

Viacheslav O Nikolaev

List of Publications by Year in descending order

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Version: 2024-02-01

110
papers

6,733
citations

70961

41
h-index

66788

78
g-index

113
all docs

113
docs citations

113
times ranked

7245
citing authors

#	ARTICLE	IF	CITATIONS
1	CNP regulates cardiac contractility and increases cGMP near both SERCA and TnI: difference from BNP visualized by targeted cGMP biosensors. <i>Cardiovascular Research</i> , 2022, 118, 1506-1519.	1.8	13
2	GPCR signaling is highly compartmentalized in human cardiomyocytes and severely remodeled in atrial fibrillation. <i>Journal of General Physiology</i> , 2022, 154, .	0.9	0
3	AKAP18 ⁺ Anchors and Regulates CaMKII Activity at Phospholamban-SERCA2 and RYR. <i>Circulation Research</i> , 2022, 130, 27-44.	2.0	27
4	Skeletal muscle derived Musclin protects the heart during pathological overload. <i>Nature Communications</i> , 2022, 13, 149.	5.8	27
5	A junctional cAMP compartment regulates rapid Ca ²⁺ signaling in atrial myocytes. <i>Journal of Molecular and Cellular Cardiology</i> , 2022, 165, 141-157.	0.9	6
6	Generation of Transgenic Mice Expressing Cytosolic and Targeted FRET Biosensors for cAMP and cGMP. <i>Methods in Molecular Biology</i> , 2022, 2483, 241-254.	0.4	0
7	NET Release of Long-Term Surviving Neutrophils. <i>Frontiers in Immunology</i> , 2022, 13, 815412.	2.2	4
8	Polycystic ovarian syndrome increases prevalence of concentric hypertrophy in normotensive obese women. <i>PLoS ONE</i> , 2022, 17, e0263312.	1.1	5
9	Understanding the Role of SERCA2a Microdomain Remodeling in Heart Failure Induced by Obesity and Type 2 Diabetes. <i>Journal of Cardiovascular Development and Disease</i> , 2022, 9, 163.	0.8	4
10	MANP Activation Of The cGMP Inhibits Aldosterone Via PDE2 And CYP11B2 In H295R Cells And In Mice. <i>Hypertension</i> , 2022, 79, 1702-1712.	1.3	5
11	Impact of phosphodiesterases PDE3 and PDE4 on 5-hydroxytryptamine receptor4-mediated increase of cAMP in human atrial fibrillation. <i>Naunyn-Schmiedeberg's Archives of Pharmacology</i> , 2021, 394, 291-298.	1.4	11
12	Multifaceted remodelling of cAMP microdomains driven by different aetiologies of heart failure. <i>FEBS Journal</i> , 2021, 288, 6603-6622.	2.2	9
13	Cardiac Hypertrophy Changes Compartmentation of cAMP in Non-Raft Membrane Microdomains. <i>Cells</i> , 2021, 10, 535.	1.8	3
14	cAMP Imaging at Ryanodine Receptors Reveals β_2 -Adrenoceptor Driven Arrhythmias. <i>Circulation Research</i> , 2021, 129, 81-94.	2.0	28
15	Hypertrophic signaling compensates for contractile and metabolic consequences of DNA methyltransferase 3A loss in human cardiomyocytes. <i>Journal of Molecular and Cellular Cardiology</i> , 2021, 154, 115-123.	0.9	3
16	Regulation of basal and norepinephrine-induced cAMP and ICa in hiPSC-cardiomyocytes: Effects of culture conditions and comparison to adult human atrial cardiomyocytes. <i>Cellular Signalling</i> , 2021, 82, 109970.	1.7	4
17	Mapping genetic changes in the cAMP-signaling cascade in human atria. <i>Journal of Molecular and Cellular Cardiology</i> , 2021, 155, 10-20.	0.9	9
18	Enhanced Heart Failure in Redox-Dead Cys17Ser PKAR1 β Knock-in Mice. <i>Journal of the American Heart Association</i> , 2021, 10, e021985.	1.6	0

