Mark T Nelson

List of Publications by Year in Descending Order

Source: https://exaly.com/author-pdf/5558348/mark-t-nelson-publications-by-year.pdf
Version: 2024-04-24

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.
The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

127 papers	8,388 citations	48 h-index	91 g-index
147 ext. papers	9,331 ext. citations	7.6 avg, IF	5.98 L-index

#	Paper	IF	Citations
127	Piezo1 is a mechanosensor channel in CNS capillaries. *Journal of General Physiology*, **2022**, 154,	3.4	2
126	Enhanced Vascular Contractility Following Secondhand Smoke Exposure: A Pathological "Double-hit" to Critical Smooth Muscle Ion Channels.. *Function*, **2022**, 3, zqab061	6.1	
125	Adenosine signaling activates ATP-sensitive K channels in endothelial cells and pericytes in CNS capillaries.. *Science Signaling*, **2022**, 15, eabl5405	8.8	3
124	Piezo1 Is a Mechanosensor Channel in Central Nervous System Capillaries.. *Circulation Research*, **2022**, 101161CIRCRESAHA122320827	15.7	4
123	Genetic ablation of smooth muscle K2.1 is inconsequential to the function of mouse cerebral arteries.. *Journal of Cerebral Blood Flow and Metabolism*, **2022**, 271678X221093432	7.3	0
122	The Role of PIEZO1 in Urinary Bladder Function and Dysfunction in a Rodent Model of Cyclophosphamide-Induced Cystitis.. *Frontiers in Pain Research*, **2021**, 2, 748385	1.4	0
121	PIP corrects cerebral blood flow deficits in small vessel disease by rescuing capillary Kir2.1 activity. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	14
120	Impaired Cerebral Autoregulation After Subarachnoid Hemorrhage: A Quantitative Assessment Using a Mouse Model. *Frontiers in Physiology*, **2021**, 12, 688468	4.6	3
119	TRPA1 channel: New kid in the ℞neurovascular coupling℞town. *Cell Calcium*, **2021**, 96, 102407	4	
118	Zinc drives vasorelaxation by acting in sensory nerves, endothelium and smooth muscle. *Nature Communications*, **2021**, 12, 3296	17.4	6
117	Impaired capillary-to-arteriolar electrical signaling after traumatic brain injury. *Journal of Cerebral Blood Flow and Metabolism*, **2021**, 41, 1313-1327	7.3	3
116	PIP Improves Cerebral Blood Flow in a Mouse Model of Alzheimer℞s Disease. *Function*, **2021**, 2, zqab010	6.1	15
115	Local IP receptor-mediated Ca signals compound to direct blood flow in brain capillaries. *Science Advances*, **2021**, 7,	14.3	12
114	Differential restoration of functional hyperemia by antihypertensive drug classes in hypertension-related cerebral small vessel disease. *Journal of Clinical Investigation*, **2021**, 131,	15.9	6
113	ATP- and voltage-dependent electro-metabolic signaling regulates blood flow in heart. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 7461-7470	11.5	18
112	Reducing Hypermuscularization of the Transitional Segment Between Arterioles and Capillaries Protects Against Spontaneous Intracerebral Hemorrhage. *Circulation*, **2020**, 141, 2078-2094	16.7	22
111	The capillary Kir channel as sensor and amplifier of neuronal signals: Modeling insights on K-mediated neurovascular communication. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 16626-16637	11.5	18

