

Vladimir Matchkov

List of Publications by Year in descending order

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91
papers

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citations

172207

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197535

49
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92
all docs

92
docs citations

92
times ranked

2904
citing authors

#	ARTICLE	IF	CITATIONS
1	Hypothesis for the Initiation of Vasomotion. <i>Circulation Research</i> , 2001, 88, 810-815.	2.0	240
2	Vasomotion – what is currently thought?. <i>Acta Physiologica</i> , 2011, 202, 253-269.	1.8	206
3	Hypertension and physical exercise: The role of oxidative stress. <i>Medicina (Lithuania)</i> , 2016, 52, 19-27.	0.8	132
4	Disruption of Na ⁺ ,HCO ₃ ⁻ Cotransporter NBCn1 (slc4a7) Inhibits NO-Mediated Vasorelaxation, Smooth Muscle Ca ²⁺ Sensitivity, and Hypertension Development in Mice. <i>Circulation</i> , 2011, 124, 1819-1829.	1.6	124
5	Bestrophin-3 (Vitelliform Macular Dystrophy 2-Like 3 Protein) Is Essential for the cGMP-Dependent Calcium-Activated Chloride Conductance in Vascular Smooth Muscle Cells. <i>Circulation Research</i> , 2008, 103, 864-872.	2.0	88
6	Loss-of-activity-mutation in the cardiac chloride-bicarbonate exchanger AE3 causes short QT syndrome. <i>Nature Communications</i> , 2017, 8, 1696.	5.8	88
7	A Cyclic GMP-dependent Calcium-activated Chloride Current in Smooth-muscle Cells from Rat Mesenteric Resistance Arteries. <i>Journal of General Physiology</i> , 2004, 123, 121-134.	0.9	87
8	Vascular smooth muscle cell phenotype is defined by C/EBP α -dependent transcription factors. <i>FEBS Journal</i> , 2013, 280, 5488-5499.	2.2	83
9	Junctional and nonjunctional effects of heptanol and glycyrrhetic acid derivatives in rat mesenteric small arteries. <i>British Journal of Pharmacology</i> , 2004, 142, 961-972.	2.7	79
10	K _v 7 channels are involved in hypoxia-induced vasodilatation of porcine coronary arteries. <i>British Journal of Pharmacology</i> , 2014, 171, 69-82.	2.7	65
11	Specialized Functional Diversity and Interactions of the Na,K-ATPase. <i>Frontiers in Physiology</i> , 2016, 7, 179.	1.3	65
12	Intracellular Ca ²⁺ Signalling and Phenotype of Vascular Smooth Muscle Cells. <i>Basic and Clinical Pharmacology and Toxicology</i> , 2012, 110, 42-48.	1.2	62
13	Analysis of effects of connexin-mimetic peptides in rat mesenteric small arteries. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2006, 291, H357-H367.	1.5	59
14	TMEM16A knockdown abrogates two different Ca ²⁺ -activated Cl ⁻ currents and contractility of smooth muscle in rat mesenteric small arteries. <i>Pflügers Archiv European Journal of Physiology</i> , 2014, 466, 1391-1409.	1.3	59
15	Interaction Between Na ⁺ /K ⁺ -Pump and Na ⁺ /Ca ²⁺ -Exchanger Modulates Intercellular Communication. <i>Circulation Research</i> , 2007, 100, 1026-1035.	2.0	52
16	Rebaudioside A directly stimulates insulin secretion from pancreatic beta cells: a glucose-dependent action via inhibition of ATP-sensitive K ⁺ channels*. <i>Diabetes, Obesity and Metabolism</i> , 2008, 10, 1074-1085.	2.2	47
17	Distinct $\hat{I}_{Na,K}$ Na,K-ATPase membrane pools are differently involved in early skeletal muscle remodeling during disuse. <i>Journal of General Physiology</i> , 2016, 147, 175-188.	0.9	47
18	Membrane lipid rafts are disturbed in the response of rat skeletal muscle to short-term disuse. <i>American Journal of Physiology - Cell Physiology</i> , 2017, 312, C627-C637.	2.1	46