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19	Upregulation of Phosphodiesterase 2A Augments T Cell Activation by Changing cGMP/cAMP Cross-Talk. <i>Frontiers in Pharmacology</i> , 2021, 12, 748798.	1.6	11
20	Rise of cGMP by partial phosphodiesterase-3A degradation enhances cardioprotection during hypoxia. <i>Redox Biology</i> , 2021, 48, 102179.	3.9	10
21	Cigarette smoke exposure alters phosphodiesterases in human structural lung cells. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2020, 318, L59-L64.	1.3	12
22	Heart-Microcirculation Connection. <i>Hypertension</i> , 2020, 76, 1637-1648.	1.3	10
23	Establishing a sensitive fluorescence-based quantification method for cyclic nucleotides. <i>BMC Biotechnology</i> , 2020, 20, 47.	1.7	1
24	Receptor-independent modulation of cAMP-dependent protein kinase and protein phosphatase signaling in cardiac myocytes by oxidizing agents. <i>Journal of Biological Chemistry</i> , 2020, 295, 15342-15365.	1.6	4
25	Monitoring Cannabinoid CB2 -Receptor Mediated cAMP Dynamics by FRET-Based Live Cell Imaging. <i>International Journal of Molecular Sciences</i> , 2020, 21, 7880.	1.8	6
26	Cardiac cGMP Signaling in Health and Disease. <i>Journal of Cardiovascular Pharmacology</i> , 2020, 75, 399-409.	0.8	11
27	Calcineurin β -Specific Anchoring Confers Isoform-Specific Compartmentation and Function in Pathological Cardiac Myocyte Hypertrophy. <i>Circulation</i> , 2020, 142, 948-962.	1.6	9
28	A-Kinase Anchoring Proteins Diminish TGF- β 1/Cigarette Smoke-Induced Epithelial-To-Mesenchymal Transition. <i>Cells</i> , 2020, 9, 356.	1.8	16
29	Real-time monitoring of cAMP in brown adipocytes reveals differential compartmentation of β 1 and β 3-adrenoceptor signalling. <i>Molecular Metabolism</i> , 2020, 37, 100986.	3.0	7
30	β 3-Adrenoceptor redistribution impairs NO/cGMP/PDE2 signalling in failing cardiomyocytes. <i>ELife</i> , 2020, 9, .	2.8	28
31	Using FRET-Based Fluorescent Sensors to Monitor Cytosolic and Membrane-Proximal Extracellular ATP Levels. <i>Methods in Molecular Biology</i> , 2020, 2041, 223-231.	0.4	1
32	Unmasking features of the autoantigen epitope essential for β 1-adrenoceptor activation by autoantibodies in chronic heart failure. <i>ESC Heart Failure</i> , 2020, 7, 1830-1841.	1.4	8
33	Glucose stimulates somatostatin secretion in pancreatic δ -cells by cAMP-dependent intracellular Ca^{2+} release. <i>Journal of General Physiology</i> , 2019, 151, 1094-1115.	0.9	19
34	Constitutive inhibitory G protein activity upon adenylyl cyclase-dependent cardiac contractility is limited to adenylyl cyclase type 6. <i>PLoS ONE</i> , 2019, 14, e0218110.	1.1	2
35	Divergent off-target effects of RSK N-terminal and C-terminal kinase inhibitors in cardiac myocytes. <i>Cellular Signalling</i> , 2019, 63, 109362.	1.7	6
36	Adenine nucleotides as paracrine mediators and intracellular second messengers in immunity and inflammation. <i>Biochemical Society Transactions</i> , 2019, 47, 329-337.	1.6	17