110	Vascular control of the CO/H-dependent drive to breathe. *ELife*, **2020**, 9,	8.9	11
109	Disruption of Pressure-Induced Ca Spark Vasoregulation of Resistance Arteries, Rather Than Endothelial Dysfunction, Underlies Obesity-Related Hypertension. *Hypertension*, **2020**, 75, 539-548	8.5	15
108	Contractile pericytes determine the direction of blood flow at capillary junctions. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 27022-27033	11.5	56
107	PIP: A critical regulator of vascular ion channels hiding in plain sight. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 20378-20389	11.5	19
106	TRPV4 blockade reduces voiding frequency, ATP release, and pelvic sensitivity in mice with chronic urothelial overexpression of NGF. *American Journal of Physiology - Renal Physiology*, **2019**, 317, F1695-F1706	4.3	7
105	"A Step and a Ceiling": mechanical properties of Ca spark vasoregulation in resistance arteries by pressure-induced oxidative activation of PKG. *Physiological Reports*, **2019**, 7, e14260	2.6	
104	Transient receptor potential vanilloid-4 channels are involved in diminished myogenic tone in brain parenchymal arterioles in response to chronic hypoperfusion in mice. *Acta Physiologica*, **2019**, 225, e13181	5.6	6
103	The K 7 channel activator retigabine suppresses mouse urinary bladder afferent nerve activity without affecting detrusor smooth muscle K channel currents. *Journal of Physiology*, **2019**, 597, 935-950	3.9	7
102	The yin and yang of K channels in cerebral small vessel pathologies. *Microcirculation*, **2018**, 25, e12436	2.9	9
101	Endothelial GqPCR activity controls capillary electrical signaling and brain blood flow through PIP depletion. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E3569-E3577	11.5	38
100	PIP depletion promotes TRPV4 channel activity in mouse brain capillary endothelial cells. *ELife*, **2018**, 7,	8.9	69
99	Junctional Pericytes Serve as Directional Control Elements in K+-mediated Functional Hyperemia. *FASEB Journal*, **2018**, 32, 843.23	0.9	
98	Knockout of Vascular Smooth Muscle Inward-Rectifier K+ Channels Causes Symptoms of Overactive Bladder in Mice. *FASEB Journal*, **2018**, 32, 770.3	0.9	
97	An In Situ Kidney Slice Model for Studying Angiotensin II- and TRPC5-Mediated Calcium Signaling. *FASEB Journal*, **2018**, 32, 721.2	0.9	
96	Oxidation of cysteine 117 stimulates constitutive activation of the type I cGMP-dependent protein kinase. *Journal of Biological Chemistry*, **2018**, 293, 16791-16802	5.4	22
95	TRPV4 and KRAS and FGFR1 gain-of-function mutations drive giant cell lesions of the jaw. *Nature Communications*, **2018**, 9, 4572	17.4	30
94	Traumatic Brain Injury Causes Endothelial Dysfunction in the Systemic Microcirculation through Arginase-1-Dependent Uncoupling of Endothelial Nitric Oxide Synthase. *Journal of Neurotrauma*, **2017**, 34, 192-203	5.4	47
93	Inhibition of vascular smooth muscle inward-rectifier K channels restores myogenic tone in mouse urinary bladder arterioles. *American Journal of Physiology - Renal Physiology*, **2017**, 312, F836-F847	4.3	10

