

Douglas N Robinson

List of Publications by Year in descending order

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94
papers

4,200
citations

117625

34
h-index

128289

60
g-index

97
all docs

97
docs citations

97
times ranked

4333
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular mechanisms of cellular mechanosensing. <i>Nature Materials</i> , 2013, 12, 1064-1071.	27.5	231
2	Competition between human cells by entosis. <i>Cell Research</i> , 2014, 24, 1299-1310.	12.0	180
3	Interactions between Myosin and Actin Crosslinkers Control Cytokinesis Contractility Dynamics and Mechanics. <i>Current Biology</i> , 2008, 18, 471-480.	3.9	173
4	Towards a molecular understanding of cytokinesis. <i>Trends in Cell Biology</i> , 2000, 10, 228-237.	7.9	165
5	<i>Drosophila</i> Kelch Is an Oligomeric Ring Canal Actin Organizer. <i>Journal of Cell Biology</i> , 1997, 138, 799-810.	5.2	159
6	Mechanosensing through Cooperative Interactions between Myosin II and the Actin Crosslinker Cortexillin I. <i>Current Biology</i> , 2009, 19, 1421-1428.	3.9	142
7	Mechanical Tension Drives Cell Membrane Fusion. <i>Developmental Cell</i> , 2015, 32, 561-573.	7.0	136
8	Stable intercellular bridges in development: the cytoskeleton lining the tunnel. <i>Trends in Cell Biology</i> , 1996, 6, 474-479.	7.9	134
9	Entosis Is Induced by Glucose Starvation. <i>Cell Reports</i> , 2017, 20, 201-210.	6.4	130
10	Balance of actively generated contractile and resistive forces controls cytokinesis dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 7186-7191.	7.1	127
11	Mitosis-Specific Mechanosensing and Contractile-Protein Redistribution Control Cell Shape. <i>Current Biology</i> , 2006, 16, 1962-1967.	3.9	123
12	GENETIC ANALYSIS OF THE ACTIN CYTOSKELETON IN THE <i>DROSOPHILA</i> Ovary. <i>Annual Review of Cell and Developmental Biology</i> , 1997, 13, 147-170.	9.4	115
13	Cortical Mechanics and Meiosis II Completion in Mammalian Oocytes Are Mediated by Myosin-II and Ezrin-Radixin-Moesin (ERM) Proteins. <i>Molecular Biology of the Cell</i> , 2010, 21, 3182-3192.	2.1	110
14	Dynacortin, a Genetic Link between Equatorial Contractility and Global Shape Control Discovered by Library Complementation of a <i>Dictyostelium discoideum</i> Cytokinesis Mutant. <i>Journal of Cell Biology</i> , 2000, 150, 823-838.	5.2	100
15	Mechanics and regulation of cytokinesis. <i>Current Opinion in Cell Biology</i> , 2004, 16, 182-188.	5.4	95
16	Mechanoaccumulative Elements of the Mammalian Actin Cytoskeleton. <i>Current Biology</i> , 2016, 26, 1473-1479.	3.9	87
17	Dynacortin contributes to cortical viscoelasticity and helps define the shape changes of cytokinesis. <i>EMBO Journal</i> , 2004, 23, 1536-1546.	7.8	82
18	Understanding the Cooperative Interaction between Myosin II and Actin Cross-Linkers Mediated by Actin Filaments during Mechanosensation. <i>Biophysical Journal</i> , 2012, 102, 238-247.	0.5	82

