

# Donald P Gaver

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

43 papers	1,721 citations	21 h-index	41 g-index
46 ext. papers	1,889 ext. citations	3.8 avg, IF	4.59 L-index

#	Paper	IF	Citations
43	Mechanisms of surface-tension-induced epithelial cell damage in a model of pulmonary airway reopening. <i>Journal of Applied Physiology</i> , <b>2003</b> , 94, 770-83	3.7	254
42	The dynamics of a localized surfactant on a thin film. <i>Journal of Fluid Mechanics</i> , <b>1990</b> , 213, 127	3.7	171
41	A theoretical model study of the influence of fluid stresses on a cell adhering to a microchannel wall. <i>Biophysical Journal</i> , <b>1998</b> , 75, 721-33	2.9	140
40	Droplet spreading on a thin viscous film. <i>Journal of Fluid Mechanics</i> , <b>1992</b> , 235, 399	3.7	107
39	The steady motion of a semi-infinite bubble through a flexible-walled channel. <i>Journal of Fluid Mechanics</i> , <b>1996</b> , 319, 25	3.7	102
38	Pressure gradient, not exposure duration, determines the extent of epithelial cell damage in a model of pulmonary airway reopening. <i>Journal of Applied Physiology</i> , <b>2004</b> , 97, 269-76	3.7	100
37	Ventilator-induced lung injury: in vivo and in vitro mechanisms. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , <b>2002</b> , 283, L678-82	5.8	100
36	A microscale model of bacterial swimming, chemotaxis and substrate transport. <i>Journal of Theoretical Biology</i> , <b>1995</b> , 177, 325-40	2.3	71
35	The influence of non-equilibrium surfactant dynamics on the flow of a semi-infinite bubble in a rigid cylindrical capillary tube. <i>Journal of Fluid Mechanics</i> , <b>2003</b> , 478, 165-196	3.7	69
34	Biomechanics of liquid-epithelium interactions in pulmonary airways. <i>Respiratory Physiology and Neurobiology</i> , <b>2008</b> , 163, 232-43	2.8	67
33	An investigation of pulmonary surfactant physicochemical behavior under airway reopening conditions. <i>Journal of Applied Physiology</i> , <b>2000</b> , 88, 493-506	3.7	46
32	A Theoretical Model of Pulmonary Surfactant Multilayer Collapse under Oscillating Area Conditions. <i>Journal of Colloid and Interface Science</i> , <b>2000</b> , 229, 353-364	9.3	45
31	The influence of surfactant on two-phase flow in a flexible-walled channel under bulk equilibrium conditions. <i>Physics of Fluids</i> , <b>1998</b> , 10, 1846-1863	4.4	45
30	An experimental investigation of oscillating flow in a tapered channel. <i>Journal of Fluid Mechanics</i> , <b>1986</b> , 172, 47	3.7	37
29	An experimental model investigation of the opening of a collapsed untethered pulmonary airway. <i>Journal of Biomechanical Engineering</i> , <b>1995</b> , 117, 245-53	2.1	36
28	Agent-based simulations of complex droplet pattern formation in a two-branch microfluidic network. <i>Lab on A Chip</i> , <b>2010</b> , 10, 303-12	7.2	28
27	Atelectrauma disrupts pulmonary epithelial barrier integrity and alters the distribution of tight junction proteins ZO-1 and claudin 4. <i>Journal of Applied Physiology</i> , <b>2012</b> , 113, 1377-87	3.7	28

