703.	3.4	27
54	Interaction of transducin- β with LGN, a G-protein modulator expressed in photoreceptor cells. <i>Molecular and Cellular Neurosciences</i> , 2005, 28, 485-495.	2.2	27

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55	Analysis of PDE6 function using chimeric PDE5/6 catalytic domains. <i>Vision Research</i> , 2006, 46, 860-868.	1.4	27
56	PDE6 in Lamprey <i>Petromyzon marinus</i> : Implications for the Evolution of the Visual Effector in Vertebrates. <i>Biochemistry</i> , 2007, 46, 9992-10000.	2.5	27
57	Binding of Transducin to Light-Activated Rhodopsin Prevents Transducin Interaction with the Rod cGMP Phosphodiesterase β -Subunit. <i>Biochemistry</i> , 1997, 36, 4188-4193.	2.5	26
58	Unique transducins expressed in long and short photoreceptors of lamprey <i>Petromyzon marinus</i> . <i>Vision Research</i> , 2008, 48, 2302-2308.	1.4	26
59	Characterization of Human Cone Phosphodiesterase-6 Ectopically Expressed in <i>Xenopus laevis</i> Rods. <i>Journal of Biological Chemistry</i> , 2009, 284, 32662-32669.	3.4	26
60	Hsp40 Couples with the CSP β Chaperone Complex upon Induction of the Heat Shock Response. <i>PLoS ONE</i> , 2009, 4, e4595.	2.5	25
61	Subunit Structure of Rod cGMP-Phosphodiesterase. <i>Journal of Biological Chemistry</i> , 1996, 271, 25382-25388.	3.4	24
62	A Truncated Form of Rod Photoreceptor PDE6 β -Subunit Causes Autosomal Dominant Congenital Stationary Night Blindness by Interfering with the Inhibitory Activity of the β -Subunit. <i>PLoS ONE</i> , 2014, 9, e95768.	2.5	24
63	A GPR-Protein Interaction Surface of G β : Implications for the Mechanism of GDP-Release Inhibition. <i>Biochemistry</i> , 2002, 41, 258-265.	2.5	23
64	Structural underpinnings of Ric8A function as a G-protein β -subunit chaperone and guanine-nucleotide exchange factor. <i>Nature Communications</i> , 2019, 10, 3084.	12.8	22
65	A dual role for Cav1.4 Ca ²⁺ channels in the molecular and structural organization of the rod photoreceptor synapse. <i>eLife</i> , 2020, 9, .	6.0	22
66	Phototransduction in a Transgenic Mouse Model of Nougaret Night Blindness. <i>Journal of Neuroscience</i> , 2006, 26, 6863-6872.	3.6	21
67	AIP1: A specialized chaperone for the phototransduction effector. <i>Cellular Signalling</i> , 2017, 40, 183-189.	3.6	21
68	[2] Specific peptide probes for G-protein interaction with effectors. <i>Methods in Enzymology</i> , 1994, 238, 13-28.	1.0	20
69	Diffusion and light-dependent compartmentalization of transducin. <i>Molecular and Cellular Neurosciences</i> , 2011, 46, 340-346.	2.2	20
70	Coupling between the N- and C-Terminal Domains Influences Transducin- β Intrinsic GDP/GTP Exchange. <i>Biochemistry</i> , 2000, 39, 3937-3942.	2.5	19
71	Extended conformation of the proline-rich domain of human aryl hydrocarbon receptor-interacting protein 1: implications for retina disease. <i>Journal of Neurochemistry</i> , 2015, 135, 165-175.	3.9	18
72	Heterologous Expression of Bovine Rhodopsin in <i>Drosophila</i> Photoreceptor Cells. , 2006, 47, 3722.		17

