Manuela Zaccolo

List of Publications by Year
in descending order

128 papers	8,720 citations	36303 51 h-index	46799 89 g-index
132 all docs	132 docs citations	132 times ranked	7883 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. Cardiovascular Research, 2022, 118, 1506-1519.	3.8	13
2	Deciphering cellular signals in adult mouse sinoatrial node cells. IScience, 2022, 25, 103693.	4.1	4
3	Quantitative Phosphoproteomics to Study cAMP Signaling. Methods in Molecular Biology, 2022, 2483, 281-296.	0.9	0
4	Micro-2D Cell Culture for cAMP Measurements Using FRET Reporters in Human iPSC-Derived Cardiomyocytes. Methods in Molecular Biology, 2022, 2483, 141-165.	0.9	0
5	Receptor-associated independent cAMP nanodomains mediate spatiotemporal specificity of GPCR signaling. Cell, 2022, 185, 1130-1142.e11.	28.9	85
6	Abnormal Cyclic Nucleotide Signaling at the Outer Mitochondrial Membrane In Sympathetic Neurons During the Early Stages of Hypertension. Hypertension, 2022, 79, 1374-1384.	2.7	2
7	Axelrod Symposium 2019: Phosphoproteomic Analysis of G-Proteinâ€“Coupled Pathways. Molecular Pharmacology, 2021, 99, 383-391.	2.3	12
8	IP₃-mediated Ca²⁺ release regulates atrial Ca²⁺ transients and pacemaker function by stimulation of adenylyl cyclases. American Journal of Physiology - Heart and Circulatory Physiology, 2021, 320, H95-H107.	3.2	22
9	Oxidation of Protein Kinase A Regulatory Subunit PKARIÎ± Protects Against Myocardial Ischemia-Reperfusion Injury by Inhibiting Lysosomal-Triggered Calcium Release. Circulation, 2021, 143, 449-465.	1.6	29
10	Subcellular Organization of the cAMP Signaling Pathway. Pharmacological Reviews, 2021, 73, 278-309.	16.0	139
11	Compartmentalized cAMP signaling in arterial myocytes. FASEB Journal, 2021, 35, .	0.5	0
12	Stressâ€induced protein dermcidin develops diabetes targeting GLUT4/insulinviaNO/cGMP inhibition.. British Journal of Pharmacology, 2021, , .	5.4	1
13	AKAP79 Orchestrates a Cyclic AMP Signalosome Adjacent to Orai1 Ca2+ Channels. Function, 2021, 2, zqab036.	2.3	10
14	Multi-Compartment, Early Disruption of cGMP and cAMP Signalling in Cardiac Myocytes from the mdx Model of Duchenne Muscular Dystrophy. International Journal of Molecular Sciences, 2020, 21, 7056.	4.1	9
15	Phosphodiesterase 2A2 regulates mitochondria clearance through Parkin-dependent mitophagy. Communications Biology, 2020, 3, 596.	4.4	20
16	Troponin destabilization impairs sarcomere-cytoskeleton interactions in iPSC-derived cardiomyocytes from dilated cardiomyopathy patients. Scientific Reports, 2020, 10, 209.	3.3	29
17	Cytoskeleton regulators CAPZA2 and INF2 associate with CFTR to control its plasma membrane levels under EPAC1 activation. Biochemical Journal, 2020, 477, 2561-2580.	3.7	13
18	cAMP Buffering via Liquidâ€“Liquid Phase Separation. Function, 2020, 2, zqaa048.	2.3	3

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19	Abstract 14219: Oxidation of PKA-RIÎ± Protects Against Ischemia-reperfusion Injury by Inhibiting Lysosomal-triggered Calcium Release. Circulation, 2020, 142, .	1.6	0
20	Whole-Cell cAMP and PKA Activity are Epiphenomena, Nanodomain Signaling Matters. Physiology, 2019, 34, 240-249.	3.1	40
21	Quantification and Comparison of Signals Generated by Different FRET-Based cAMP Reporters. Methods in Molecular Biology, 2019, 1947, 217-237.	0.9	8