26	Unsteady bubble propagation in a flexible channel: predictions of a viscous stick-slip instability. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 528, 53-86	3.7	25
25	Bio-fluid mechanics of the pulmonary system. <i>Annals of Biomedical Engineering</i> , <b>2005</b> , 33, 1681-8	4.7	22
24	A Dual-Reciprocity Boundary Element Method for Evaluating Bulk Convective Transport of Surfactant in Free-Surface Flows. <i>Journal of Computational Physics</i> , <b>2001</b> , 171, 534-559	4.1	22
23	In situ enhancement of pulmonary surfactant function using temporary flow reversal. <i>Journal of Applied Physiology</i> , <b>2012</b> , 112, 149-58	3.7	21
22	The POOR Get POORer: A Hypothesis for the Pathogenesis of Ventilator-induced Lung Injury. <i>American Journal of Respiratory and Critical Care Medicine</i> , <b>2020</b> , 202, 1081-1087	10.2	19
21	The Pulsatile Propagation of a Finger of Air Within a Fluid-Occluded Cylindrical Tube. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 601, 1-23	3.7	17
20	A model of surfactant-induced surface tension effects on the parenchymal tethering of pulmonary airways. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 319-28	2.9	13
19	EPIV measurements of the ensemble flow fields surrounding a migrating semi-infinite bubble. <i>Experiments in Fluids</i> , <b>2009</b> , 47, 309-320	2.5	13
18	The pulsatile motion of a semi-infinite bubble in a channel: flow fields, and transport of an inactive surface-associated contaminant. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 537, 1	3.7	13
17	Modeling of Mass Transport into Immiscible Polymeric Blends. <i>Macromolecules</i> , <b>2003</b> , 36, 9216-9229	5.5	13
16	Estimation of the Pressure Drop Required for Lymph Flow through Initial Lymphatic Networks. <i>Lymphatic Research and Biology</i> , <b>2016</b> , 14, 62-9	2.3	12
15	Physicochemical effects enhance surfactant transport in pulsatile motion of a semi-infinite bubble. <i>Biophysical Journal</i> , <b>2009</b> , 96, 312-27	2.9	10
14	EVALUATION OF INTERFACIAL FLUID DYNAMICAL STRESSES USING THE IMMERSED BOUNDARY METHOD. <i>Discrete and Continuous Dynamical Systems - Series B</i> , <b>2009</b> , 11, 519-540	1.3	10
13	Atelectrauma Versus Volutrauma: A Tale of Two Time-Constants <b>2020</b> , 2, e0299		9
12	The influence of surfactant on the propagation of a semi-infinite bubble through a liquid-filled compliant channel. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 698, 125-159	3.7	8
11	Biofluid mechanics of special organs and the issue of system control. Sixth International Bio-Fluid Mechanics Symposium and Workshop, March 28-30, 2008 Pasadena, California. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 1204-15	4.7	7
10	The unusual symmetric reopening effect induced by pulmonary surfactant. <i>Journal of Applied Physiology</i> , <b>2014</b> , 116, 635-44	3.7	6
9	Lagrangian transport properties of pulmonary interfacial flows. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 705, 234-257	3.7	5

8	Reduced-Dimension Modeling Approach for Simulating Recruitment/De-recruitment Dynamics in the Lung. <i>Annals of Biomedical Engineering</i> , <b>2016</b> , 44, 3619-3631	4.7	5
7	Microscale distribution and dynamic surface tension of pulmonary surfactant normalize the recruitment of asymmetric bifurcating airways. <i>Journal of Applied Physiology</i> , <b>2017</b> , 122, 1167-1178	3.7	4
6	Microscale to mesoscale analysis of parenchymal tethering: the effect of heterogeneous alveolar pressures on the pulmonary mechanics of compliant airways. <i>Journal of Applied Physiology</i> , <b>2019</b> , 126, 1204-1213	3.7	4
5	The influence of tethering and gravity on the stability of compliant liquid-lined airways. <i>Journal of Biomechanics</i> , <b>2017</b> , 50, 228-233	2.9	2
4	Surfactant-Mediated Airway and Acinar Interactions in a Multi-Scale Model of a Healthy Lung. <i>Frontiers in Physiology</i> , <b>2020</b> , 11, 941	4.6	1
3	Learning Environments and Evidence-Based Practices in Bioengineering and Biomedical Engineering. <i>Biomedical Engineering Education</i> , <b>2022</b> , 2, 1		0
2	Electric Cell-Substrate Impedance Sensing (ECIS) as a Platform for Evaluating Barrier-Function Susceptibility and Damage from Pulmonary Atelectrauma. <i>Biosensors</i> , <b>2022</b> , 12, 390	5.9	0
1	1483: EXCESSIVE DYNAMIC AND STATIC STRAIN ACT SYNERGISTICALLY TO INCREASE LUNG INFLAMMATION. <i>Critical Care Medicine</i> , <b>2022</b> , 50, 745-745	1.4	