Nikolai O Artemyev

List of Publications by Year
in descending order

108 papers	3,391 citations	109137 35 h-index	182168 51 g-index
109 all docs	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.	3.3	178
2	A site on rod G protein alpha subunit that mediates effector activation. Science, 1992, 256, 1031-1033.	6.0	106
3	AGS3 Inhibits GDP Dissociation from GÎ± Subunits of the Gi Family and Rhodopsin-dependent Activation of Transducin. Journal of Biological Chemistry, 2000, 275, 40981-40985.	1.6	102
4	Intrinsically disordered Î³-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.	3.3	89
5	Inhibition of GDP/GTP Exchange on GÎ± Subunits by Proteins Containing G-Protein Regulatory Motifsâ€. Biochemistry, 2001, 40, 5322-5328.	1.2	88
6	Dysregulation of Ca_v1.4 channels disrupts the maturation of photoreceptor synaptic ribbons in congenital stationary night blindness type 2. Channels, 2013, 7, 514-523.	1.5	87
7	A nonhuman primate model of inherited retinal disease. Journal of Clinical Investigation, 2019, 129, 863-874.	3.9	78
8	Active sites of the cyclic GMP phosphodiesterase Î³-subunit of retinal rod outer segments. FEBS Letters, 1988, 234, 287-290.	1.3	71
9	The Î³ Subunit of Rod cGMP-Phosphodiesterase Blocks the Enzyme Catalytic Site. Journal of Biological Chemistry, 1997, 272, 11686-11689.	1.6	68
10	An Effector Site That Stimulates G-protein GTPase in Photoreceptors. Journal of Biological Chemistry, 1995, 270, 14319-14324.	1.6	67
11	The Carboxyl Terminus of the Î³-Subunit of Rod cGMP Phosphodiesterase Contains Distinct Sites of Interaction with the Enzyme Catalytic Subunits and the Î±-Subunit of Transducin. Journal of Biological Chemistry, 1995, 270, 13210-13215.	1.6	65
12	Characterization of the GÎ±s Regulator Cysteine String Protein. Journal of Biological Chemistry, 2005, 280, 30236-30241.	1.6	62
13	Decreased catalytic activity and altered activation properties of PDE6C mutants associated with autosomal recessive achromatopsia. Human Molecular Genetics, 2011, 20, 719-730.	1.4	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.	3.3	59
15	Probing Domain Functions of Chimeric PDE6Î±â€²/PDE5 cGMP-Phosphodiesterase. Journal of Biological Chemistry, 1998, 273, 24485-24490.	1.6	58
16	The Trimeric GTP-binding Protein (Gq/G11) Î± Subunit Is Required for Insulin-stimulated GLUT4 Translocation in 3T3L1 Adipocytes. Journal of Biological Chemistry, 2000, 275, 7167-7175.	1.6	58
17	Structural basis of phosphodiesterase 6 inhibition by the C-terminal region of the Î³-subunit. EMBO Journal, 2009, 28, 3613-3622.	3.5	57
18	Î±₂Î´-4 Is Required for the Molecular and Structural Organization of Rod and Cone Photoreceptor Synapses. Journal of Neuroscience, 2018, 38, 6145-6160.	1.7	56

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19	Transducin Activation State Controls Its Light-dependent Translocation in Rod Photoreceptors. Journal of Biological Chemistry, 2005, 280, 41069-41076.	1.6	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. Journal of Biological Chemistry, 2018, 293, 15332-15346.	1.6	53
21	Regulation of Transducin GTPase Activity by Human Retinal RGS. Journal of Biological Chemistry, 1997, 272, 17444-17449.	1.6	51
22	Light-Dependent Compartmentalization of Transducin in Rod Photoreceptors. Molecular Neurobiology, 2008, 37, 44-51.	1.9	48
23	Direct Interaction of the Inhibitory Î³-Subunit of Rod cGMP Phosphodiesterase (PDE6) with the PDE6 GAFa Domainsâ€. Biochemistry, 2002, 41, 3884-3890.	1.2	47
24	Mutational Analysis of the Asn Residue Essential for RGS Protein Binding to G-proteins. Journal of Biological Chemistry, 1998, 273, 6731-6735.	1.6	43
25	The Inhibitory Î³ Subunit of the Rod cGMP Phosphodiesterase Binds the Catalytic Subunits in an Extended Linear Structure*. Journal of Biological Chemistry, 2006, 281, 15412-15422.	1.6	42
26	Rod phosphodiesterase-6 PDE6A and PDE6B Subunits Are Enzymatically Equivalent. Journal of Biological Chemistry, 2010, 285, 39828-39834.	1.6	42