92	Capillary K-sensing initiates retrograde hyperpolarization to increase local cerebral blood flow. *Nature Neuroscience*, **2017**, 20, 717-726	25.5	240
91	Lack of direct effect of adiponectin on vascular smooth muscle cell BK channels or Ca signaling in the regulation of small artery pressure-induced constriction. *Physiological Reports*, **2017**, 5, e13337	2.6	8
90	Rhythmic Calcium Events in the Lamina Propria Network of the Urinary Bladder of Rat Pups. *Frontiers in Systems Neuroscience*, **2017**, 11, 87	3.5	13
89	Purinergic regulation of vascular tone in the retrotrapezoid nucleus is specialized to support the drive to breathe. *ELife*, **2017**, 6,	8.9	29
88	Pressure-induced oxidative activation of PKG enables vasoregulation by Ca2+ sparks and BK channels. *Science Signaling*, **2016**, 9, ra100	8.8	29
87	Transient contractions of urinary bladder smooth muscle are drivers of afferent nerve activity during filling. *Journal of General Physiology*, **2016**, 147, 323-35	3.4	40
86	The K+ channel KIR2.1 functions in tandem with proton influx to mediate sour taste transduction. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E229-38	11.5	85
85	Ion channel networks in the control of cerebral blood flow. *Journal of Cerebral Blood Flow and Metabolism*, **2016**, 36, 492-512	7.3	84
84	Mechanistic insights into a TIMP3-sensitive pathway constitutively engaged in the regulation of cerebral hemodynamics. *ELife*, **2016**, 5,	8.9	42
83	Inward rectifier potassium (Kir2.1) channels as end-stage boosters of endothelium-dependent vasodilators. *Journal of Physiology*, **2016**, 594, 3271-85	3.9	67
82	Purinergic signalling underlies transforming growth factor-β-mediated bladder afferent nerve hyperexcitability. *Journal of Physiology*, **2016**, 594, 3575-88	3.9	12
81	Reducing Timp3 or vitronectin ameliorates disease manifestations in CADASIL mice. *Annals of Neurology*, **2016**, 79, 387-403	9.4	52
80	Pharmacological inhibitors of TRPV4 channels reduce cytokine production, restore endothelial function and increase survival in septic mice. *Scientific Reports*, **2016**, 6, 33841	4.9	39
79	Gain-of-function mutation in TRPV4 identified in patients with osteonecrosis of the femoral head. *Journal of Medical Genetics*, **2016**, 53, 705-9	5.8	19
78	Uncoupling of neurovascular communication after transient global cerebral ischemia is caused by impaired parenchymal smooth muscle Kir channel function. *Journal of Cerebral Blood Flow and Metabolism*, **2016**, 36, 1195-201	7.3	17
77	Dysfunction of mouse cerebral arteries during early aging. *Journal of Cerebral Blood Flow and Metabolism*, **2015**, 35, 1445-53	7.3	51
76	Orchestrating Ca2+ influx through Ca(V)1.2 and Ca(V)3.x channels in human cerebral arteries. *Journal of General Physiology*, **2015**, 145, 481-3	3.4	
75	Social stress in mice induces urinary bladder overactivity and increases TRPV1 channel-dependent afferent nerve activity. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2015**, 309, R629-38	3.2	25