22	Imaging cAMP nanodomains in the heart. Biochemical Society Transactions, 2019, 47, 1383-1392.	3.4	21
23	Submicroscopic cAMP/PKA Compartmentalization: Ion flux at the Cardiomyocyte Plasmalemma. FASEB Journal, 2019, 33, 676.6.	0.5	0
24	FRET-ting about RhoA signalling in heart and vasculature: a new tool in our cardiovascular toolbox. Cardiovascular Research, 2018, 114, e25-e27.	3.8	0
25	Cardiomyocyte Membrane Structure and cAMP Compartmentation Produce Anatomical Variation in Î²2AR-cAMP Responsiveness in Murine Hearts. Cell Reports, 2018, 23, 459-469.	6.4	51
26	cAMP: From Long-Range Second Messenger to Nanodomain Signalling. Trends in Pharmacological Sciences, 2018, 39, 209-222.	8.7	95
27	Adrenaline Stimulates Glucagon Secretion by Tpc2-Dependent Ca2+ Mobilization From Acidic Stores in Pancreatic Î±-Cells. Diabetes, 2018, 67, 1128-1139.	0.6	61
28	Increase in Ca2+ current by sustained cAMP levels enhances proliferation rate in GH3 cells. Life Sciences, 2018, 192, 144-150.	4.3	6
29	Targeting FRET-Based Reporters for cAMP and PKA Activity Using AKAP79. Sensors, 2018, 18, 2164.	3.8	13
30	Phosphatases control PKA-dependent functional microdomains at the outer mitochondrial membrane. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E6497-E6506.	7.1	41
31	Using cAMP Sensors to Study Cardiac Nanodomains. Journal of Cardiovascular Development and Disease, 2018, 5, 17.	1.6	23
32	Phosphodiesterase 2A as a therapeutic target to restore cardiac neurotransmission during sympathetic hyperactivity. JCI Insight, 2018, 3, .	5.0	19
33	PDE2A. , 2018, , 3826-3834.		1
34	Components of the mitochondrial cAMP signalosome. Biochemical Society Transactions, 2017, 45, 269-274.	3.4	20
35	FRET biosensor uncovers cAMP nano-domains at Î²-adrenergic targets that dictate precise tuning of cardiac contractility. Nature Communications, 2017, 8, 15031.	12.8	166
36	Activation of PKA in cell requires higher concentration of cAMP than in vitro: implications for compartmentalization of cAMP signalling. Scientific Reports, 2017, 7, 14090.	3.3	69

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37	PDE2A2 regulates mitochondria morphology and apoptotic cell death via local modulation of cAMP/PKA signalling. ELife, 2017, 6, .	6.0	82
38	cAMP Compartmentalisation and Hypertrophy of the Heart: â€˜Goodâ€™ Pools of cAMP and â€˜Badâ€™ Pools of cAMP Coexist in the Same Cardiac Myocyte. Cardiac and Vascular Biology, 2017, , 117-141.	0.2	2
39	Modulation of Compartmentalised Cyclic Nucleotide Signalling via Local Inhibition of Phosphodiesterase Activity. International Journal of Molecular Sciences, 2016, 17, 1672.	4.1	48
40	Control of Î²AR- and N-methyl-D-aspartate (NMDA) Receptor-Dependent cAMP Dynamics in Hippocampal Neurons. PLoS Computational Biology, 2016, 12, e1004735.	3.2	22
41	Bifunctional Ligands for Inhibition of Tight-Binding Proteinâ€“Protein Interactions. Bioconjugate Chemistry, 2016, 27, 1900-1910.	3.6	19
42	EPAC1 activation by cAMP stabilizes CFTR at the membrane by promoting its interaction with NHERF1. Journal of Cell Science, 2016, 129, 2599-612.	2.0	56
43	Response to Wagner et al.: phosphodiesterase-2â€”anti-adrenergic friend or hypertrophic foe in heart disease?. Naunyn-Schmiedeberg's Archives of Pharmacology, 2016, 389, 1143-1145.	3.0	5
44	Sustained exposure to catecholamines affects cAMP/PKA compartmentalised signalling in adult rat ventricular myocytes. Cellular Signalling, 2016, 28, 725-732.	3.6	27