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19	Quantitation of the distribution and flux of myosin-II during cytokinesis. BMC Cell Biology, 2002, 3, 4.	3.0	75
20	Modeling cellular deformations using the level set formalism. BMC Systems Biology, 2008, 2, 68.	3.0	73
21	14-3-3 Coordinates Microtubules, Rac, and Myosin II to Control Cell Mechanics and Cytokinesis. Current Biology, 2010, 20, 1881-1889.	3.9	72
22	Formation of the Drosophila Ovarian Ring Canal Inner Rim Depends on <i>cheerio</i> . Genetics, 1997, 145, 1063-1072.	2.9	70
23	Cigarette smoke disrupts monolayer integrity by altering epithelial cell-cell adhesion and cortical tension. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2017, 313, L581-L591.	2.9	63
24	A mechanosensory system governs myosin II accumulation in dividing cells. Molecular Biology of the Cell, 2012, 23, 1510-1523.	2.1	57
25	Deconvolution of the Cellular Force-Generating Subsystems that Govern Cytokinesis Furrow Ingression. PLoS Computational Biology, 2012, 8, e1002467.	3.2	55
26	Pharmacological activation of myosin II paralogs to correct cell mechanics defects. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1428-1433.	7.1	54
27	The stress and strain of cytokinesis. Trends in Cell Biology, 2005, 15, 200-206.	7.9	53
28	Mechanical Stress and Network Structure Drive Protein Dynamics during Cytokinesis. Current Biology, 2015, 25, 663-670.	3.9	49
29	Involvement of the Cytoskeleton in Controlling Leading-Edge Function during Chemotaxis. Molecular Biology of the Cell, 2010, 21, 1810-1824.	2.1	45
30	TRPV4 disrupts mitochondrial transport and causes axonal degeneration via a CaMKII-dependent elevation of intracellular Ca ²⁺ . Nature Communications, 2020, 11, 2679.	12.8	45
31	Dictyostelium myosin II mechanochemistry promotes active behavior of the cortex on long time scales. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2103-2108.	7.1	44
32	Targeting Mechanoresponsive Proteins in Pancreatic Cancer: 4-Hydroxyacetophenone Blocks Dissemination and Invasion by Activating MYH14. Cancer Research, 2019, 79, 4665-4678.	0.9	44
33	Using Lessons from Cellular and Molecular Structures for Future Materials. Advanced Materials, 2007, 19, 3761-3770.	21.0	43
34	Spectrin is a mechanoresponsive protein shaping fusogenic synapse architecture during myoblast fusion. Nature Cell Biology, 2018, 20, 688-698.	10.3	43
35	<i>Dictyostelium</i> huntingtin controls chemotaxis and cytokinesis through the regulation of myosin II phosphorylation. Molecular Biology of the Cell, 2011, 22, 2270-2281.	2.1	37
36	Automated characterization of cell shape changes during amoeboid motility by skeletonization. BMC Systems Biology, 2010, 4, 33.	3.0	35

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37	Mechanochemical Signaling Directs Cell-Shape Change. <i>Biophysical Journal</i> , 2017, 112, 207-214.	0.5	32
38	Yes-associated protein impacts adherens junction assembly through regulating actin cytoskeleton organization. <i>American Journal of Physiology - Renal Physiology</i> , 2016, 311, G396-G411.	3.4	31
39	Cytokinesis through biochemical“mechanical feedback loops. <i>Seminars in Cell and Developmental Biology</i> , 2010, 21, 866-873.	5.0	30
40	Î±-Catenin and IQGAP Regulate Myosin Localization to Control Epithelial Tube Morphogenesis in <i>Dictyostelium</i> . <i>Developmental Cell</i> , 2012, 23, 533-546.	7.0	29
41	Cytokinesis: Robust cell shape regulation. <i>Seminars in Cell and Developmental Biology</i> , 2016, 53, 39-44.	5.0	29
42	Cell Blebbing in Confined Microfluidic Environments. <i>PLoS ONE</i> , 2016, 11, e0163866.	2.5	28
43	Enlazin, a Natural Fusion of Two Classes of Canonical Cytoskeletal Proteins, Contributes to Cytokinesis Dynamics. <i>Molecular Biology of the Cell</i> , 2006, 17, 5275-5286.	2.1	27
44	A Mechanosensory System Controls Cell Shape Changes During Mitosis. <i>Cell Cycle</i> , 2007, 6, 30-35.	2.6	27
45	The spatial and mechanical challenges of female meiosis. <i>Molecular Reproduction and Development</i> , 2011, 78, 769-777.	2.0	27
46	Micropipette Aspiration for Studying Cellular Mechanosensory Responses and Mechanics. <i>Methods in Molecular Biology</i> , 2013, 983, 367-382.	0.9	27
47	The fifth sense: Mechanosensory regulation of alpha-actinin-4 and its relevance for cancer metastasis. <i>Seminars in Cell and Developmental Biology</i> , 2017, 71, 68-74.	5.0	26
48	Dynacortin Is a Novel Actin Bundling Protein That Localizes to Dynamic Actin Structures. <i>Journal of Biological Chemistry</i> , 2002, 277, 9088-9095.	3.4	25
49	A Novel Role for Aquaporin-5 in Enhancing Microtubule Organization and Stability. <i>PLoS ONE</i> , 2012, 7, e38717.	2.5	25
50	Motor Proteins: Myosin Mechanosensors. <i>Current Biology</i> , 2008, 18, R860-R862.	3.9	24
51	4-Hydroxyacetophenone modulates the actomyosin cytoskeleton to reduce metastasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 22423-22429.	7.1	24
52	How the mechanobiome drives cell behavior, viewed through the lens of control theory. <i>Journal of Cell Science</i> , 2019, 132, .	2.0	23
53	Cortical mechanics and myosin-II abnormalities associated with post-ovulatory aging: implications for functional defects in aged eggs. <i>Molecular Human Reproduction</i> , 2016, 22, 397-409.	2.8	22
54	Microtubule-Nucleus Interactions in <i>Dictyostelium discoideum</i> Mediated by Central Motor Kinesins. <i>Eukaryotic Cell</i> , 2009, 8, 723-731.	3.4	20