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19	A model of smooth muscle cell synchronization in the arterial wall. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2007, 293, H229-H237.	1.5	45
20	NS11021, a novel opener of large-conductance Ca^{2+} -activated K^{+} channels, enhances erectile responses in rats. <i>British Journal of Pharmacology</i> , 2009, 158, 1465-1476.	2.7	45
21	Vasomotion has chloride-dependency in rat mesenteric small arteries. <i>Pflugers Archiv European Journal of Physiology</i> , 2008, 457, 389-404.	1.3	44
22	Activation of a cGMP-sensitive calcium-dependent chloride channel may cause transition from calcium waves to whole cell oscillations in smooth muscle cells. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2007, 293, H215-H228.	1.5	41
23	Bestrophen is important for the rhythmic but not the tonic contraction in rat mesenteric small arteries. <i>Cardiovascular Research</i> , 2011, 91, 685-693.	1.8	39
24	Chronic selective serotonin reuptake inhibition modulates endothelial dysfunction and oxidative state in rat chronic mild stress model of depression. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2015, 309, R814-R823.	0.9	39
25	Effects of cGMP on Coordination of Vascular Smooth Muscle Cells of Rat Mesenteric Small Arteries. <i>Journal of Vascular Research</i> , 2005, 42, 301-311.	0.6	34
26	Antiphase oscillations of endothelium and smooth muscle $[Ca^{2+}]_i$ in vasomotion of rat mesenteric small arteries. <i>Cell Calcium</i> , 2007, 42, 536-547.	1.1	34
27	Association Between Endothelial Dysfunction and Depression-Like Symptoms in Chronic Mild Stress Model of Depression. <i>Psychosomatic Medicine</i> , 2014, 76, 268-276.	1.3	34
28	Distribution of cGMP-dependent and cGMP-independent Ca^{2+} -activated Cl^{-} conductances in smooth muscle cells from different vascular beds and colon. <i>Pflugers Archiv European Journal of Physiology</i> , 2005, 451, 371-379.	1.3	31
29	Transport and Function of Chloride in Vascular Smooth Muscles. <i>Journal of Vascular Research</i> , 2013, 50, 69-87.	0.6	30
30	Intravital investigation of rat mesenteric small artery tone and blood flow. <i>Journal of Physiology</i> , 2017, 595, 5037-5053.	1.3	30
31	Cyclodextrin-Scaffolded Alamethicin with Remarkably Efficient Membrane Permeabilizing Properties and Membrane Current Conductance. <i>Journal of Physical Chemistry B</i> , 2012, 116, 7652-7659.	1.2	28
32	The α isoform of the Na,K-pump is important for intercellular communication, agonist-induced contraction, and EDHF-like response in rat mesenteric arteries. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2012, 303, H36-H46.	1.5	24
33	Isoform-Specific Na,K-ATPase Alterations Precede Disuse-Induced Atrophy of Rat Soleus Muscle. <i>BioMed Research International</i> , 2015, 2015, 1-11.	0.9	24
34	The bestrophen- and TMEM16A-associated Ca^{2+} -activated Cl^{-} channels in vascular smooth muscles. <i>Channels</i> , 2014, 8, 361-369.	1.5	23
35	The role of Ca^{2+} activated Cl^{-} channels in blood pressure control. <i>Current Opinion in Pharmacology</i> , 2015, 21, 127-137.	1.7	23
36	Chronic Mild Stress-Induced Depression-Like Symptoms in Rats and Abnormalities in Catecholamine Uptake in Small Arteries. <i>Psychosomatic Medicine</i> , 2012, 74, 278-287.	1.3	22

