Julie A Theriot

List of Publications by Year
in descending order

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141 papers	13,609 citations	18436 62 h-index	24179 110 g-index
165 all docs	165 docs citations	165 times ranked	11918 citing authors

#	ARTICLE	IF	CITATIONS
1	A deep generative model of 3D single-cell organization. PLoS Computational Biology, 2022, 18, e1009155.	1.5	18
2	Mechanical Forces Govern Interactions of Host Cells with Intracellular Bacterial Pathogens. Microbiology and Molecular Biology Reviews, 2022, 86, e0009420.	2.9	8
3	Leading edge maintenance in migrating cells is an emergent property of branched actin network growth. ELife, 2022, 11, .	2.8	15
4	Mechanical competition triggered by innate immune signaling drives the collective extrusion of bacterially infected epithelial cells. Developmental Cell, 2021, 56, 443-460.e11.	3.1	27
5	Actin cables and comet tails organize mitochondrial networks in mitosis. Nature, 2021, 591, 659-664.	13.7	92
6	Elastic wrinkling of keratocyte lamellipodia driven by myosin-induced contractile stress. Biophysical Journal, 2021, 120, 1578-1591.	0.2	9
7	Volume measurement and biophysical characterization of mounds in epithelial monolayers after intracellular bacterial infection. STAR Protocols, 2021, 2, 100551.	0.5	5
8	Cell states beyond transcriptomics: Integrating structural organization and gene expression in hiPSC-derived cardiomyocytes. Cell Systems, 2021, 12, 670-687.e10.	2.9	33
9	Entropy-driven translocation of disordered proteins through the Gram-positive bacterial cell wall. Nature Microbiology, 2021, 6, 1055-1065.	5.9	13
10	Fundamental limits on the rate of bacterial growth and their influence on proteomic composition. Cell Systems, 2021, 12, 924-944.e2.	2.9	45
11	Phagocytic â€˜teethâ€™ and myosin-II â€˜jawâ€™ power target constriction during phagocytosis. ELife, 2021, 10,	2.8	35
12	Directional reorientation of migrating neutrophils is limited by suppression of receptor input signaling at the cell rear through myosin II activity. Nature Communications, 2021, 12, 6619.	5.8	27
13	Wounding Zebrafish Larval Epidermis by Laceration. Bio-protocol, 2021, 11, e4260.	0.2	3
14	Microparticle traction force microscopy reveals subcellular force exertion patterns in immune cellâ€“target interactions. Nature Communications, 2020, 11, 20.	5.8	101
15	Cell Mechanics at the Rear Act to Steer the Direction of Cell Migration. Cell Systems, 2020, 11, 286-299.e4.	2.9	20
16	A mechanical perspective on phagocytic cup formation. Current Opinion in Cell Biology, 2020, 66, 112-122.	2.6	42
17	Cover Image, Volume 77, Issue 5â€6. Cytoskeleton, 2020, 77, C1.	1.0	0
18	A Bayesian framework for the detection of diffusive heterogeneity. PLoS ONE, 2020, 15, e0221841.	1.1	0

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19	Rapidly dynamic host cell heterogeneity in bacterial adhesion governs susceptibility to infection by <i>Listeria monocytogenes</i>. Molecular Biology of the Cell, 2020, 31, 2097-2106.	0.9	5
20	Neutrophilâ€like HLâ€60 cells expressing only GFPâ€tagged Î²â€actin exhibit nearly normal motility. Cytoskeleton, 2020, 77, 181-196.	1.0	16
21	Osmolarity-independent electrical cues guide rapid response to injury in zebrafish epidermis. ELife, 2020, 9, .	2.8	27
22	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
23	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
24	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
25	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
26	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
27	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
28	Sequential assembly of the septal cell envelope prior to V snapping in Corynebacterium glutamicum. Nature Chemical Biology, 2019, 15, 221-231.	3.9	44
29	Efficient Front-Rear Coupling in Neutrophil Chemotaxis by Dynamic Myosin II Localization. Developmental Cell, 2019, 49, 189-205.e6.	3.1	59
30	Subendothelial stiffness alters endothelial cell traction force generation while exerting a minimal effect on the transcriptome. Scientific Reports, 2019, 9, 18209.	1.6	44
31	Listeria monocytogenes cell-to-cell spread in epithelia is heterogeneous and dominated by rare pioneer bacteria. ELife, 2019, 8, .	2.8	40
32	Acute Modulation of Mycobacterial Cell Envelope Biogenesis by Frontâ€Line Tuberculosis Drugs. Angewandte Chemie - International Edition, 2018, 57, 5267-5272.	7.2	37
33	Acute Modulation of Mycobacterial Cell Envelope Biogenesis by Frontâ€Line Tuberculosis Drugs. Angewandte Chemie, 2018, 130, 5365-5370.	1.6	4
34	Identification of phagocytosis regulators using magnetic genome-wide CRISPR screens. Nature Genetics, 2018, 50, 1716-1727.	9.4	135
35	A Multi-well Format Polyacrylamide-based Assay for Studying the Effect of Extracellular Matrix Stiffness on the Bacterial Infection of Adherent Cells. Journal of Visualized Experiments, 2018, , .	0.2	8
36	The outer membrane is an essential load-bearing element in Gram-negative bacteria. Nature, 2018, 559, 617-621.	13.7	388