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55	Myosin IIB assembly state determines its mechanosensitive dynamics. <i>Journal of Cell Biology</i> , 2019, 218, 895-908.	5.2	20
56	Cell division: Biochemically controlled mechanics. <i>Current Biology</i> , 2001, 11, R737-R740.	3.9	19
57	Cytokinesis mechanics and mechanosensing. <i>Cytoskeleton</i> , 2012, 69, 700-709.	2.0	19
58	14-3-3 proteins tune non-muscle myosin II assembly. <i>Journal of Biological Chemistry</i> , 2018, 293, 6751-6761.	3.4	19
59	Helping Scholars Overcome Socioeconomic Barriers to Medical and Biomedical Careers: Creating a Pipeline Initiative. <i>Teaching and Learning in Medicine</i> , 2020, 32, 422-433.	2.1	19
60	Dictyostelium cytokinesis: from molecules to mechanics. <i>Journal of Muscle Research and Cell Motility</i> , 2002, 23, 719-727.	2.0	18
61	Mimicking the mechanical properties of the cell cortex by the self-assembly of an actin cortex in vesicles. <i>Applied Physics Letters</i> , 2014, 104, 153701.	3.3	18
62	Adenine nucleotide translocase regulates airway epithelial metabolism, surface hydration and ciliary function. <i>Journal of Cell Science</i> , 2021, 134, .	2.0	18
63	Cell shape regulation through mechanosensory feedback control. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150512.	3.4	17
64	Dynacortin facilitates polarization of chemotaxing cells. <i>BMC Biology</i> , 2007, 5, 53.	3.8	16
65	Prophase I Mouse Oocytes Are Deficient in the Ability to Respond to Fertilization by Decreasing Membrane Receptivity to Sperm and Establishing a Membrane Block to Polyspermy1. <i>Biology of Reproduction</i> , 2013, 89, 44.	2.7	16
66	MAPK3/1 (ERK1/2) and Myosin Light Chain Kinase in Mammalian Eggs Affect Myosin-II Function and Regulate the Metaphase II State in a Calcium- and Zinc-Dependent Manner1. <i>Biology of Reproduction</i> , 2015, 92, 146.	2.7	15
67	Separation anxiety: Stress, tension and cytokinesis. <i>Experimental Cell Research</i> , 2012, 318, 1428-1434.	2.6	14
68	Contractility kits promote assembly of the mechanoresponsive cytoskeletal network. <i>Journal of Cell Science</i> , 2019, 132, .	2.0	14
69	The Unusual Suspects in Cytokinesis: Fitting the Pieces Together. <i>Frontiers in Cell and Developmental Biology</i> , 2020, 8, 441.	3.7	14
70	Putting the Brakes on Cytokinesis with $\hat{\pm}$ -Actinin. <i>Developmental Cell</i> , 2007, 13, 460-462.	7.0	12
71	Genetic suppression of a phosphomimic myosin II identifies system-level factors that promote myosin II cleavage furrow accumulation. <i>Molecular Biology of the Cell</i> , 2014, 25, 4150-4165.	2.1	12
72	Why new biology must be uncovered to advance therapeutic strategies for chronic obstructive pulmonary disease. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2021, 320, L1-L11.	2.9	12