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37	Heterogeneity and weak coupling may explain the synchronization characteristics of cells in the arterial wall. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2008, 366, 3483-3502.	1.6	21
38	Smooth muscle Ca ²⁺ sensitization causes hypercontractility of middle cerebral arteries in mice bearing the familial hemiplegic migraine type 2 associated mutation. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2019, 39, 1570-1587.	2.4	21
39	Downregulation of L-type Ca ²⁺ channel in rat mesenteric arteries leads to loss of smooth muscle contractile phenotype and inward hypertrophic remodeling. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2014, 306, H1287-H1301.	1.5	20
40	Myogenic response of rat femoral small arteries in relation to wall structure and [Ca ²⁺] _i . <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2002, 283, H118-H125.	1.5	19
41	Na-K-ATPase regulates intercellular communication in the vascular wall via cSrc kinase-dependent connexin43 phosphorylation. <i>American Journal of Physiology - Cell Physiology</i> , 2017, 312, C385-C397.	2.1	19
42	KATP-channel-induced vasodilation is modulated by the Na,K-pump activity in rabbit coronary small arteries. <i>British Journal of Pharmacology</i> , 2004, 143, 872-880.	2.7	16
43	Negative News: Cl ⁻ and HCO ₃ ⁻ in the Vascular Wall. <i>Physiology</i> , 2016, 31, 370-383.	1.6	16
44	The β 2 isoform Na,K-ATPase modulates contraction of rat mesenteric small artery via cSrc-dependent Ca ²⁺ sensitization. <i>Acta Physiologica</i> , 2018, 224, e13059.	1.8	16
45	Mechanisms of cellular synchronization in the vascular wall. <i>Mechanisms of vasomotion. Danish Medical Bulletin</i> , 2010, 57, B4191.	0.3	16
46	Involvement of transglutaminase 2 and voltage-gated potassium channels in cystamine vasodilatation in rat mesenteric small arteries. <i>British Journal of Pharmacology</i> , 2016, 173, 839-855.	2.7	15
47	The V-ATPase is expressed in the choroid plexus and mediates cAMP-induced intracellular pH alterations. <i>Physiological Reports</i> , 2017, 5, e13072.	0.7	15
48	Variable Contribution of TMEM16A to Tone in Murine Arterial Vasculature. <i>Basic and Clinical Pharmacology and Toxicology</i> , 2018, 123, 30-41.	1.2	15
49	A Single Simulated Heliox Dive Modifies Endothelial Function in the Vascular Wall of ApoE Knockout Male Rats More Than Females. <i>Frontiers in Physiology</i> , 2019, 10, 1342.	1.3	15
50	Abnormal neurovascular coupling as a cause of excess cerebral vasodilation in familial migraine. <i>Cardiovascular Research</i> , 2020, 116, 2009-2020.	1.8	15
51	PTPRG is an ischemia risk locus essential for HCO ₃ ⁻ -dependent regulation of endothelial function and tissue perfusion. <i>ELife</i> , 2020, 9, .	2.8	15
52	Role of Peripheral Vascular Resistance for the Association Between Major Depression and Cardiovascular Disease. <i>Journal of Cardiovascular Pharmacology</i> , 2015, 65, 299-307.	0.8	14
53	Circulating Ouabain Modulates Expression of Claudins in Rat Intestine and Cerebral Blood Vessels. <i>International Journal of Molecular Sciences</i> , 2020, 21, 5067.	1.8	14
54	Activation of the kidney sodium chloride cotransporter by the β 2-adrenergic receptor agonist salbutamol increases blood pressure. <i>Kidney International</i> , 2021, 100, 321-335.	2.6	14

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55	Transglutaminase 2 Inhibitor LDN 27219 Age-Dependently Lowers Blood Pressure and Improves Endothelium-Dependent Vasodilation in Resistance Arteries. <i>Hypertension</i> , 2021, 77, 216-227.	1.3	12
56	Rat mesenteric small artery neurogenic dilatation is predominantly mediated by β_1 -adrenoceptors <i>in vivo</i> . <i>Journal of Physiology</i> , 2019, 597, 1819-1831.	1.3	10
57	Skeletal Muscle Na,K-ATPase as a Target for Circulating Ouabain. <i>International Journal of Molecular Sciences</i> , 2020, 21, 2875.	1.8	10
58	Involvement of the Na ⁺ ,K ⁺ -ATPase isoforms in control of cerebral perfusion. <i>Experimental Physiology</i> , 2019, 104, 1023-1028.	0.9	9
59	A characterization of the electrophysiological properties of the cardiomyocytes from ventricle, atrium and sinus venosus of the snake heart. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2020, 190, 63-73.	0.7	9
60	Isoform-specific Na,K-ATPase and membrane cholesterol remodeling in motor endplates in distinct mouse models of myodystrophy. <i>American Journal of Physiology - Cell Physiology</i> , 2020, 318, C1030-C1041.	2.1	9
61	Migraine-Associated Mutation in the Na,K-ATPase Leads to Disturbances in Cardiac Metabolism and Reduced Cardiac Function. <i>Journal of the American Heart Association</i> , 2022, 11, e021814.	1.6	9
62	The Na,K-ATPase-Dependent Src Kinase Signaling Changes with Mesenteric Artery Diameter. <i>International Journal of Molecular Sciences</i> , 2018, 19, 2489.	1.8	8
63	Perivascular Adipose Tissue Contributes to the Modulation of Vascular Tone <i>in vivo</i> . <i>Journal of Vascular Research</i> , 2019, 56, 320-332.	0.6	8
64	The Na,K-ATPase in vascular smooth muscle cells. <i>Current Topics in Membranes</i> , 2019, 83, 151-175.	0.5	8
65	A paradoxical increase of force development in saphenous and tail arteries from heterozygous ANO1 knockout mice. <i>Physiological Reports</i> , 2020, 8, e14645.	0.7	8
66	Chronic Ouabain Prevents Na,K-ATPase Dysfunction and Targets AMPK and IL-6 in Disused Rat Soleus Muscle. <i>International Journal of Molecular Sciences</i> , 2021, 22, 3920.	1.8	8
67	Extracellular Calcium-Dependent Modulation of Endothelium Relaxation in Rat Mesenteric Small Artery: The Role of Potassium Signaling. <i>BioMed Research International</i> , 2015, 2015, 1-11.	0.9	7
68	Aberrant sinus node firing during β -adrenergic stimulation leads to cardiac arrhythmias in diabetic mice. <i>Acta Physiologica</i> , 2020, 229, e13444.	1.8	7
69	NBCn1 Increases NH ₄ ⁺ Reabsorption Across Thick Ascending Limbs, the Capacity for Urinary NH ₄ ⁺ Excretion, and Early Recovery from Metabolic Acidosis. <i>Journal of the American Society of Nephrology: JASN</i> , 2021, 32, 852-865.	3.0	7
70	Impaired Mineral Ion Metabolism in a Mouse Model of Targeted Calcium-Sensing Receptor (CaSR) Deletion from Vascular Smooth Muscle Cells. <i>Journal of the American Society of Nephrology: JASN</i> , 2022, 33, 1323-1340.	3.0	7
71	Effect of ischemic preconditioning and a Kv7 channel blocker on cardiac ischemia-reperfusion injury in rats. <i>European Journal of Pharmacology</i> , 2020, 866, 172820.	1.7	6
72	Treatment with the vascular disrupting agent combretastatin is associated with impaired AQP2 trafficking and increased urine output. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2012, 303, R186-R198.	0.9	5

