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A mathematical model of the cytosolic-free calcium response in endothelial cells to fluid shear stress

DOI: 10.1073/pnas.94.8.3726

Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 3726-31.

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#	Paper	IF	Citations
61	Shear stress and the endothelium. <i>Kidney International</i> , 1998 , 67, S100-8	9.9	263
60	Steady flow and wall compression in stenotic arteries: a three-dimensional thick-wall model with fluid-wall interactions. <i>Journal of Biomechanical Engineering</i> , 2001 , 123, 548-57	2.1	87
59	A model for shear stress-induced deformation of a flow sensor on the surface of vascular endothelial cells. <i>Journal of Theoretical Biology</i> , 2001 , 210, 221-36	2.3	45
58	Effect of shear stress on migration and integrin expression in macaque trophoblast cells. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2002 , 1589, 233-46	4.9	34
57	Effect of shear stress on expression of a recombinant protein by Chinese hamster ovary cells. <i>Biotechnology and Bioengineering</i> , 2003 , 81, 211-20	4.9	77
56	A model for shear stress sensing and transmission in vascular endothelial cells. <i>Biophysical Journal</i> , 2003 , 84, 4087-101	2.9	32
55	Differential membrane potential and ion current responses to different types of shear stress in vascular endothelial cells. <i>American Journal of Physiology - Cell Physiology</i> , 2004 , 286, C1367-75	5.4	57
54	Molecular basis of the effects of shear stress on vascular endothelial cells. <i>Journal of Biomechanics</i> , 2005 , 38, 1949-71	2.9	630
53	Effects of arterial wall stress on vasomotion. <i>Biophysical Journal</i> , 2006 , 91, 1663-74	2.9	50
52	Atherosclerosis and calcium signalling in endothelial cells. <i>Progress in Biophysics and Molecular Biology</i> , 2006 , 91, 287-313	4.7	47
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46	Effect of the stress phase angle on the strain energy density of the endothelial plasma membrane. <i>Biophysical Journal</i> , 2007 , 93, 3026-33	2.9	17
45	A new multiphysics model for the physiological responses of vascular endothelial cells to fluid shear stress. <i>Journal of Physiological Sciences</i> , 2007 , 57, 299-309	2.3	3

44	A model of calcium signaling and degranulation dynamics induced by laser irradiation in mast cells. <i>Science Bulletin</i> , 2008 , 53, 2315-2325	10.6	8
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42	Endothelial nitric oxide synthase and calcium production in arterial geometries: an integrated fluid mechanics/cell model. <i>Journal of Biomechanical Engineering</i> , 2008 , 130, 011010	2.1	25
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37	Particle Image Velocimetry (PIV) and Computational Fluid Dynamics (CFD) Modelling of Carotid Artery Haemodynamics under Steady Flow: A Validation Study. <i>Journal of Biomechanical Science and Engineering</i> , 2010 , 5, 421-436	0.8	11
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18	A systems biology pipeline identifies new immune and disease related molecular signatures and networks in human cells during microgravity exposure. <i>Scientific Reports</i> , 2016 , 6, 25975	4.9	18
17	The role of nitric oxide in neurovascular coupling. <i>Journal of Theoretical Biology</i> , 2016 , 394, 1-17	2.3	42
16	Inwardly rectifying K channels are major contributors to flow-induced vasodilatation in resistance arteries. <i>Journal of Physiology</i> , 2017 , 595, 2339-2364	3.9	44
15	Simulation of intracellular Ca ²⁺ transients in osteoblasts induced by fluid shear stress and its application. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017 , 16, 509-520	3.8	1
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13	Endothelial permeability, LDL deposition, and cardiovascular risk factors-a review. <i>Cardiovascular Research</i> , 2018 , 114, 35-52	9.9	125
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10	Modeling of Endothelial Calcium Responses within a Microfluidic Generator of Spatio-Temporal ATP and Shear Stress Signals. <i>Micromachines</i> , 2021 , 12,	3.3	0
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- 7 Biomechanics and Its Impact on Human Life: From Gene Expression to Organ Physiology. **2000**, 13-19
- 6 Vascular Adaptation. **2002**, 499-597
- 5 Shear-induced nitric oxide production by endothelial cells.
- 4 On the Ca²⁺elevation in vascular endothelial cells due to inositol trisphosphate-sensitive store receptor activation: a data-driven modeling approach. ○
- 3 Mathematical modeling of intracellular calcium in presence of receptor: a homeostatic model for endothelial cell. ○
- 2 Modeling Reactive Hyperemia to Better Understand and Assess Microvascular Function: A Review of Techniques. ○
- 1 A mathematical model for intracellular NO and ROS dynamics in vascular endothelial cells activated by exercise-induced wall shear stress. **2023**, 109009 ○