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37	Optogenetic Monitoring of the Glutathione Redox State in Engineered Human Myocardium. <i>Frontiers in Physiology</i> , 2019, 10, 272.	1.3	5
38	Follicle-stimulating hormone and luteinizing hormone increase Ca ²⁺ in the granulosa cells of mouse ovarian follicles. <i>Biology of Reproduction</i> , 2019, 101, 433-444.	1.2	14
39	Externalized histone H4 orchestrates chronic inflammation by inducing lytic cell death. <i>Nature</i> , 2019, 569, 236-240.	13.7	268
40	P2X7-mediated ATP secretion is accompanied by depletion of cytosolic ATP. <i>Purinergic Signalling</i> , 2019, 15, 155-166.	1.1	13
41	Phosphodiesterases as therapeutic targets for respiratory diseases. , 2019, 197, 225-242.		81
42	A Software Tool for High-Throughput Real-Time Measurement of Intensity-Based Ratio-Metric FRET. <i>Cells</i> , 2019, 8, 1541.	1.8	8
43	Visualizing Cyclic Adenosine Monophosphate in Cardiac Microdomains Involved in Ion Homeostasis. <i>Frontiers in Physiology</i> , 2019, 10, 1406.	1.3	10
44	Heart failure leads to altered β_2 -adrenoceptor/cyclic adenosine monophosphate dynamics in the sarcolemmal phospholemman/Na,K ATPase microdomain. <i>Cardiovascular Research</i> , 2019, 115, 546-555.	1.8	31
45	cGMP signalling in cardiomyocyte microdomains. <i>Biochemical Society Transactions</i> , 2019, 47, 1327-1339.	1.6	9
46	Endothelial C-Type Natriuretic Peptide Acts on Pericytes to Regulate Microcirculatory Flow and Blood Pressure. <i>Circulation</i> , 2018, 138, 494-508.	1.6	86
47	Cardiomyocyte Membrane Structure and cAMP Compartmentation Produce Anatomical Variation in β_2 AR-cAMP Responsiveness in Murine Hearts. <i>Cell Reports</i> , 2018, 23, 459-469.	2.9	51
48	Phosphodiesterase 3A expression and activity in the murine vasculature is influenced by NO-sensitive guanylyl cyclase. <i>Pflügers Archiv European Journal of Physiology</i> , 2018, 470, 693-702.	1.3	10
49	Cigarette smoke up-regulates cPDE3 and cPDE4 to decrease cAMP in airway cells. <i>British Journal of Pharmacology</i> , 2018, 175, 2988-3006.	2.7	31
50	Membrane-Permeable Octanoyloxybenzyl-Masked cNMPs As Novel Tools for Non-Invasive Cell Assays. <i>Molecules</i> , 2018, 23, 2960.	1.7	1
51	cGMP Signaling in the Cardiovascular System—The Role of Compartmentation and Its Live Cell Imaging. <i>International Journal of Molecular Sciences</i> , 2018, 19, 801.	1.8	20
52	Impact of Intracardiac Neurons on Cardiac Electrophysiology and Arrhythmogenesis in an Ex Vivo Langendorff System. <i>Journal of Visualized Experiments</i> , 2018, , .	0.2	4
53	Distinct submembrane localisation compartmentalises cardiac NPR1 and NPR2 signalling to cGMP. <i>Nature Communications</i> , 2018, 9, 2446.	5.8	52
54	Imaging of PDE2- and PDE3-Mediated cGMP-to-cAMP Cross-Talk in Cardiomyocytes. <i>Journal of Cardiovascular Development and Disease</i> , 2018, 5, 4.	0.8	27

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55	Disruption of cardiac cholinergic neurons enhances susceptibility to ventricular arrhythmias. <i>Nature Communications</i> , 2017, 8, 14155.	5.8	77
56	Cyclic nucleotide imaging and cardiovascular disease. , 2017, 175, 107-115.		16
57	T-tubule remodelling disturbs localized β_2 -adrenergic signalling in rat ventricular myocytes during the progression of heart failure. <i>Cardiovascular Research</i> , 2017, 113, 770-782.	1.8	53
58	FRET Microscopy for Real-Time Visualization of Second Messengers in Living Cells. <i>Methods in Molecular Biology</i> , 2017, 1563, 85-90.	0.4	9
59	cGMP-Elevating Compounds and Ischemic Conditioning Provide Cardioprotection Against Ischemia and Reperfusion Injury via Cardiomyocyte-Specific BK Channels. <i>Circulation</i> , 2017, 136, 2337-2355.	1.6	124
60	Oxidant sensor in the cGMP-binding pocket of PKG β regulates nitroxyl-mediated kinase activity. <i>Scientific Reports</i> , 2017, 7, 9938.	1.6	22
61	Catecholamine-Dependent β_2 -Adrenergic Signaling in a Pluripotent Stem Cell Model of Takotsubo Cardiomyopathy. <i>Journal of the American College of Cardiology</i> , 2017, 70, 975-991.	1.2	124
62	Atropine augments cardiac contractility by inhibiting cAMP-specific phosphodiesterase type 4. <i>Scientific Reports</i> , 2017, 7, 15222.	1.6	11
63	Protein kinase A activation by the anti-cancer drugs ABT-737 and thymoquinone is caspase-3-dependent and correlates with platelet inhibition and apoptosis. <i>Cell Death and Disease</i> , 2017, 8, e2898-e2898.	2.7	23
64	Cyclic Nucleotide Control of Microtubule Dynamics for Axon Guidance. <i>Journal of Neuroscience</i> , 2016, 36, 5636-5649.	1.7	42
65	Endothelial Actions of ANP Enhance Myocardial Inflammatory Infiltration in the Early Phase After Acute Infarction. <i>Circulation Research</i> , 2016, 119, 237-248.	2.0	53
66	Microdomain-Specific Modulation of L-Type Calcium Channels Leads to Triggered Ventricular Arrhythmia in Heart Failure. <i>Circulation Research</i> , 2016, 119, 944-955.	2.0	101
67	Redox Imaging Using Cardiac Myocyte-Specific Transgenic Biosensor Mice. <i>Circulation Research</i> , 2016, 119, 1004-1016.	2.0	38
68	Axial tubule junctions control rapid calcium signaling in atria. <i>Journal of Clinical Investigation</i> , 2016, 126, 3999-4015.	3.9	118
69	Interactions of Calcium Fluctuations during Cardiomyocyte Contraction with Real-Time cAMP Dynamics Detected by FRET. <i>PLoS ONE</i> , 2016, 11, e0167974.	1.1	13
70	Imaging alterations of cardiomyocyte cAMP microdomains in disease. <i>Frontiers in Pharmacology</i> , 2015, 6, 172.	1.6	25
71	Generation of Transgenic Mice Expressing FRET Biosensors. <i>Methods in Molecular Biology</i> , 2015, 1294, 117-129.	0.4	2
72	Microdomain Switch of cGMP-Regulated Phosphodiesterases Leads to ANP-Induced Augmentation of β_2 -Adrenoceptor-Stimulated Contractility in Early Cardiac Hypertrophy. <i>Circulation Research</i> , 2015, 116, 1304-1311.	2.0	88