45	Correctors of mutant CFTR enhance subcortical cAMP/PKA signaling via ezrin phosphorylation and cytoskeleton organization. Journal of Cell Science, 2016, 129, 1128-40.	2.0	37
46	Adenoviral Transduction of FRET-Based Biosensors for cAMP in Primary Adult Mouse Cardiomyocytes. Methods in Molecular Biology, 2015, 1294, 103-115.	0.9	10
47	Alcohol Disrupts Levels and Function of the Cystic Fibrosis Transmembrane Conductance Regulator to Promote Development of Pancreatitis. Gastroenterology, 2015, 148, 427-439.e16.	1.3	159
48	Cardiac Hypertrophy Is Inhibited by a Local Pool of cAMP Regulated by Phosphodiesterase 2. Circulation Research, 2015, 117, 707-719.	4.5	105
49	Phosphorylation of ezrin on Thr567 is required for the synergistic activation of cell spreading by EPAC1 and protein kinase A in HEK293T cells. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 1749-1758.	4.1	15
50	Efficacy of B-Type Natriuretic Peptide Is Coupled to Phosphodiesterase 2A in Cardiac Sympathetic Neurons. Hypertension, 2015, 66, 190-198.	2.7	34
51	A Novel Approach Combining Real-Time Imaging and the Patch-Clamp Technique to Calibrate FRET-Based Reporters for cAMP in Their Cellular Microenvironment. Methods in Molecular Biology, 2015, 1294, 25-40.	0.9	13
52	GLP-1 stimulates insulin secretion by PKC-dependent TRPM4 and TRPM5 activation. Journal of Clinical Investigation, 2015, 125, 4714-4728.	8.2	145
53	Phosphodiesterases Maintain Signaling Fidelity via Compartmentalization of Cyclic Nucleotides. Physiology, 2014, 29, 141-149.	3.1	30
54	cAMP signaling in subcellular compartments. , 2014, 143, 295-304.		157

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55	Analysis of Compartmentalized cAMP: A Method to Compare Signals from Differently Targeted FRET Reporters. Methods in Molecular Biology, 2014, 1071, 59-71.	0.9	15
56	Local modulation of cystic fibrosis conductance regulator: cytoskeleton and compartmentalized <scp>cAMP</scp> signalling. British Journal of Pharmacology, 2013, 169, 1-9.	5.4	24
57	Phosphodiesterases and subcellular compartmentalized cAMP signaling in the cardiovascular system. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 302, H379-H390.	3.2	62
58	PKA and PDE4D3 anchoring to AKAP9 provides distinct regulation of cAMP signals at the centrosome. Journal of Cell Biology, 2012, 198, 607-621.	5.2	63
59	cGMPâ€"cAMP interplay in cardiac myocytes: a local affair with far-reaching consequences for heart function. Biochemical Society Transactions, 2012, 40, 11-14.	3.4	23
60	Rapsyn mediates subsynaptic anchoring of PKA type I and stabilisation of acetylcholine receptor in vivo. Journal of Cell Science, 2012, 125, 714-723.	2.0	38
61	Regulation of the inflammatory response of vascular endothelial cells by EPAC1. British Journal of Pharmacology, 2012, 166, 434-446.	5.4	54
62	Participation of Myosin Va and Pka Type I in the Regeneration of Neuromuscular Junctions. PLoS ONE, 2012, 7, e40860.	2.5	22
63	CFTR regulation in human airway epithelial cells requires integrity of the actin cytoskeleton and compartmentalized cAMP and PKA activity. Journal of Cell Science, 2012, 125, 1106-1117.	2.0	72
64	Spatial control of cAMP signalling in health and disease. Current Opinion in Pharmacology, 2011, 11, 649-655.	3.5	70