74	Location, Location, Location: Juxtaposed calcium-signaling microdomains as a novel model of the vascular smooth muscle myogenic response. *Journal of General Physiology*, **2015**, 146, 129-32	3.4	5
73	Potassium channelopathy-like defect underlies early-stage cerebrovascular dysfunction in a genetic model of small vessel disease. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E796-805	11.5	55
72	Vascular inward rectifier K+ channels as external K+ sensors in the control of cerebral blood flow. *Microcirculation*, **2015**, 22, 183-96	2.9	83
71	Disruption Of Astrocytic Calcium Signaling During Neurovascular Coupling In A Genetic Model Of Small Vessel Disease. *FASEB Journal*, **2015**, 29, 832.6	0.9	
70	Ca2+ Dynamics and Contraction of Junctional Pericytes in the Retinal Vasculature. *FASEB Journal*, **2015**, 29, 790.1	0.9	
69	NS19504: a novel BK channel activator with relaxing effect on bladder smooth muscle spontaneous phasic contractions. *Journal of Pharmacology and Experimental Therapeutics*, **2014**, 350, 520-30	4.7	16
68	Stress-induced glucocorticoid signaling remodels neurovascular coupling through impairment of cerebrovascular inwardly rectifying K+ channel function. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 7462-7	11.5	58
67	Social stress induces changes in urinary bladder function, bladder NGF content, and generalized bladder inflammation in mice. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2014**, 307, R893-900	3.2	24
66	AKAP150-dependent cooperative TRPV4 channel gating is central to endothelium-dependent vasodilation and is disrupted in hypertension. *Science Signaling*, **2014**, 7, ra66	8.8	110
65	A PLC□-dependent, force-sensitive signaling network in the myogenic constriction of cerebral arteries. *Science Signaling*, **2014**, 7, ra49	8.8	73
64	Vascular TRP channels: performing under pressure and going with the flow. *Physiology*, **2014**, 29, 343-60	9.8	59
63	In vivo and ex vivo dysfunction of neurovascular coupling in a mouse model of subarachnoid hemorrhage (676.3). *FASEB Journal*, **2014**, 28, 676.3	0.9	
62	Critical role of Kv channels in cerebrovascular dysfunction associated with ischemic small vessel disease in a mouse genetic model. *FASEB Journal*, **2013**, 27, 925.7	0.9	
61	Loss of parenchymal arteriolar dilation to K+ contributes to impaired neurovascular coupling in chronic angiotensin II hypertension. *FASEB Journal*, **2013**, 27, 1186.8	0.9	
60	Impairment of Neurovascular Coupling by Chronic Stress. *FASEB Journal*, **2013**, 27, 925.9	0.9	
59	Calcium-sensitive potassium channels are not involved in the decreased myogenic tone of posterior cerebral arteries in a genetic model of cerebral ischemic small vessel disease. *FASEB Journal*, **2013**, 27, lb671	0.9	
58	CEREBRAL VASCULAR DYSFUNCTION FOLLOWING TRAUMATIC BRAIN INJURY. *FASEB Journal*, **2013**, 27, 875.6	0.9	
57	Increased endothelial calcium signals in cerebral vessels following traumatic brain injury. *FASEB Journal*, **2013**, 27, 875.9	0.9	

56	Elementary Ca2+ signals through endothelial TRPV4 channels regulate vascular function. *Science*, **2012**, 336, 597-601	33.3	392
55	Acidosis dilates brain parenchymal arterioles by conversion of calcium waves to sparks to activate BK channels. *Circulation Research*, **2012**, 110, 285-94	15.7	76
54	Inversion of neurovascular coupling by subarachnoid blood depends on large-conductance Ca2+-activated K+ (BK) channels. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E1387-95	11.5	81
53	Profound decrease in myogenic tone of parenchymal arterioles in a genetic model of cerebral ischemic small vessel disease. *FASEB Journal*, **2012**, 26, 685.6	0.9	
52	Calcium signaling in smooth muscle. *Cold Spring Harbor Perspectives in Biology*, **2011**, 3, a004549	10.2	115
51	Role of ryanodine receptors in acidic pH-induced dilation of brain parenchymal arterioles. *FASEB Journal*, **2011**, 25, 1024.15	0.9	
50	Elementary TRPV4 Ca2+ events in intact vascular endothelium. *FASEB Journal*, **2011**, 25, 1082.1	0.9	
49	Functional evidence of TRPV4-mediated Ca2+ signals in cortical astrocytes. *FASEB Journal*, **2011**, 25, 1024.23	0.9	1
48	Fundamental Change in Neurovascular Coupling after Subarachnoid Hemorrhage. *FASEB Journal*, **2011**, 25, 1021.9	0.9	
47	A non-anesthetized mouse model for recording sensory urinary bladder activity. *Frontiers in Neurology*, **2010**, 1, 127	4.1	17
46	Astrocytic endfoot Ca2+ and BK channels determine both arteriolar dilation and constriction. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 3811-6	11.5	227
45	Spinning Disk Confocal Microscopy of Calcium Signalling in Blood Vessel Walls **2010**, 24, 5-8		8
44	Nerve-induced smooth muscle to endothelium signaling in small resistance arteries. *FASEB Journal*, **2010**, 24, 598.7	0.9	
43	High intravascular pressure decreases endothelial Ca2+ pulsars and impairs endothelium-dependent vasodilation in mouse mesenteric arteries. *FASEB Journal*, **2010**, 24, 956.6	0.9	
42	Nerve-evoked purinergic signalling suppresses action potentials, Ca2+ flashes and contractility evoked by muscarinic receptor activation in mouse urinary bladder smooth muscle. *Journal of Physiology*, **2009**, 587, 5275-88	3.9	44
41	Functional architecture of inositol 1,4,5-trisphosphate signaling in restricted spaces of myoendothelial projections. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 9627-32	11.5	211
40	Sarcoplasmic Reticulum and Membrane Currents. *Novartis Foundation Symposium*, **2008**, 189-207		5
39	Ca2+ pulsars: spatially restricted, IP3R-mediated Ca2+ release important for endothelial function. *FASEB Journal*, **2008**, 22, 1181.18	0.9	