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73	Sildenafil Does Not Prevent Heart Hypertrophy and Fibrosis Induced by Cardiomyocyte Angiotensin II Type 1 Receptor Signaling. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2015, 354, 406-416.	1.3	14
74	Adenylyl cyclases 5 and 6 underlie PIP3-dependent regulation. <i>FASEB Journal</i> , 2015, 29, 3458-3471.	0.2	3
75	Intercellular signaling via cyclic GMP diffusion through gap junctions restarts meiosis in mouse ovarian follicles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 5527-5532.	3.3	134
76	In vivo model with targeted cAMP biosensor reveals changes in receptor microdomain communication in cardiac disease. <i>Nature Communications</i> , 2015, 6, 6965.	5.8	110
77	Novel Receptor-Derived Cyclopeptides to Treat Heart Failure Caused by Anti- β_1 -Adrenoceptor Antibodies in a Human-Analogous Rat Model. <i>PLoS ONE</i> , 2015, 10, e0117589.	1.1	20
78	Transgenic Mice for Real-Time Visualization of cGMP in Intact Adult Cardiomyocytes. <i>Circulation Research</i> , 2014, 114, 1235-1245.	2.0	71
79	Enhanced Expression of β_3 -Adrenoceptors in Cardiac Myocytes Attenuates Neurohormone-Induced Hypertrophic Remodeling Through Nitric Oxide Synthase. <i>Circulation</i> , 2014, 129, 451-462.	1.6	125
80	Tubulin polymerization disrupts cardiac β_2 -adrenergic regulation of late INa. <i>Cardiovascular Research</i> , 2014, 103, 168-177.	1.8	45
81	Atrial Natriuretic Peptide Locally Counteracts the Deleterious Effects of Cardiomyocyte Mineralocorticoid Receptor Activation. <i>Circulation: Heart Failure</i> , 2014, 7, 814-821.	1.6	42
82	Caveolin-3 regulates compartmentation of cardiomyocyte β_2 -adrenergic receptor-mediated cAMP signaling. <i>Journal of Molecular and Cellular Cardiology</i> , 2014, 67, 38-48.	0.9	103
83	Role of Membrane Microdomains in Compartmentation of cAMP Signaling. <i>PLoS ONE</i> , 2014, 9, e95835.	1.1	75
84	Phosphodiesterase-2 Is Up-Regulated in Human Failing Hearts and Blunts β_2 -Adrenergic Responses in Cardiomyocytes. <i>Journal of the American College of Cardiology</i> , 2013, 62, 1596-1606.	1.2	115
85	Advances and Techniques to Measure cGMP in Intact Cardiomyocytes. <i>Methods in Molecular Biology</i> , 2013, 1020, 121-129.	0.4	6
86	Biophysical Techniques for Detection of cAMP and cGMP in Living Cells. <i>International Journal of Molecular Sciences</i> , 2013, 14, 8025-8046.	1.8	71
87	In vivo genetic dissection of β_2 -evoked cGMP dynamics in a <i>Caenorhabditis elegans</i> gas sensor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E3301-10.	3.3	37
88	Plasticity of Surface Structures and β_2 -Adrenergic Receptor Localization in Failing Ventricular Cardiomyocytes During Recovery From Heart Failure. <i>Circulation: Heart Failure</i> , 2012, 5, 357-365.	1.6	102
89	Phosphoinositide 3-Kinase β_3 Protects Against Catecholamine-Induced Ventricular Arrhythmia Through Protein Kinase A-Mediated Regulation of Distinct Phosphodiesterases. <i>Circulation</i> , 2012, 126, 2073-2083.	1.6	74
90	FRET Microscopy for Real-time Monitoring of Signaling Events in Live Cells Using Unimolecular Biosensors. <i>Journal of Visualized Experiments</i> , 2012, , e4081.	0.2	21