65	Disruption of the cyclic AMP phosphodiesterase-4 (PDE4)â€"HSP20 complex attenuates the Î²-agonist induced hypertrophic response in cardiac myocytes. Journal of Molecular and Cellular Cardiology, 2011, 50, 872-883.	1.9	94
66	Local Termination of 3â€²-5â€²-Cyclic Adenosine Monophosphate Signals: The Role of A Kinase Anchoring Proteinâ€"Tethered Phosphodiesterases. Journal of Cardiovascular Pharmacology, 2011, 58, 345-353.	1.9	12
67	Cyclic nucleotide phosphodiesterase 1A: a key regulator of cardiac fibroblast activation and extracellular matrix remodeling in the heart. Basic Research in Cardiology, 2011, 106, 1023-1039.	5.9	91
68	A Phosphodiesterase 3B-based Signaling Complex Integrates Exchange Protein Activated by cAMP 1 and Phosphatidylinositol 3-Kinase Signals in Human Arterial Endothelial Cells. Journal of Biological Chemistry, 2011, 286, 16285-16296.	3.4	46
69	Plasma Membrane Calcium Pump (PMCA4)-Neuronal Nitric-oxide Synthase Complex Regulates Cardiac Contractility through Modulation of a Compartmentalized Cyclic Nucleotide Microdomain. Journal of Biological Chemistry, 2011, 286, 41520-41529.	3.4	69
70	cGMP Signals Modulate cAMP Levels in a Compartment-Specific Manner to Regulate Catecholamine-Dependent Signaling in Cardiac Myocytes. Circulation Research, 2011, 108, 929-939.	4.5	143
71	Measuring Spatiotemporal Dynamics of Cyclic AMP Signaling in Real-Time Using FRET-Based Biosensors. Methods in Molecular Biology, 2011, 746, 297-316.	0.9	21
72	Biochemical Characterization and Cellular Imaging of a Novel, Membrane Permeable Fluorescent Camp Analog. , 2011, , 107-129.		0

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73	The Role of Type 4 Phosphodiesterases in Generating Microdomains of cAMP: Large Scale Stochastic Simulations. PLoS ONE, 2010, 5, e11725.	2.5	113
74	Regulation of cAMP-dependent Protein Kinases. Journal of Biological Chemistry, 2010, 285, 35910-35918.	3.4	19
75	Myosin Va cooperates with PKA RIÎ± to mediate maintenance of the endplate in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 2031-2036.	7.1	52
76	Small-molecule FRET probes for protein kinase activity monitoring in living cells. Biochemical and Biophysical Research Communications, 2010, 397, 750-755.	2.1	23
77	Odorant receptors at the growth cone are coupled to localized cAMP and Ca ²⁺ increases. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3537-3542.	7.1	37
78	PKA microdomain organisation and cAMP handling in healthy and dystrophic muscle in vivo. Cellular Signalling, 2009, 21, 819-826.	3.6	19
79	cAMP signal transduction in the heart: understanding spatial control for the development of novel therapeutic strategies. British Journal of Pharmacology, 2009, 158, 50-60.	5.4	141
80	Space and time-resolved gene expression experiments on cultured mammalian cells by a single-cell electroporation microarray. New Biotechnology, 2008, 25, 55-67.	4.4	25
81	Biochemical characterization and cellular imaging of a novel, membrane permeable fluorescent cAMP analog. BMC Biochemistry, 2008, 9, 18.	4.4	17
82	Mutations in the Insulin-Like Factor 3 Receptor Are Associated With Osteoporosis. Journal of Bone and Mineral Research, 2008, 23, 683-693.	2.8	128
83	Î²â€Oestradiol rescues Î”F508CFTR functional expression in human cystic fibrosis airway CFBE41o^{â^’} cells through the upâ€regulation of NHERF1. Biology of the Cell, 2008, 100, 399-412.	2.0	30