27	Interaction of Transducin with Uncoordinated 119 Protein (UNC119). Journal of Biological Chemistry, 2011, 286, 28954-28962.	1.6	42
28	Rhodopsin Determinants for Transducin Activation. Journal of Biological Chemistry, 2003, 278, 37574-37581.	1.6	40
29	Asymmetric Interaction between Rod Cyclic GMP Phosphodiesterase Î³ Subunits and Î±Î² Subunits. Journal of Biological Chemistry, 2005, 280, 12585-12592.	1.6	40
30	Identification of Effector Residues on Photoreceptor G Protein, Transducin. Journal of Biological Chemistry, 1998, 273, 21808-21815.	1.6	39
31	Probing the mechanism of rhodopsin-catalyzed transducin activation. Journal of Neurochemistry, 2001, 77, 202-210.	2.1	39
32	The GAFa Domains of Rod cGMP-phosphodiesterase 6 Determine the Selectivity of the Enzyme Dimerization. Journal of Biological Chemistry, 2003, 278, 10594-10601.	1.6	39
33	Transducin translocation contributes to rod survival and enhances synaptic transmission from rods to rod bipolar cells. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12468-12473.	3.3	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 Meiosis1. Biology of Reproduction, 2016, 94, 110.	1.2	39
35	Mutation in Rod PDE6 Linked to Congenital Stationary Night Blindness Impairs the Enzyme Inhibition by Its Î³-Subunitâ€. Biochemistry, 2003, 42, 3305-3310.	1.2	38
36	Mechanisms of dominant negative Gâ€protein Î± subunits. Journal of Neuroscience Research, 2007, 85, 3505-3514.	1.3	38

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37	A Single Mutation Asp229 â†' Ser Confers upon GsÎ± the Ability To Interact with Regulators of G Protein Signaling. Biochemistry, 1998, 37, 13776-13780.	1.2	35
38	Rhodopsin Recognition by Mutant GsÎ± Containing C-terminal Residues of Transducin. Journal of Biological Chemistry, 2000, 275, 2669-2675.	1.6	35
39	Aryl Hydrocarbon Receptor-interacting Protein-like 1 Is an Obligate Chaperone of Phosphodiesterase 6 and Is Assisted by the Î³-Subunit of Its Client. Journal of Biological Chemistry, 2016, 291, 16282-16291.	1.6	35
40	An Interface of Interaction between Photoreceptor cGMP Phosphodiesterase Catalytic Subunits and Inhibitory Î³ Subunits. Journal of Biological Chemistry, 1996, 271, 19964-19969.	1.6	34
41	A Conformational Switch in the Inhibitory Î³-Subunit of PDE6 upon Enzyme Activation by Transducinâ€. Biochemistry, 2001, 40, 13209-13215.	1.2	34
42	Mechanisms of mutant PDE6 proteins underlying retinal diseases. Cellular Signalling, 2017, 37, 74-80.	1.7	33
43	Photoreceptor Phosphodiesterase: Interaction of Inhibitory Î³ Subunit and Cyclic GMP with Specific Binding Sites on Catalytic Subunits. Methods, 1998, 14, 93-104.	1.9	32
44	Structural determinants of the PDE6 GAF A domain for binding the inhibitory Î³-subunit and noncatalytic cGMP. Vision Research, 2004, 44, 2437-2444.	0.7	32
45	Interaction of Aryl Hydrocarbon Receptor-interacting Protein-like 1 with the Farnesyl Moiety. Journal of Biological Chemistry, 2013, 288, 21320-21328.	1.6	32
46	Roles of the Transducin Î±-Subunit Î±4-Helix/Î±4-Î²6 Loop in the Receptor and Effector Interactions. Journal of Biological Chemistry, 1999, 274, 7865-7869.	1.6	31
47	Loss of the Effector Function in a Transducin-Î± Mutant Associated with Nougaret Night Blindness. Journal of Biological Chemistry, 2000, 275, 6969-6974.	1.6	31
48	Identification of the Î³ Subunit-interacting Residues on Photoreceptor cGMP Phosphodiesterase, PDE6Î±â€². Journal of Biological Chemistry, 2000, 275, 41258-41262.	1.6	31
49	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
50	Exchange of Cone for Rod Phosphodiesterase 6 Catalytic Subunits in Rod Photoreceptors Mimics in Part Features of Light Adaptation. Journal of Neuroscience, 2015, 35, 9225-9235.	1.7	29
51	Substitution of Transducin Ser202 by Asp Abolishes G-protein/RGS Interaction. Journal of Biological Chemistry, 1998, 273, 4300-4303.	1.6	27
52	Modulation of Transducin GTPase Activity by Chimeric RGS16 and RGS9 Regulators of G Protein Signaling and the Effector Molecule. Biochemistry, 1999, 38, 4931-4937.	1.2	27