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73	Expression and subcellular distribution of UNC119a, a protein partner of transducin $\hat{\pm}$ subunit in rod photoreceptors. <i>Cellular Signalling</i> , 2013, 25, 341-348.	3.6	17
74	Unique structural features of the AIPL1 $\hat{\pm}$ FKBP domain that support prenyl lipid binding and underlie protein malfunction in blindness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E6536-E6545.	7.1	16
75	Interaction of human retinal RGS with G-protein $\hat{\pm}$ -subunits. <i>FEBS Letters</i> , 1997, 411, 179-182.	2.8	15
76	Photophobia and Abnormally Sustained Pupil Responses in a Mouse Model of Bradyopsia. <i>Investigative Ophthalmology and Visual Science</i> , 2014, 55, 6878-6885.	3.3	12
77	Probing functional interfaces of rod PDE $\hat{\beta}$ -subunit using scanning fluorescent labeling. <i>Cell Biochemistry and Biophysics</i> , 1998, 28, 115-133.	1.8	11
78	[36] Mutational analysis of functional interfaces of transducin. <i>Methods in Enzymology</i> , 2000, 315, 539-554.	1.0	11
79	The <i>Drosophila</i> rhodopsin cytoplasmic tail domain is required for maintenance of rhabdomere structure. <i>FASEB Journal</i> , 2007, 21, 449-455.	0.5	11
80	Determinants for Phosphodiesterase 6 Inhibition by Its $\hat{\beta}$ -Subunit. <i>Biochemistry</i> , 2010, 49, 3862-3867.	2.5	11
81	Interaction of the tetratricopeptide repeat domain of aryl hydrocarbon receptor $\hat{\pm}$ interacting protein $\hat{\pm}$ like 1 with the regulatory $\hat{\beta}$ subunit of phosphodiesterase 6. <i>Journal of Biological Chemistry</i> , 2019, 294, 15795-15807.	3.4	11
82	Comparative Analysis of Cone and Rod Transducins Using Chimeric $\hat{\beta}$ Subunits. <i>Biochemistry</i> , 2012, 51, 1617-1624.	2.5	10
83	Distinct patterns of compartmentalization and proteolytic stability of PDE6C mutants linked to achromatopsia. <i>Molecular and Cellular Neurosciences</i> , 2015, 64, 1-8.	2.2	9
84	NMR resonance assignments of the FKBP domain of human aryl hydrocarbon receptor-interacting protein-like 1 (AIPL1) in complex with a farnesyl ligand. <i>Biomolecular NMR Assignments</i> , 2017, 11, 111-115.	0.8	9
85	Reproducibility of the Rod Photoreceptor Response Depends Critically on the Concentration of the Phosphodiesterase Effector Enzyme. <i>Journal of Neuroscience</i> , 2022, 42, 2180-2189.	3.6	9
86	A point mutation uncouples transducin $\hat{\pm}$ from the photoreceptor RGS and effector proteins. <i>Journal of Neurochemistry</i> , 2003, 87, 1262-1271.	3.9	8
87	Dominant Negative Mutants of Transducin $\hat{\pm}$ That Block Activated Receptor. <i>Biochemistry</i> , 2006, 45, 6488-6494.	2.5	8
88	The GAFa domain of phosphodiesterase $\hat{\epsilon}$ 6 contains a rod outer segment localization signal. <i>Journal of Neurochemistry</i> , 2014, 129, 256-263.	3.9	8
89	Large-scale conformational rearrangement of the $\hat{\pm}$ 5-helix of $\hat{\beta}$ subunits in complex with the guanine nucleotide exchange factor Ric8A. <i>Journal of Biological Chemistry</i> , 2019, 294, 17875-17882.	3.4	8
90	Chaperones and retinal disorders. <i>Advances in Protein Chemistry and Structural Biology</i> , 2019, 114, 85-117.	2.3	7

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91	Mutation R238E in transducin-alpha yields a GTPase and effector-deficient, but not dominant-negative, G-protein alpha-subunit. <i>Molecular Vision</i> , 2006, 12, 492-8.	1.1	7
92	Atypical retinal degeneration 3 in mice is caused by defective PDE6B pre-mRNA splicing. <i>Vision Research</i> , 2012, 57, 1-8.	1.4	6
93	RicA, a GEF, and a Chaperone for G Protein β -Subunits: Evidence for the Two-Faced Interface. <i>BioEssays</i> , 2020, 42, e1900208.	2.5	6
94	Rod cGMP-Phosphodiesterase β -Subunit: Structure-Function Relationships. <i>Methods</i> , 1993, 5, 220-228.	3.8	4
95	Interactions Between Catalytic and Inhibitory Subunits of PDE6. , 2005, 307, 277-288.		4
96	The solution structure of the transducin α -uncoordinated 119 protein complex suggests occlusion of the $G\beta$ -binding sites. <i>FEBS Journal</i> , 2015, 282, 550-561.	4.7	4
97	Molecular insights into the maturation of phosphodiesterase 6 by the specialized chaperone complex of HSP90 with AIPL1. <i>Journal of Biological Chemistry</i> , 2022, 298, 101620.	3.4	4
98	Probing G-protein function. <i>Nature Structural Biology</i> , 1994, 1, 752-754.	9.7	3
99	NMR resonance assignments of the TPR domain of human aryl hydrocarbon receptor-interacting protein-like 1 (AIPL1). <i>Biomolecular NMR Assignments</i> , 2019, 13, 79-83.	0.8	3
100	Ex Vivo Functional Evaluation of Synaptic Transmission from Rods to Rod Bipolar Cells in Mice. <i>Methods in Molecular Biology</i> , 2018, 1753, 203-216.	0.9	2
101	Transducin Partners Outside the Phototransduction Pathway. <i>Frontiers in Cellular Neuroscience</i> , 2020, 14, 589494.	3.7	2
102	[42] Inhibition of photoreceptor cGMP phosphodiesterase by its β subunit. <i>Methods in Enzymology</i> , 2000, 315, 635-646.	1.0	1
103	Probing rhodopsin-transducin interaction using <i>Drosophila</i> Rh1-bovine rhodopsin chimeras. <i>Vision Research</i> , 2006, 46, 4575-4581.	1.4	1
104	Probing the mechanism of rhodopsin-catalyzed transducin activation. <i>Journal of Neurochemistry</i> , 2008, 77, 202-210.	3.9	1
105	Assays of G Protein/cGMP-Phosphodiesterase Interactions. <i>Methods in Enzymology</i> , 2002, 345, 27-37.	1.0	0
106	Phosphodiesterase 6A, cGMP-specific rod alpha. <i>The AFCS-nature Molecule Pages</i> , 0, , .	0.2	0
107	Phosphodiesterase 6B, cGMP-specific rod beta. <i>The AFCS-nature Molecule Pages</i> , 0, , .	0.2	0
108	G-Protein-Effector Coupling in the Vertebrate Phototransduction Cascade. , 2014, , 49-64.		0