84	Developmentally acquired PKA localisation in mouse oocytes and embryos. Developmental Biology, 2008, 317, 36-45.	2.0	25
85	cAMP imaging of cells treated with pertussis toxin, cholera toxin, and anthrax edema toxin. Biochemical and Biophysical Research Communications, 2008, 376, 429-433.	2.1	18
86	Protein Kinase A Type I and Type II Define Distinct Intracellular Signaling Compartments. Circulation Research, 2008, 103, 836-844.	4.5	185
87	Heterogeneity of Second Messenger Levels in Living Cells. Novartis Foundation Symposium, 2008, 239, 85-95.	1.1	6
88	Nitroxyl Improves Cellular Heart Function by Directly Enhancing Cardiac Sarcoplasmic Reticulum Ca 2+ Cycling. Circulation Research, 2007, 100, 96-104.	4.5	209
89	cAMP and cGMP Signaling Cross-Talk. Circulation Research, 2007, 100, 1569-1578.	4.5	309
90	Spatiotemporal Coupling of cAMP Transporter to CFTR Chloride Channel Function in the Gut Epithelia. Cell, 2007, 131, 940-951.	28.9	191

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91	Missense mutations in Desmocollin-2 N-terminus, associated with arrhythmogenic right ventricular cardiomyopathy, affect intracellular localization of desmocollin-2 in vitro. BMC Medical Genetics, 2007, 8, 65.	2.1	61
92	Unitary permeability of gap junction channels to second messengers measured by FRET microscopy. Nature Methods, 2007, 4, 353-358.	19.0	71
93	AKAP complex regulates Ca ²⁺ reâ€uptake into heart sarcoplasmic reticulum. EMBO Reports, 2007, 8, 1061-1067.	4.5	167
94	Transgenic fruit-flies expressing a FRET-based sensor for in vivo imaging of cAMP dynamics. Cellular Signalling, 2007, 19, 2296-2303.	3.6	34
95	Restricted diffusion of a freely diffusible second messenger: mechanisms underlying compartmentalized cAMP signalling. Biochemical Society Transactions, 2006, 34, 495-497.	3.4	70
96	A complex phosphodiesterase system controls Î²-adrenoceptor signalling in cardiomyocytes. Biochemical Society Transactions, 2006, 34, 510-511.	3.4	29
97	Cell entry and cAMP imaging of anthrax edema toxin. EMBO Journal, 2006, 25, 5405-5413.	7.8	68
98	Compartmentalized cAMP/PKA signalling regulates cardiac excitationâ€"contraction coupling. Journal of Muscle Research and Cell Motility, 2006, 27, 399-403.	2.0	39
99	Phosphodiesterases and compartmentalized cAMP signalling in the heart. European Journal of Cell Biology, 2006, 85, 693-697.	3.6	76
100	Imaging of cAMP Levels and Protein Kinase A Activity Reveals That Retinal Waves Drive Oscillations in Second-Messenger Cascades. Journal of Neuroscience, 2006, 26, 12807-12815.	3.6	117
101	Real-time analysis of cAMP-mediated regulation of ciliary motility in single primary human airway epithelial cells. Journal of Cell Science, 2006, 119, 4176-4186.	2.0	63
102	Compartmentalized Phosphodiesterase-2 Activity Blunts Î²-Adrenergic Cardiac Inotropy via an NO/cGMP-Dependent Pathway. Circulation Research, 2006, 98, 226-234.	4.5	252
103	PGE1 stimulation of HEK293 cells generates multiple contiguous domains with different [cAMP]: role of compartmentalized phosphodiesterases. Journal of Cell Biology, 2006, 175, 441-451.	5.2	171
104	Imaging the cAMP-dependent signal transduction pathway1. Biochemical Society Transactions, 2005, 33, 1323.	3.4	27
105	Î²-Adrenergic- and muscarinic receptor-induced changes in cAMP activity in adult cardiac myocytes detected with FRET-based biosensor. American Journal of Physiology - Cell Physiology, 2005, 289, C455-C461.	4.6	65