53	Partial Reconstitution of Photoreceptor cGMP Phosphodiesterase Characteristics in cGMP Phosphodiesterase-5. Journal of Biological Chemistry, 2001, 276, 21698-21703.	1.6	27
54	Interaction of transducin-Î± with LGN, a G-protein modulator expressed in photoreceptor cells. Molecular and Cellular Neurosciences, 2005, 28, 485-495.	1.0	27

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55	Analysis of PDE6 function using chimeric PDE5/6 catalytic domains. Vision Research, 2006, 46, 860-868.	0.7	27
56	PDE6 in Lamprey <i>Petromyzon marinus</i>:â€‰ Implications for the Evolution of the Visual Effector in Vertebrates[,]. Biochemistry, 2007, 46, 9992-10000.	1.2	27
57	Binding of Transducin to Light-Activated Rhodopsin Prevents Transducin Interaction with the Rod cGMP Phosphodiesterase Î³-Subunit. Biochemistry, 1997, 36, 4188-4193.	1.2	26
58	Unique transducins expressed in long and short photoreceptors of lamprey Petromyzon marinus. Vision Research, 2008, 48, 2302-2308.	0.7	26
59	Characterization of Human Cone Phosphodiesterase-6 Ectopically Expressed in Xenopus laevis Rods. Journal of Biological Chemistry, 2009, 284, 32662-32669.	1.6	26
60	Hsp40 Couples with the CSPÎ± Chaperone Complex upon Induction of the Heat Shock Response. PLoS ONE, 2009, 4, e4595.	1.1	25
61	Subunit Structure of Rod cGMP-Phosphodiesterase. Journal of Biological Chemistry, 1996, 271, 25382-25388.	1.6	24
62	A Truncated Form of Rod Photoreceptor PDE6 Î²-Subunit Causes Autosomal Dominant Congenital Stationary Night Blindness by Interfering with the Inhibitory Activity of the Î³-Subunit. PLoS ONE, 2014, 9, e95768.	1.1	24
63	A GPR-Protein Interaction Surface of GiÎ±:Â Implications for the Mechanism of GDP-Release Inhibitionâ€. Biochemistry, 2002, 41, 258-265.	1.2	23
64	Structural underpinnings of Ric8A function as a G-protein Î±-subunit chaperone and guanine-nucleotide exchange factor. Nature Communications, 2019, 10, 3084.	5.8	22
65	A dual role for Cav1.4 Ca2+ channels in the molecular and structural organization of the rod photoreceptor synapse. ELife, 2020, 9, .	2.8	22
66	Phototransduction in a Transgenic Mouse Model of Nougaret Night Blindness. Journal of Neuroscience, 2006, 26, 6863-6872.	1.7	21
67	AIPL1: A specialized chaperone for the phototransduction effector. Cellular Signalling, 2017, 40, 183-189.	1.7	21
68	[2] Specific peptide probes for G-protein interaction with effectors. Methods in Enzymology, 1994, 238, 13-28.	0.4	20
69	Diffusion and light-dependent compartmentalization of transducin. Molecular and Cellular Neurosciences, 2011, 46, 340-346.	1.0	20
70	Coupling between the N- and C-Terminal Domains Influences Transducin-Î± Intrinsic GDP/GTP Exchange. Biochemistry, 2000, 39, 3937-3942.	1.2	19
71	Extended conformation of the prolineâ€rich domain of human aryl hydrocarbon receptorâ€interacting proteinâ€like 1: implications for retina disease. Journal of Neurochemistry, 2015, 135, 165-175.	2.1	18
72	Heterologous Expression of Bovine Rhodopsin inDrosophilaPhotoreceptor Cells. , 2006, 47, 3722.		17

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73	Expression and subcellular distribution of UNC119a, a protein partner of transducin Î± subunit in rod photoreceptors. Cellular Signalling, 2013, 25, 341-348.	1.7	17
74	Unique structural features of the AIPL1â€“FKBP domain that support prenyl lipid binding and underlie protein malfunction in blindness. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6536-E6545.	3.3	16
75	Interaction of human retinal RGS with G-proteinÎ±-subunits. FEBS Letters, 1997, 411, 179-182.	1.3	15
76	Photophobia and Abnormally Sustained Pupil Responses in a Mouse Model of Bradyopsia. Investigative Ophthalmology and Visual Science, 2014, 55, 6878-6885.	3.3	12
77	Probing functional interfaces of rod PDE Î³-subunit using scanning fluorescent labeling. Cell Biochemistry and Biophysics, 1998, 28, 115-133.	0.9	11
78	[36] Mutational analysis of functional interfaces of transducin. Methods in Enzymology, 2000, 315, 539-554.	0.4	11