38	Decreased frequency of transient outward BK currents in cerebral myocytes following subarachnoid hemorrhage. *FASEB Journal*, **2008**, 22, 965.18	0.9	
37	Basal and ACh-stimulated intracellular Ca2+ signals in intact endothelium originate from IP3-sensitive stores. *FASEB Journal*, **2007**, 21, A861	0.9	
36	Local potassium signaling couples neuronal activity to vasodilation in the brain. *Nature Neuroscience*, **2006**, 9, 1397-1403	25.5	420
35	SK channels are involved in the stimulation of intracellular Ca2+ signals by reactive oxygen species (ROS) in intact endothelium. *FASEB Journal*, **2006**, 20, A1164	0.9	
34	Calcium dynamics in cortical astrocytes and arterioles during neurovascular coupling. *Circulation Research*, **2004**, 95, e73-81	15.7	201
33	The beta1 subunit of the Ca2+-sensitive K+ channel protects against hypertension. *Journal of Clinical Investigation*, **2004**, 113, 955-7	15.9	33
32	Properties and molecular basis of the mouse urinary bladder voltage-gated K+ current. *Journal of Physiology*, **2003**, 549, 65-74	3.9	62
31	Altered expression of small-conductance Ca2+-activated K+ (SK3) channels modulates arterial tone and blood pressure. *Circulation Research*, **2003**, 93, 124-31	15.7	273
30	Urinary bladder instability induced by selective suppression of the murine small conductance calcium-activated potassium (SK3) channel. *Journal of Physiology*, **2003**, 551, 893-903	3.9	99
29	Differential regulation of SK and BK channels by Ca(2+) signals from Ca(2+) channels and ryanodine receptors in guinea-pig urinary bladder myocytes. *Journal of Physiology*, **2002**, 541, 483-92	3.9	99
28	Potassium ions as vasodilators: role of inward rectifier potassium channels. *Circulation Research*, **2001**, 88, 132-3	15.7	23
27	Voltage dependence of the coupling of Ca(2+) sparks to BK(Ca) channels in urinary bladder smooth muscle. *American Journal of Physiology - Cell Physiology*, **2001**, 280, C481-90	5.4	89
26	Role of phospholamban in the modulation of arterial Ca(2+) sparks and Ca(2+)-activated K(+) channels by cAMP. *American Journal of Physiology - Cell Physiology*, **2001**, 281, C1029-37	5.4	84
25	Micromolar Ca(2+) from sparks activates Ca(2+)-sensitive K(+) channels in rat cerebral artery smooth muscle. *American Journal of Physiology - Cell Physiology*, **2001**, 281, C1769-75	5.4	169
24	Low levels of K(ATP) channel activation decrease excitability and contractility of urinary bladder. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2001**, 280, R1427-33	3.2	64
23	Swelling-activated cation channels mediate depolarization of rat cerebrovascular smooth muscle by hyposmolarity and intravascular pressure. *Journal of Physiology*, **2000**, 527 Pt 1, 139-48	3.9	107
22	Actions of histamine on muscle and ganglia of the guinea pig gallbladder. *American Journal of Physiology - Renal Physiology*, **2000**, 279, G622-30	5.1	22
21	Differential regulation of Ca(2+) sparks and Ca(2+) waves by UTP in rat cerebral artery smooth muscle cells. *American Journal of Physiology - Cell Physiology*, **2000**, 279, C1528-39	5.4	105