106	Protein Kinase A Gating of a Pseudopodial-located RhoA/ROCK/p38/NHE1 Signal Module Regulates Invasion in Breast Cancer Cell Lines. Molecular Biology of the Cell, 2005, 16, 3117-3127.	2.1	92
107	Study of Cyclic Adenosine Monophosphate Microdomains in Cells. , 2005, 307, 001-014.		6
108	cGMP Catabolism by Phosphodiesterase 5A Regulates Cardiac Adrenergic Stimulation by NOS3-Dependent Mechanism. Circulation Research, 2005, 96, 100-109.	4.5	191

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109	Termination of cAMP signals by Ca2+ and GÎ±i via extracellular Ca2+ sensors. Journal of Cell Biology, 2005, 171, 303-312.	5.2	60
110	Photon Moment Analysis in Cells in the Presence of Photo-Bleaching. Applied Spectroscopy, 2005, 59, 227-236.	2.2	7
111	Improvement of a FRET-based Indicator for cAMP by Linker Design and Stabilization of Donorâ€"Acceptor Interaction. Journal of Molecular Biology, 2005, 354, 546-555.	4.2	67
112	Molecular basis of the allosteric mechanism of cAMP in the regulatory PKA subunit. FEBS Letters, 2005, 579, 2679-2685.	2.8	9
113	Measuring Dynamic Changes in cAMP Using Fluorescence Resonance Energy Transfer. , 2004, 284, 259-270.		17
114	TCR- and CD28-Mediated Recruitment of Phosphodiesterase 4 to Lipid Rafts Potentiates TCR Signaling. Journal of Immunology, 2004, 173, 4847-4858.	0.8	123
115	Fluorescence Resonance Energy Transferâ€"Based Analysis of cAMP Dynamics in Live Neonatal Rat Cardiac Myocytes Reveals Distinct Functions of Compartmentalized Phosphodiesterases. Circulation Research, 2004, 95, 67-75.	4.5	341
116	Detecting cAMPâ€induced Epac activation by fluorescence resonance energy transfer: Epac as a novel cAMP indicator. EMBO Reports, 2004, 5, 1176-1180.	4.5	404
117	Use of Chimeric Fluorescent Proteins and Fluorescence Resonance Energy Transfer to Monitor Cellular Responses. Circulation Research, 2004, 94, 866-873.	4.5	97
118	Human MYO18B, a Novel Unconventional Myosin Heavy Chain Expressed in Striated Muscles Moves into the Myonuclei upon Differentiation. Journal of Molecular Biology, 2003, 326, 137-149.	4.2	66
119	cAMP and Ca2+ interplay: a matter of oscillation patterns. Trends in Neurosciences, 2003, 26, 53-55.	8.6	67
120	Spatial and Temporal Relationships of Cyclic Nucleotides in Intact Cells. , 2003, , 459-464.		0
121	Selection of Functional Antibodies on the Basis of Valency. , 2002, 178, 255-258.		2
122	Discrete Microdomains with High Concentration of cAMP in Stimulated Rat Neonatal Cardiac Myocytes. Science, 2002, 295, 1711-1715.	12.6	782
123	Microdomains of cAMP in heart cells. Biomedicine and Pharmacotherapy, 2002, 56, 313-314.	5.6	0
124	Compartmentalisation of cAMP and Ca2+ signals. Current Opinion in Cell Biology, 2002, 14, 160-166.	5.4	110
125	A genetically encoded, fluorescent indicator for cyclic AMP in living cells. Nature Cell Biology, 2000, 2, 25-29.	10.3	474
126	Imaging Signal Transduction in Living Cells with GFP-Based Probes. IUBMB Life, 2000, 49, 375-379.	3.4	26

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127	Dimerization of Fab fragments enables ready screening of phage antibodies that affect hepatocyte growth factor/scatter factor activity on target cells. European Journal of Immunology, 1997, 27, 618-623.	2.9	10
128	Phosphodiesterase 2A, cGMP stimulated. The AFCS-nature Molecule Pages, 0, , .	0.2	1