79	The Drosophila rhodopsin cytoplasmic tail domain is required for maintenance of rhabdomere structure. FASEB Journal, 2007, 21, 449-455.	0.2	11
80	Determinants for Phosphodiesterase 6 Inhibition by Its Î³-Subunit. Biochemistry, 2010, 49, 3862-3867.	1.2	11
81	Interaction of the tetratricopeptide repeat domain of aryl hydrocarbon receptorâ€“interacting proteinâ€“like 1 with the regulatory PÎ³ subunit of phosphodiesterase 6. Journal of Biological Chemistry, 2019, 294, 15795-15807.	1.6	11
82	Comparative Analysis of Cone and Rod Transducins Using Chimeric GÎ± Subunits. Biochemistry, 2012, 51, 1617-1624.	1.2	10
83	Distinct patterns of compartmentalization and proteolytic stability of PDE6C mutants linked to achromatopsia. Molecular and Cellular Neurosciences, 2015, 64, 1-8.	1.0	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. Biomolecular NMR Assignments, 2017, 11, 111-115.	0.4	9
85	Reproducibility of the Rod Photoreceptor Response Depends Critically on the Concentration of the Phosphodiesterase Effector Enzyme. Journal of Neuroscience, 2022, 42, 2180-2189.	1.7	9
86	A point mutation uncouples transducin-Î± from the photoreceptor RGS and effector proteins. Journal of Neurochemistry, 2003, 87, 1262-1271.	2.1	8
87	Dominant Negative Mutants of Transducin-Î± That Block Activated Receptor. Biochemistry, 2006, 45, 6488-6494.	1.2	8
88	The GAFa domain of phosphodiesteraseâ€6 contains a rod outer segment localization signal. Journal of Neurochemistry, 2014, 129, 256-263.	2.1	8
89	Large-scale conformational rearrangement of the Î±5-helix of GÎ± subunits in complex with the guanine nucleotide exchange factor Ric8A. Journal of Biological Chemistry, 2019, 294, 17875-17882.	1.6	8
90	Chaperones and retinal disorders. Advances in Protein Chemistry and Structural Biology, 2019, 114, 85-117.	1.0	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. Molecular Vision, 2006, 12, 492-8.	1.1	7
92	Atypical retinal degeneration 3 in mice is caused by defective PDE6B pre-mRNA splicing. Vision Research, 2012, 57, 1-8.	0.7	6
93	Ricâ€8A, a GEF, and a Chaperone for G Protein Î±â€Subunits: Evidence for the Twoâ€Faced Interface. BioEssays, 2020, 42, e1900208.	1.2	6
94	Rod cGMP-Phosphodiesterase Î³-Subunit: Structureâ€"Function Relationships. Methods, 1993, 5, 220-228.	1.9	4
95	Interactions Between Catalytic and Inhibitory Subunits of PDE6. , 2005, 307, 277-288.		4
96	The solution structure of the transducinâ€Î±â€"uncoordinated 119 protein complex suggests occlusion of the GÎ²₁Î³₁â€binding sites. FEBS Journal, 2015, 282, 550-561.	2.2	4
97	Molecular insights into the maturation of phosphodiesterase 6 by the specialized chaperone complex of HSP90 with AIPL1. Journal of Biological Chemistry, 2022, 298, 101620.	1.6	4
98	Probing G-protein function. Nature Structural Biology, 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). Biomolecular NMR Assignments, 2019, 13, 79-83.	0.4	3
100	Ex Vivo Functional Evaluation of Synaptic Transmission from Rods to Rod Bipolar Cells in Mice. Methods in Molecular Biology, 2018, 1753, 203-216.	0.4	2
101	Transducin Partners Outside the Phototransduction Pathway. Frontiers in Cellular Neuroscience, 2020, 14, 589494.	1.8	2
102	[42] Inhibition of photoreceptor cGMP phosphodiesterase by its Î³ subunit. Methods in Enzymology, 2000, 315, 635-646.	0.4	1
103	Probing rhodopsinâ€"transducin interaction using Drosophila Rh1â€"bovine rhodopsin chimeras. Vision Research, 2006, 46, 4575-4581.	0.7	1
104	Probing the mechanism of rhodopsin-catalyzed transducin activation. Journal of Neurochemistry, 2008, 77, 202-210.	2.1	1
105	Assays of G Protein/cGMPâ€"Phosphodiesterase Interactions. Methods in Enzymology, 2002, 345, 27-37.	0.4	0
106	Phosphodiesterase 6A, cGMP-specific rod alpha. The AFCS-nature Molecule Pages, 0, , .	0.2	0
107	Phosphodiesterase 6B, cGMP-specific rod beta. The AFCS-nature Molecule Pages, 0, , .	0.2	0
108	G-Proteinâ€"Effector Coupling in the Vertebrate Phototransduction Cascade. , 2014, , 49-64.		0