Donald G Buerk

List of Publications by Year
in descending order

78	3,789	186265 28	128289 60
papers	citations	h-index	g-index

78	78	78	3697
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	TRPC channel-derived calcium fluxes differentially regulate ATP and flow-induced activation of eNOS. Nitric Oxide - Biology and Chemistry, 2021, 111-112, 1-13.	2.7	6
2	Coordinated regulation of endothelial calcium signaling and shear stress-induced nitric oxide production by PKCÎ² and PKCÎ·. Cellular Signalling, 2021, 87, 110125.	3.6	4
3	A dynamic computational network model for the role of nitric oxide and the myogenic response in microvascular flow regulation. Microcirculation, 2018, 25, e12465.	1.8	5
4	Effect of Spatial Heterogeneity and Colocalization of eNOS and Capacitative Calcium Entry Channels on Shear Stress-Induced NO Production by Endothelial Cells: A Modeling Approach. Cellular and Molecular Bioengineering, 2018, 11, 143-155.	2.1	4
5	Cholesterol Enrichment Impairs Capacitative Calcium Entry, eNOS Phosphorylation & Shear Stress-Induced NO Production. Cellular and Molecular Bioengineering, 2017, 10, 30-40.	2.1	11
6	Nitric oxide release by deoxymyoglobin nitrite reduction during cardiac ischemia: A mathematical model. Microvascular Research, 2017, 112, 79-86.	2.5	5
7	Nitrite-Mediated Hypoxic Vasodilation Predicted from Mathematical Modeling and Quantified from in Vivo Studies in Rat Mesentery. Frontiers in Physiology, 2017, 8, 1053.	2.8	4
8	A mathematical model for the role of N 2 O 3 in enhancing nitric oxide bioavailability following nitrite infusion. Nitric Oxide - Biology and Chemistry, 2016, 60, 1-9.	2.7	10
9	Mathematical model for shear stress dependent NO and adenine nucleotide production from endothelial cells. Nitric Oxide - Biology and Chemistry, 2016, 52, 1-15.	2.7	7
10	Commentaries on Viewpoint: A paradigm shift for local blood flow regulation. Journal of Applied Physiology, 2014, 116, 706-707.	2.5	3
11	Mechanotransduction Drives Post Ischemic Revascularization Through K_{ATP} Channel Closure and Production of Reactive Oxygen Species. Antioxidants and Redox Signaling, 2014, 20, 872-886.	5.4	30
12	Shear Stress-Induced NO Production is Dependent on ATP Autocrine Signaling and Capacitative Calcium Entry. Cellular and Molecular Bioengineering, 2014, 7, 510-520.	2.1	18
13	Nitric-oxide Synthase-2 Linkage to Focal Adhesion Kinase in Neutrophils Influences Enzyme Activity and Î²2 Integrin Function. Journal of Biological Chemistry, 2013, 288, 4810-4818.	3.4	29
14	Intramicroparticle nitrogen dioxide is a bubble nucleation site leading to decompression-induced neutrophil activation and vascular injury. Journal of Applied Physiology, 2013, 114, 550-558.	2.5	28
15	3D network model of NO transport in tissue. Medical and Biological Engineering and Computing, 2011, 49, 633-647.	2.8	12
16	Response to Dr. Annemiek J.M. Cornelissen editorial. Medical and Biological Engineering and Computing, 2011, 49, 631-632.	2.8	0
17	Modeling O2-Dependent Effects of Nitrite Reductase Activity in Blood and Tissue on Coupled NO and O2 Transport around Arterioles. Advances in Experimental Medicine and Biology, 2011, 701, 271-276.	1.6	10
18	Nitric Oxide Signaling in the Microcirculation. Critical Reviews in Biomedical Engineering, 2011, 39, 397-433.	0.9	31

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19	Direct, real-time measurement of shear stress-induced nitric oxide produced from endothelial cells in vitro. Nitric Oxide - Biology and Chemistry, 2010, 23, 335-342.	2.7	73
20	Mathematical Modeling of The Interaction Between Oxygen, Nitric Oxide And Superoxide. Advances in Experimental Medicine and Biology, 2009, 645, 7-12.	1.6	9
21	Tumoricidal activity of highâ€dose tumor necrosis factorâ€Î± is mediated by macrophageâ€derived nitric oxide burst and permanent blood flow shutdown. International Journal of Cancer, 2008, 123, 464-475.	5.1	9
22	Transport-dependent calcium signaling in spatially segregated cellular caveolar domains. American Journal of Physiology - Cell Physiology, 2008, 294, C856-C866.	4.6	29
23	Glucose-induced release of nitric oxide from mouse pancreatic islets as detected with nitric oxide-selective glass microelectrodes. American Journal of Physiology - Endocrinology and Metabolism, 2007, 292, E907-E912.	3.5	10
24	Nitric Oxide Regulation of Microvascular Oxygen. Antioxidants and Redox Signaling, 2007, 9, 829-843.	5.4	27
25	A Model of NO/O2 Transport in Capillary-perfused Tissue Containing an Arteriole and Venule Pair. Annals of Biomedical Engineering, 2007, 35, 517-529.	2.5	46
26	Nitric Oxide in The Kidney Direct measurements of bioavailable renal nitric oxide. , 2007, 599, 117-123.		4
27	Diabetic impairments in NO-mediated endothelial progenitor cell mobilization and homing are reversed by hyperoxia and SDF-1Î±. Journal of Clinical Investigation, 2007, 117, 1249-1259.	8.2	595
28	Quantifying the l-arginine paradox in vivo. Microvascular Research, 2006, 71, 48-54.	2.5	67
29	The influence of radial RBC distribution, blood velocity profiles, and glycocalyx on coupled NO/O2 transport. Journal of Applied Physiology, 2006, 100, 482-492.	2.5	75
30	Endothelial Progenitor Cell Release into Circulation Is Triggered by Hyperoxia-Induced Increases in Bone Marrow Nitric Oxide. Stem Cells, 2006, 24, 2309-2318.	3.2	118
31	Stem cell mobilization by hyperbaric oxygen. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 290, H1378-H1386.	3.2	232
32	Elevated plasma viscosity in extreme hemodilution increases perivascular nitric oxide concentration and microvascular perfusion. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 288, H1730-H1739.	3.2	196
33	Reduced Nitric Oxide Concentration in the Renal Cortex of Streptozotocin-Induced Diabetic Rats: Effects on Renal Oxygenation and Microcirculation. Diabetes, 2005, 54, 3282-3287.	0.6	74
34	A Model of NO/O<inf>2</inf>Transport in Capillary-perfused Tissue Containing an Arteriole and Venule Pair. , 2005, 2005, 7580-3.		1
35	NO mediates mural cell recruitment and vessel morphogenesis in murine melanomas and tissue-engineered blood vessels. Journal of Clinical Investigation, 2005, 115, 1816-1827.	8.2	167
36	Measuring Tissue PO2 with Microelectrodes. Methods in Enzymology, 2004, 381, 665-690.	1.0	32

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37	Neuronal nitric oxide synthase and N-methyl-d-aspartate neurons in experimental carbon monoxide poisoning. Toxicology and Applied Pharmacology, 2004, 194, 280-295.	2.8	56
38	Impact of the FÃ¥hraeus Effect on NO and O2Biotransport: A Computer Model. Microcirculation, 2004, 11, 337-349.	1.8	46
39	Interferon-Î² gene therapy improves survival in an immunocompetent mouse model of carcinomatosis. Surgery, 2004, 135, 427-436.	1.9	14
40	Interactions between NO and O2 in the microcirculation: a mathematical analysis. Microvascular Research, 2004, 68, 38-50.	2.5	65
41	Effects of iron-chelators on ion-channels and HIF-1Î± in the carotid body. Respiratory Physiology and Neurobiology, 2004, 141, 115-123.	1.6	20
42	Modeling the influence of superoxide dismutase on superoxide and nitric oxide interactions, including reversible inhibition of oxygen consumption. Free Radical Biology and Medicine, 2003, 34, 1488-1503.	2.9	78
43	Immunotargeting of catalase to the pulmonary endothelium alleviates oxidative stress and reduces acute lung transplantation injury. Nature Biotechnology, 2003, 21, 392-398.	17.5	139
44	Temporal Dynamics of Brain Tissue Nitric Oxide during Functional Forepaw Stimulation in Rats. NeuroImage, 2003, 18, 1-9.	4.2	97
45	Investigating the Role of Nitric Oxide in Regulating Blood Flow and Oxygen Delivery from in Vivo Electrochemical Measurements in Eye and Brain. Advances in Experimental Medicine and Biology, 2003, 530, 359-370.	1.6	9
46	Stimulation of perivascular nitric oxide synthesis by oxygen. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 284, H1230-H1239.	3.2	84
47	Nitric Oxide Synthesis in Brain is Stimulated By Oxygen. Advances in Experimental Medicine and Biology, 2003, 510, 133-137.	1.6	15
48	Modeling the Regulation of Oxygen Consumption By Nitric Oxide. Advances in Experimental Medicine and Biology, 2003, 510, 145-149.	1.6	12
49	Recessed Oxygen Electrodes: Getting More Than PO2. Advances in Experimental Medicine and Biology, 2003, 510, 175-179.	1.6	2
50	Evidence that Nitric Oxide Plays a Role in O 2 Sensing from Tissue NO and PO 2 Measurements in Cat Carotid Body. Advances in Experimental Medicine and Biology, 2002, 475, 337-347.	1.6	18
51	Adenosine Enhances Functional Activation of Blood Flow in Cat Optic Nerve Head during Photic Stimulation Independently from Nitric Oxide. Microvascular Research, 2002, 64, 254-264.	2.5	24
52	Acidosis plus melphalan induces nitric oxide-mediated tumor regression in an isolated limb perfusion human melanoma xenograft model. Surgery, 2002, 132, 252-258.	1.9	19
53	Stimulation of nitric oxide synthase in cerebral cortex due to elevated partial pressures of oxygen: An oxidative stress response. Journal of Neurobiology, 2002, 51, 85-100.	3.6	86
54	Can We Model Nitric Oxide Biotransport? A Survey of Mathematical Models for a Simple Diatomic Molecule with Surprisingly Complex Biological Activities. Annual Review of Biomedical Engineering, 2001, 3, 109-143.	12.3	142

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55	Temporal dynamics of the partial pressure of brain tissue oxygen during functional forepaw stimulation in rats. Neuroscience Letters, 2001, 306, 106-110.	2.1	118
56	Regulation of oxygen sensing in peripheral arterial chemoreceptors. International Journal of Biochemistry and Cell Biology, 2001, 33, 755-774.	2.8	63
57	O2â€“Hb Reaction Kinetics and the FÃ¥hraeus Effect during Stagnant, Hypoxic, and Anemic Supply Deficit. Annals of Biomedical Engineering, 1998, 26, 60-75.	2.5	9
58	In vivo Tissue pO₂ Measurements in Hamster Skinfold by Recessed pO₂ Microelectrodes and Phosphorescence Quenching Are in Agreement. Microcirculation, 1998, 5, 219-225.	1.8	29
59	Suppression of glomus cell K+ conductance by 4-aminopyridine is not related to [Ca2+] , dopamine release and chemosensory discharge from carotid body. Brain Research, 1998, 785, 228-235.	2.2	20
60	Inhibition of dopamine release with simultaneous chemosensory excitation by hypercapnia with and without [Ca2+]0 in the cat carotid body. Journal of the Autonomic Nervous System, 1998, 69, 184-189.	1.9	0
61	Vasomotion and Spontaneous Low-Frequency Oscillations in Blood Flow and Nitric Oxide in Cat Optic Nerve Head. Microvascular Research, 1998, 55, 103-112.	2.5	53
62	Dynamic coupling of blood flow to function and metabolism in the optic nerve head. Neuro-Ophthalmology, 1998, 20, 45-54.	1.0	14
63	Simultaneous Tissue PO2, Nitric Oxide, and Laser Doppler Blood Flow Measurements during Neuronal Activation of Optic Nerve. Advances in Experimental Medicine and Biology, 1998, 454, 159-164.	1.6	17
64	Comparing Tissue PO2 Measurements by Recessed Microelectrode and Phosphorescence Quenching. Advances in Experimental Medicine and Biology, 1998, 454, 367-374.	1.6	16
65	Vascular and Metabolic Effects of Nitric Oxide Synthase Inhibition Evaluated by Tissue PO2 Measurements in Carotid Body. Advances in Experimental Medicine and Biology, 1998, 454, 455-460.	1.6	10
66	A Novel Reaction Mechanism for the Formation of S-Nitrosothiol in Vivo. Journal of Biological Chemistry, 1997, 272, 2841-2845.	3.4	273
67	Potential role of H2O2 in chemoreception in the cat carotid body. Journal of the Autonomic Nervous System, 1997, 63, 39-45.	1.9	17
68	Cat carotid body chemosensory discharge (in vitro) is insensitive to charybdotoxin. Brain Research, 1997, 747, 324-327.	2.2	26
69	Influence of O2-Hb Kinetics and the FÃhraeus Effect on the Arteriolar Role in Gas Exchange. Advances in Experimental Medicine and Biology, 1997, 411, 203-207.	1.6	0
70	Nitric Oxide Has a Vasodilatory Role in Cat Optic Nerve Head during Flicker Stimuli. Microvascular Research, 1996, 52, 13-26.	2.5	143
71	Arteriolar Contribution to Microcirculatory CO2/O2 Exchange. Microvascular Research, 1995, 50, 338-359.	2.5	9
72	A compartmental model for oxygen-carbon dioxide coupled transport in the microcirculation. Annals of Biomedical Engineering, 1994, 22, 464-479.	2.5	23

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73	Electrochemical Measurement of Rapid Dopamine Release in Perfused Cat Carotid Body during Onset of Hypoxia. Advances in Experimental Medicine and Biology, 1994, 360, 193-195.	1.6	0
74	Spatial variation of aortic wall oxygen diffusion coefficient from transient polarographic measurements. Annals of Biomedical Engineering, 1992, 20, 629-646.	2.5	13
75	Oxygen Tension Changes in the Outer Vascular Wall Supplied by Vasa vasorum following Adenosine and Epinephrine. Journal of Vascular Research, 1986, 23, 9-21.	1.4	9
76	Interpretation of Oxygen Disappearance Curves Measured in Blood Perfused Tissues. Advances in Experimental Medicine and Biology, 1986, 200, 151-161.	1.6	10
77	Two Cytochrome Oxygen Consumption Model and Mechanism for Carotid Body Chemoreception. Advances in Experimental Medicine and Biology, 1986, 200, 293-300.	1.6	5
78	An Evaluation of Eastonâ€™s Paradigm for the Oxyhemoglobin Equilibrium Curve. Advances in Experimental Medicine and Biology, 1984, 180, 333-344.	1.6	5