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91	Popeye domain containing proteins are essential for stress-mediated modulation of cardiac pacemaking in mice. <i>Journal of Clinical Investigation</i> , 2012, 122, 1119-1130.	3.9	129
92	FRET measurements of intracellular cAMP concentrations and cAMP analog permeability in intact cells. <i>Nature Protocols</i> , 2011, 6, 427-438.	5.5	191
93	Scanning ion conductance microscopy: a convergent high-resolution technology for multi-parametric analysis of living cardiovascular cells. <i>Journal of the Royal Society Interface</i> , 2011, 8, 913-925.	1.5	61
94	A cardiac pathway of cyclic GMP-independent signaling of guanylyl cyclase A, the receptor for atrial natriuretic peptide. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 18500-18505.	3.3	48
95	β_2 -Adrenergic Receptor Redistribution in Heart Failure Changes cAMP Compartmentation. <i>Science</i> , 2010, 327, 1653-1657.	6.0	505
96	Persistent cAMP-Signals Triggered by Internalized G-Protein-Coupled Receptors. <i>PLoS Biology</i> , 2009, 7, e1000172.	2.6	471
97	Novel Techniques for Real-Time Monitoring of cGMP in Living Cells. <i>Handbook of Experimental Pharmacology</i> , 2009, , 229-243.	0.9	19
98	Real-time monitoring of phosphodiesterase inhibition in intact cells. <i>Cellular Signalling</i> , 2008, 20, 1423-1431.	1.7	47
99	Widespread Receptivity to Neuropeptide PDF throughout the Neuronal Circadian Clock Network of <i>Drosophila</i> Revealed by Real-Time Cyclic AMP Imaging. <i>Neuron</i> , 2008, 58, 223-237.	3.8	295
100	Spatiotemporal Dynamics of β_2 -Adrenergic cAMP Signals and L-Type Ca^{2+} Channel Regulation in Adult Rat Ventricular Myocytes. <i>Circulation Research</i> , 2008, 102, 1091-1100.	2.0	143
101	Cytoplasmic cAMP concentrations in intact cardiac myocytes. <i>American Journal of Physiology - Cell Physiology</i> , 2008, 295, C414-C422.	2.1	83
102	Live Cell Monitoring of μ -Opioid Receptor-mediated G-protein Activation Reveals Strong Biological Activity of Close Morphine Biosynthetic Precursors. <i>Journal of Biological Chemistry</i> , 2007, 282, 27126-27132.	1.6	25
103	Monitoring receptor signaling by intramolecular FRET. <i>Current Opinion in Pharmacology</i> , 2007, 7, 547-553.	1.7	54
104	cAMP microdomains and L-type Ca^{2+} -channel regulation in guinea-pig ventricular myocytes. <i>Journal of Physiology</i> , 2007, 580, 765-776.	1.3	64
105	Fluorescent sensors for rapid monitoring of intracellular cGMP. <i>Nature Methods</i> , 2006, 3, 23-25.	9.0	175
106	Cyclic AMP Imaging in Adult Cardiac Myocytes Reveals Far-Reaching β_1 -Adrenergic but Locally Confined β_2 -Adrenergic Receptor-Mediated Signaling. <i>Circulation Research</i> , 2006, 99, 1084-1091.	2.0	321
107	Molecular Basis of Partial Agonism at the Neurotransmitter β_2 -Adrenergic Receptor and Gi-protein Heterotrimer. <i>Journal of Biological Chemistry</i> , 2006, 281, 24506-24511.	1.6	97
108	Monitoring of cAMP Synthesis and Degradation in Living Cells. <i>Physiology</i> , 2006, 21, 86-92.	1.6	89

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109	Real-time Monitoring of the PDE2 Activity of Live Cells. Journal of Biological Chemistry, 2005, 280, 1716-1719.	1.6	122
110	Novel Single Chain cAMP Sensors for Receptor-induced Signal Propagation. Journal of Biological Chemistry, 2004, 279, 37215-37218.	1.6	630