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73	14-3-3, an integrator of cell mechanics and cytokinesis. <i>Small GTPases</i> , 2010, 1, 165-169.	1.6	11
74	A Summer Academic Research Experience for Disadvantaged Youth. <i>CBE Life Sciences Education</i> , 2013, 12, 410-418.	2.3	11
75	The mechanobiome: a goldmine for cancer therapeutics. <i>American Journal of Physiology - Cell Physiology</i> , 2021, 320, C306-C323.	4.6	11
76	Cancer as a biophysical disease: Targeting the mechanical-adaptability program. <i>Biophysical Journal</i> , 2022, 121, 3573-3585.	0.5	11
77	An RNA-binding protein, RNP-1, protects microtubules from nocodazole and localizes to the leading edge during cytokinesis and cell migration in <i>Dictyostelium</i> cells. <i>Acta Pharmacologica Sinica</i> , 2016, 37, 1449-1457.	6.1	9
78	Recent advances in cytokinesis: understanding the molecular underpinnings. <i>F1000Research</i> , 2018, 7, 1849.	1.6	8
79	Meddling with myosin's mechanobiology in cancer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 15322-15323.	7.1	7
80	Kinetic Monte Carlo simulations of the assembly of filamentous biomacromolecules by the dimer addition mechanism. <i>RSC Advances</i> , 2015, 5, 3922-3929.	3.6	5
81	Cytokinesis from nanometers to micrometers and microseconds to minutes. <i>Methods in Cell Biology</i> , 2017, 137, 307-322.	1.1	5
82	A mesoscale mechanical model of cellular interactions. <i>Biophysical Journal</i> , 2021, 120, 4905-4917.	0.5	5
83	Micropipette Aspiration of Oocytes to Assess Cortical Tension. <i>Methods in Molecular Biology</i> , 2018, 1818, 163-171.	0.9	4
84	Parallel Compression Is a Fast Low-Cost Assay for the High-Throughput Screening of Mechanosensory Cytoskeletal Proteins in Cells. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 28168-28179.	8.0	3
85	Tools for computational analysis of moving boundary problems in cellular mechanobiology. <i>WIREs Mechanisms of Disease</i> , 2021, 13, e1514.	3.3	3
86	Regulating Cell Shape During Cytokinesis. , 0, , 203-224.		2
87	The Role of the Actin Cytoskeleton in Mechanosensation. , 2010, , 25-65.		2
88	Pancreatic Ductal Adenocarcinoma Cortical Mechanics and Clinical Implications. <i>Frontiers in Oncology</i> , 2022, 12, 809179.	2.8	2
89	Cytokinesis Through Biochemical-Mechanical Feedback Loops. <i>Biophysical Journal</i> , 2011, 100, 180a.	0.5	1
90	Bringing the physical sciences into your cell biology research. <i>Molecular Biology of the Cell</i> , 2012, 23, 4167-4170.	2.1	1

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91	Effects of Ubiquitin C-Terminal Hydrolase L1 (UCH-L1) inhibition on sperm incorporation and cortical tension in mouse eggs. <i>Molecular Reproduction and Development</i> , 2016, 83, 188-189.	2.0	1
92	The Role of CLP36 in Pancreatic Cancer Cells during Migration and in Cell Shape Morphology. <i>Biophysical Journal</i> , 2019, 116, 547a.	0.5	0
93	Cell Division Cytokinesis. , 2021, , 42-48.		0
94	Cooperative Interactions between Myosin II and Cortexillin I Mediated by Actin Filaments during Cellular Deformation. <i>IFMBE Proceedings</i> , 2010, , 74-76.	0.3	0