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37	Listeria monocytogenes InlP interacts with afadin and facilitates basement membrane crossing. PLoS Pathogens, 2018, 14, e1007094.	2.1	35
38	Matrix stiffness modulates infection of endothelial cells by<i>Listeria monocytogenes</i>via expression of cell surface vimentin. Molecular Biology of the Cell, 2018, 29, 1571-1589.	0.9	31
39	Surface Area to Volume Ratio: A Natural Variable for Bacterial Morphogenesis. Trends in Microbiology, 2018, 26, 815-832.	3.5	106
40	Visualization of mycobacterial membrane dynamics in live cells. Journal of the American Chemical Society, 2017, 139, 3488-3495.	6.6	93
41	Adhesion-Dependent Wave Generation in Crawling Cells. Current Biology, 2017, 27, 27-38.	1.8	73
42	Adhesion to the host cell surface is sufficient to mediate<i>Listeria monocytogenes</i>entry into epithelial cells. Molecular Biology of the Cell, 2017, 28, 2945-2957.	0.9	32
43	Cytoplasmic Flow and Mixing Due to Deformation of Motile Cells. Biophysical Journal, 2017, 113, 2077-2087.	0.2	18
44	Non-model model organisms. BMC Biology, 2017, 15, 55.	1.7	164
45	Homeostatic Cell Growth Is Accomplished Mechanically through Membrane Tension Inhibition of Cell-Wall Synthesis. Cell Systems, 2017, 5, 578-590.e6.	2.9	47
46	Endothelial Cells Use a Formin-Dependent Phagocytosis-Like Process to Internalize the Bacterium Listeria monocytogenes. PLoS Pathogens, 2016, 12, e1005603.	2.1	54
47	Fast Mechanically Driven Daughter Cell Separation Is Widespread in <i>Actinobacteria</i>. MBio, 2016, 7, .	1.8	24
48	Rickettsia Sca4 Reduces Vinculin-Mediated Intercellular Tension to Promote Spread. Cell, 2016, 167, 670-683.e10.	13.5	101
49	Disentangling Random Motion and Flow in a Complex Medium. Biophysical Journal, 2016, 110, 700-709.	0.2	14
50	Relative Rates of Surface and Volume Synthesis Set Bacterial Cell Size. Cell, 2016, 165, 1479-1492.	13.5	216
51	Variation in Taxonomic Composition of the Fecal Microbiota in an Inbred Mouse Strain across Individuals and Time. PLoS ONE, 2015, 10, e0142825.	1.1	84
52	Mechanical crack propagation drives millisecond daughter cell separation in <i>Staphylococcus aureus</i>. Science, 2015, 348, 574-578.	6.0	98
53	Myosin light chain kinase regulates cell polarization independently of membrane tension or Rho kinase. Journal of Cell Biology, 2015, 209, 275-288.	2.3	40
54	Balance between cellâ˘substrate adhesion and myosin contraction determines the frequency of motility initiation in fish keratocytes. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5045-5050.	3.3	96

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55	Changes in Oscillatory Dynamics in the Cell Cycle of Early Xenopus laevis Embryos. PLoS Biology, 2014, 12, e1001788.	2.6	74
56	A <scp><i>C</i></scp><i>aulobacter</i>â€...<scp>MreB</scp> mutant with irregular cell shape exhibits compensatory widening to maintain a preferred surface area to volume ratio. