John A Frangos

List of Publications by Year
in descending order

96 papers	6,148 citations	61984 43 h-index	71685 76 g-index
96 all docs	96 docs citations	96 times ranked	5437 citing authors

#	Article	IF	Citations
1	G protein-coupled receptors sense fluid shear stress in endothelial cells. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15463-15468.	7.1	424
2	Fluid shear stress as a mediator of osteoblast cyclic adenosine monophosphate production. Journal of Cellular Physiology, 1990, 143, 100-104.	4.1	326
3	Low nitric oxide bioavailability contributes to the genesis of experimental cerebral malaria. Nature Medicine, 2006, 12, 1417-1422.	30.7	234
4	The shear stress of it all: the cell membrane and mechanochemical transduction. Philosophical Transactions of the Royal Society B: Biological Sciences, 2007, 362, 1459-1467.	4.0	217
5	Fluid Flow Rapidly Activates G Proteins in Human Endothelial Cells. Circulation Research, 1996, 79, 834-839.	4.5	216
6	Temporal Gradient in Shear But Not Steady Shear Stress Induces PDGF-A and MCP-1 Expression in Endothelial Cells. Arteriosclerosis, Thrombosis, and Vascular Biology, 1999, 19, 996-1003.	2.4	205
7	New fluorescent probes for the measurement of cell membrane viscosity. Chemistry and Biology, 2001, 8, 123-131.	6.0	202
8	Pulsatile and steady flow induces câ€‹<i>fos</i> expression in human endothelial cells. Journal of Cellular Physiology, 1993, 154, 143-151.	4.1	197
9	Fluid shear stress increases membrane fluidity in endothelial cells: a study with DCVJ fluorescence. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 278, H1401-H1406.	3.2	186
10	Temporal Gradients in Shear, but Not Spatial Gradients, Stimulate Endothelial Cell Proliferation. Circulation, 2001, 103, 2508-2513.	1.6	154
11	Steady Shear and Step Changes in Shear Stimulate Endothelium via Independent Mechanismsâ€"Superposition of Transient and Sustained Nitric Oxide Production. Biochemical and Biophysical Research Communications, 1996, 224, 660-665.	2.1	151
12	Shear-induced platelet-derived growth factor gene expression in human endothelial cells is mediated by protein kinase C. Journal of Cellular Physiology, 1992, 150, 552-558.	4.1	136
13	Mechanism of shear-induced prostacyclin production in endothelial cells. Biochemical and Biophysical Research Communications, 1989, 158, 31-37.	2.1	134
14	Nongenomic Thyroid Hormone Signaling Occurs Through a Plasma Membraneâ€"Localized Receptor. Science Signaling, 2014, 7, ra48.	3.6	119
15	Activation of G Proteins Mediates Flow-Induced Prostaglandin E₂Production in Osteoblasts. Endocrinology, 1997, 138, 1014-1018.	2.8	110
16	PECAM-1 Mediates NO-Dependent Dilation of Arterioles to High Temporal Gradients of Shear Stress. Arteriosclerosis, Thrombosis, and Vascular Biology, 2005, 25, 1590-1595.	2.4	105
17	Murine Cerebral Malaria Is Associated with a Vasospasm-Like Microcirculatory Dysfunction, and Survival upon Rescue Treatment Is Markedly Increased by Nimodipine. American Journal of Pathology, 2010, 176, 1306-1315.	3.8	96
18	Temporal gradient in shear-induced signaling pathway: involvement of MAP kinase, c-<i>fos</i>, and connexin43. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 278, H1598-H1605.	3.2	90

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19	Fluid Shear Stress Stimulates Membrane Phospholipid Metabolism in Cultured Human Endothelial Cells. Journal of Vascular Research, 1992, 29, 443-449.	1.4	87
20	Type II cGMP-dependent Protein Kinase Mediates Osteoblast Mechanotransduction. Journal of Biological Chemistry, 2009, 284, 14796-14808.	3.4	86
21	Nitric Oxide Protection Against Murine Cerebral Malaria Is Associated With Improved Cerebral Microcirculatory Physiology. Journal of Infectious Diseases, 2011, 203, 1454-1463.	4.0	86
22	Laurdan fluorescence senses mechanical strain in the lipid bilayer membrane. Biochemical and Biophysical Research Communications, 2006, 347, 838-841.	2.1	83
23	Equibiaxial strain and strain rate stimulate early activation of G proteins in cardiac fibroblasts. American Journal of Physiology - Cell Physiology, 1998, 274, C1424-C1428.	4.6	81
24	Protein kinase C mediates flow-induced prostaglandin E2 production in osteoblasts. Calcified Tissue International, 1993, 52, 62-66.	3.1	76
25	Mechanism of temporal gradients in shear-induced ERK1/2 activation and proliferation in endothelial cells. American Journal of Physiology - Heart and Circulatory Physiology, 2001, 281, H22-H29.	3.2	76
26	Microfluidic enhancement of intramedullary pressure increases interstitial fluid flow and inhibits bone loss in hindlimb suspended mice. Journal of Bone and Mineral Research, 2010, 25, 1798-1807.	2.8	76
27	Fluid shear stress induces upregulation of COX-2 and PGI₂release in endothelial cells via a pathway involving PECAM-1, PI3K, FAK, and p38. American Journal of Physiology - Heart and Circulatory Physiology, 2017, 312, H485-H500.	3.2	76
28	Temporal gradients in shear stimulate osteoblastic proliferation via ERK1/2 and retinoblastoma protein. American Journal of Physiology - Endocrinology and Metabolism, 2002, 283, E383-E389.	3.5	75
29	Flowâ€induced prostacyclin production is mediated by a pertussis toxinâ€sensitive G protein. FEBS Letters, 1992, 308, 277-279.	2.8	71
30	Exogenous, basal, and flow-induced nitric oxide production and endothelial cell proliferation. Journal of Cellular Physiology, 1997, 171, 252-258.	4.1	71
31	Shear-Induced Increase in Hydraulic Conductivity in Endothelial Cells Is Mediated by a Nitric Oxideâ€"Dependent Mechanism. Arteriosclerosis, Thrombosis, and Vascular Biology, 2000, 20, 35-42.	2.4	66
32	Rapid Activation of Ras by Fluid Flow Is Mediated by GÎ±qand GÎ²Î³ Subunits of Heterotrimeric G Proteins in Human Endothelial Cells. Arteriosclerosis, Thrombosis, and Vascular Biology, 2003, 23, 994-1000.	2.4	64
33	A novel approach to blood plasma viscosity measurement using fluorescent molecular rotors. American Journal of Physiology - Heart and Circulatory Physiology, 2002, 282, H1609-H1614.	3.2	62
34	Oxygen delivery and consumption in the microcirculation after extreme hemodilution with perfluorocarbons. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 287, H320-H330.	3.2	62
35	Mechanical stimulus alters conformation of type 1 parathyroid hormone receptor in bone cells. American Journal of Physiology - Cell Physiology, 2009, 296, C1391-C1399.	4.6	62
36	Coronary Arteriolar Dilation to Acidosis. Circulation, 1999, 99, 558-563.	1.6	60

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37	Role of endothelial nitric oxide in microvascular oxygen delivery and consumption. Free Radical Biology and Medicine, 2005, 39, 1229-1237.	2.9	58
38	PECAM-1 is a critical mediator of atherosclerosis. DMM Disease Models and Mechanisms, 2008, 1, 175-181.	2.4	57
39	Reactive oxygen species inhibited by titanium oxide coatings. Journal of Biomedical Materials Research Part B, 2003, 66A, 396-402.	3.1	53
40	Exogenous nitric oxide decreases brain vascular inflammation, leakage and venular resistance during Plasmodium berghei ANKA infection in mice. Journal of Neuroinflammation, 2011, 8, 66.	7.2	50
41	Nitric Oxide Synthase Dysfunction Contributes to Impaired Cerebroarteriolar Reactivity in Experimental Cerebral Malaria. PLoS Pathogens, 2013, 9, e1003444.	4.7	49
42	Phospholipid-Bound Molecular Rotors: Synthesis and Characterization. Bioorganic and Medicinal Chemistry, 2002, 10, 3627-3636.	3.0	47
43	Shear-induced endothelial cell-cell junction inclination. American Journal of Physiology - Cell Physiology, 2010, 299, C621-C629.	4.6	46
44	Effects of flow on the synthesis and release of fibronectin by endothelial cells. In Vitro Cellular & Developmental Biology, 1990, 26, 57-60.	1.0	44
45	Temporal gradients in shear, but not spatial gradients, stimulate ERK1/2 activation in human endothelial cells. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 289, H2350-H2355.	3.2	40
46	Strain-induced fetal type II epithelial cell differentiation is mediated via cAMP-PKA-dependent signaling pathway. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2006, 291, L820-L827.	2.9	40
47	Analysis of Temporal Shear Stress Gradients During the Onset Phase of Flow Over a Backward-Facing Step. Journal of Biomechanical Engineering, 2001, 123, 455-463.	1.3	38
48	Plasmodium berghei Resists Killing by Reactive Oxygen Species. Infection and Immunity, 2005, 73, 6704-6710.	2.2	38
49	Rapid changes in shear stress induce dissociation of a GÎ±_{q/11}â€“platelet endothelial cell adhesion moleculeâ€•1 complex. Journal of Physiology, 2009, 587, 2365-2373.	2.9	37
50	Inhibition of Inflammatory Species by Titanium Surfaces. Clinical Orthopaedics and Related Research, 2000, 372, 280-289.	1.5	36
51	Uniaxial strain system to investigate strain rate regulationin vitro. Review of Scientific Instruments, 2001, 72, 2415-2422.	1.3	35
52	Strain and strain rate activation of G proteins in human endothelial cells. Biochemical and Biophysical Research Communications, 2002, 299, 258-262.	2.1	35
53	Anti-inflammatory properties of micropatterned titanium coatings. Journal of Biomedical Materials Research - Part A, 2006, 77A, 43-49.	4.0	35
54	Strain Rate Mechanotransduction in Aligned Human Vascular Smooth Muscle Cells. Annals of Biomedical Engineering, 2003, 31, 239-249.	2.5	34

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55	Skeletal Adaptation to Intramedullary Pressure-Induced Interstitial Fluid Flow Is Enhanced in Mice Subjected to Targeted Osteocyte Ablation. PLoS ONE, 2012, 7, e33336.	2.5	34
56	Heparan Sulfates Mediate the Interaction between Platelet Endothelial Cell Adhesion Molecule-1 (PECAM-1) and the GÎ±q/11 Subunits of Heterotrimeric G Proteins. Journal of Biological Chemistry, 2014, 289, 7413-7424.	3.4	34
57	Activation of G Proteins Mediates Flow-Induced Prostaglandin E2 Production in Osteoblasts. Endocrinology, 1997, 138, 1014-1018.	2.8	34
58	Efficacy of Different Nitric Oxide-Based Strategies in Preventing Experimental Cerebral Malaria by Plasmodium berghei ANKA. PLoS ONE, 2012, 7, e32048.	2.5	33
59	Titanate biomaterials with enhanced antiinflammatory properties. Journal of Biomedical Materials Research - Part A, 2007, 80A, 480-485.	4.0	31
60	Fluid flow increases membrane permeability to merocyanine 540 in human endothelial cells. Biochimica Et Biophysica Acta - Biomembranes, 1994, 1191, 209-218.	2.6	29
61	Shear stress induces GÎ±_{q/11} activation independently of G protein-coupled receptor activation in endothelial cells. American Journal of Physiology - Cell Physiology, 2017, 312, C428-C437.	4.6	29
62	Yoda1-induced phosphorylation of Akt and ERK1/2 does not require Piezo1 activation. Biochemical and Biophysical Research Communications, 2018, 497, 220-225.	2.1	29
63	Extracellular signal-regulated kinase activation and endothelin-1 production in human endothelial cells exposed to vibration. Journal of Physiology, 2004, 555, 565-572.	2.9	28
64	Evidence for the role of G-proteins in flow stimulation of dinoflagellate bioluminescence. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2007, 292, R2020-R2027.	1.8	28
65	S-nitrosoglutathione Prevents Experimental Cerebral Malaria. Journal of NeuroImmune Pharmacology, 2012, 7, 477-487.	4.1	28
66	NO and CO binding profiles of hemoglobin vesicles as artificial oxygen carriers. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2008, 1784, 1441-1447.	2.3	27
67	GÎ±_{q/11}-mediated intracellular calcium responses to retrograde flow in endothelial cells. American Journal of Physiology - Cell Physiology, 2012, 303, C467-C473.	4.6	23
68	Quantification of Lacunarâ€“Canalicular Interstitial Fluid Flow Through Computational Modeling of Fluorescence Recovery After Photobleaching. Cellular and Molecular Bioengineering, 2010, 3, 296-306.	2.1	22
69	The use of dinoflagellate bioluminescence to characterize cell stimulation in bioreactors. Biotechnology and Bioengineering, 2003, 83, 93-103.	3.3	21
70	Slow and continuous delivery of a low dose of nimodipine improves survival and electrocardiogram parameters in rescue therapy of mice with experimental cerebral malaria. Malaria Journal, 2013, 12, 138.	2.3	21
71	Early VEGFR2 activation in response to flow is VEGF-dependent and mediated by MMP activity. Biochemical and Biophysical Research Communications, 2013, 434, 641-646.	2.1	20
72	Maturation enhances fluid shear-induced activation of eNOS in perfused ovine carotid arteries. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 289, H2220-H2227.	3.2	19

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73	Cerebral tissue oxygenation impairment during experimental cerebral malaria. Virulence, 2013, 4, 686-697.	4.4	19
74	Distinctive Subcellular Aktâ€1 Responses to Shear Stress in Endothelial Cells. Journal of Cellular Biochemistry, 2014, 115, 121-129.	2.6	19
75	Rapid flow-induced activation of GÎ±_{q/11} is independent of Piezo1 activation. American Journal of Physiology - Cell Physiology, 2019, 316, C741-C752.	4.6	19
76	An In Vitro Evaluation of an Artificial Heart. ASAIO Transactions, 1991, 37, 27-32.	0.2	18
77	NO-Donor Dihydroartemisinin Derivatives as Multitarget Agents for the Treatment of Cerebral Malaria. Journal of Medicinal Chemistry, 2015, 58, 7895-7899.	6.4	18
78	Regulation of G Protein-Coupled Receptor Activities by the Platelet-Endothelial Cell Adhesion Molecule, PECAM-1. Biochemistry, 2008, 47, 9029-9039.	2.5	17
79	Transdermal Glyceryl Trinitrate as an Effective Adjunctive Treatment with Artemether for Late-Stage Experimental Cerebral Malaria. Antimicrobial Agents and Chemotherapy, 2013, 57, 5462-5471.	3.2	17
80	Effects of Flow on Anchorage-Dependent Mammalian Cellsâ€"Secreted Products. , 1993, , 139-192.		16
81	Osteoblast hydraulic conductivity is regulated by calcitonin and parathyroid hormone. Journal of Bone and Mineral Research, 1996, 11, 114-124.	2.8	15
82	A New Mock Circulatory Loop and Its Application to the Study of Chemical Additive and Aortic Pressure Effects on Hemolysis in the Penn State Electric Ventricular Assist Device. Artificial Organs, 1994, 18, 397-407.	1.9	14
83	Stretch activation of GTP-binding proteins in C2C12 myoblasts. Experimental Cell Research, 2004, 292, 265-273.	2.6	14
84	A lactate dehydrogenase ELISA-based assay for the in vitro determination of Plasmodium berghei sensitivity to anti-malarial drugs. Malaria Journal, 2012, 11, 366.	2.3	14
85	Reversal of cerebrovascular constriction in experimental cerebral malaria by L-arginine. Scientific Reports, 2018, 8, 15957.	3.3	14
86	Cell Membrane Fluidity Changes and Membrane Undulations Observed Using a Laser Scattering Technique. Annals of Biomedical Engineering, 2004, 32, 531-536.	2.5	13
87	Bone Cell Responses to Fluid Flow. , 2003, 80, 381-398.		8
88	Hemoglobin Serves to Protect Plasmodium Parasites from Nitric Oxide and Reactive Oxygen Species. Journal of Investigative Medicine, 2005, 53, 246-253.	1.6	7
89	A Chronic Scheme of Cranial Window Preparation to Study Pial Vascular Reactivity in Murine Cerebral Malaria. Microcirculation, 2013, 20, 394-404.	1.8	6
90	Exogenous, basal, and flowâ€induced nitric oxide production and endothelial cell proliferation. Journal of Cellular Physiology, 1997, 171, 252-258.	4.1	5

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91	Shear sensitivity in animal cell culture. Current Opinion in Biotechnology, 1993, 4, 193-196.	6.6	4
92	Flow Effects on Endothelial Cell Signal Transduction, Function, and Mediator Release. , 1995, , 85-116.		4
93	<title>Fluorescent molecular rotor for the study of membrane fluidity in endothelial cells under fluid shear stress</title>. , 2000, 3921, 101.		3
94	Mechanotransduction by Membrane-Mediated Activation of G-Protein Coupled Receptors and G-Proteins. , 0, , 89-119.		0
95	Shear Stress Mechanotransduction and the Flow Properties of Blood. , 2006, , 93-101.		0
96	Shear Stress-Induced Gene Expression in Human Endothelial Cells. , 1993, , 155-166.		0