20	Intracellular calcium events activated by ATP in murine colonic myocytes. *American Journal of Physiology - Cell Physiology*, **2000**, 279, C126-35	5.4	88
19	Regulation of urinary bladder smooth muscle contractions by ryanodine receptors and BK and SK channels. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2000**, 279, R60-8	3.2	129
18	A case for myoendothelial gap junctions. *Circulation Research*, **2000**, 87, 427-8	15.7	3
17	Vasoregulation by the beta1 subunit of the calcium-activated potassium channel. *Nature*, **2000**, 407, 870-6	50.4	689
16	Gender differences in coronary artery diameter reflect changes in both endothelial Ca2+ and ecNOS activity. *American Journal of Physiology - Heart and Circulatory Physiology*, **1999**, 276, H961-9	5.2	54
15	Functional coupling of ryanodine receptors to KCa channels in smooth muscle cells from rat cerebral arteries. *Journal of General Physiology*, **1999**, 113, 229-38	3.4	248
14	Kir2.1 encodes the inward rectifier potassium channel in rat arterial smooth muscle cells. *Journal of Physiology*, **1999**, 515 (Pt 3), 639-51	3.9	110
13	Regulation of arterial diameter and wall [Ca2+] in cerebral arteries of rat by membrane potential and intravascular pressure. *Journal of Physiology*, **1998**, 508 (Pt 1), 199-209	3.9	514
12	Ryanodine receptors regulate arterial diameter and wall [Ca2+] in cerebral arteries of rat via Ca2+-dependent K+ channels. *Journal of Physiology*, **1998**, 508 (Pt 1), 211-21	3.9	219
11	Bayliss, myogenic tone and volume-regulated chloride channels in arterial smooth muscle. *Journal of Physiology*, **1998**, 507 (Pt 3), 629	3.9	26
10	Ontogeny of local sarcoplasmic reticulum Ca2+ signals in cerebral arteries: Ca2+ sparks as elementary physiological events. *Circulation Research*, **1998**, 83, 1104-14	15.7	99
9	Frequency modulation of Ca2+ sparks is involved in regulation of arterial diameter by cyclic nucleotides. *American Journal of Physiology - Cell Physiology*, **1998**, 274, C1346-55	5.4	180
8	Voltage dependence of Ca2+ sparks in intact cerebral arteries. *American Journal of Physiology - Cell Physiology*, **1998**, 274, C1755-61	5.4	128
7	Activators of protein kinase C decrease Ca2+ spark frequency in smooth muscle cells from cerebral arteries. *American Journal of Physiology - Cell Physiology*, **1997**, 273, C2090-5	5.4	109
6	Chloride channel blockers inhibit myogenic tone in rat cerebral arteries. *Journal of Physiology*, **1997**, 502 (Pt 2), 259-64	3.9	151
5	Increased myogenic tone and diminished responsiveness to ATP-sensitive K+ channel openers in cerebral arteries from diabetic rats. *Circulation Research*, **1997**, 81, 996-1004	15.7	89
4	Zeneca ZD6169 activates ATP-sensitive K+ channels in the urinary bladder of the guinea pig. *Pharmacology*, **1996**, 53, 170-9	2.3	14
3	Arterial dilations in response to calcitonin gene-related peptide involve activation of K+ channels. *Nature*, **1990**, 344, 770-3	50.4	401

2	Noradrenaline contracts arteries by activating voltage-dependent calcium channels. *Nature*, **1988**, 336, 382-5	50.4	301
1	Electro-Metabolic Sensing Through Capillary ATP-Sensitive K+ Channels and Adenosine to Control Cerebral Blood Flow		1