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73	Does Src Kinase Mediated Vasoconstriction Impair Penumbral Reperfusion?. Stroke, 2021, 52, e250-e258.	1.0	4
74	Phenylephrine-Induced Cardiovascular Changes in the Anesthetized Mouse: An Integrated Assessment of in vivo Hemodynamics Under Conditions of Controlled Heart Rate. Frontiers in Physiology, 2022, 13, 831724.	1.3	4
75	Endothelium in Diseased States. BioMed Research International, 2014, 2014, 1-2.	0.9	3
76	Trophic sympathetic influence weakens pro-contractile role of Cl ⁻ channels in rat arteries during postnatal maturation. Scientific Reports, 2020, 10, 20002.	1.6	3
77	Demand creates its own supply: The Na/K-ATPase controls metabolic reserve and flexibility. Acta Physiologica, 2021, 232, e13673.	1.8	3
78	Reply from Vladimir V. Matchkov and Christian Aalkjaer. Journal of Physiology, 2017, 595, 6785-6787.	1.3	2
79	Pro-contractile role of chloride in arterial smooth muscle: Postnatal decline potentially governed by sympathetic nerves. Experimental Physiology, 2019, 104, 1018-1022.	0.9	2
80	The snake heart pacemaker is localized near the sinoatrial valve. Journal of Experimental Biology, 2021, 224, .	0.8	2
81	Inherited Ventricular Arrhythmia in Zebrafish: Genetic Models and Phenotyping Tools. Reviews of Physiology, Biochemistry and Pharmacology, 2021, , 1.	0.9	1
82	Stress adaptation in rats associate with reduced expression of cerebrovascular K _v 7.4 channels and biphasic neurovascular responses. Stress, 2022, 25, 227-234.	0.8	1
83	Opto-mechanical microbridles for the determination of structural and functional properties of small resistance arteries. , 2014, , .		0
84	Ultrasensitive Photonic Microsystem Enabling Sub-micrometric Monitoring of Arterial Oscillations for Advanced Cardiovascular Studies. Frontiers in Physiology, 2019, 10, 940.	1.3	0
85	Vascular microdomain signalling and possible novel treatments in cardiovascular diseases. Experimental Physiology, 2019, 104, 1011-1012.	0.9	0
86	Na ⁺ /K ⁺ -ATPase pump modulates intercellular communication via interaction with other membrane transporters in vascular smooth muscle cells.. FASEB Journal, 2007, 21, A912.	0.2	0
87	siRNA-mediated knockdown of endogenously expressed bestrophin in smooth muscles.. FASEB Journal, 2007, 21, .	0.2	0
88	The $\alpha 2$ isoform of the Na ⁺ /K ⁺ -ATPase pump is involved in synchronization of smooth muscle cells in the arterial wall.. FASEB Journal, 2010, 24, 976.16.	0.2	0
89	Downrgulation of L-type calcium channels increase media thicknes and change smooth muscle phenotype in rat resistance arteries in vivo.. FASEB Journal, 2010, 24, 985.16.	0.2	0
90	Vasomotion in rat small mesenteric arteries is bestrophin-dependent.. FASEB Journal, 2010, 24, 1002.29.	0.2	0

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91	Role of bestrophin-3 protein in endoplasmic reticulum (ER) stress response and its regulation by reactive oxygen species (ROS) and ERK1/2 in kidney proximal tubule cells (PTC).. FASEB Journal, 2010, 24, 770.1.	0.2	0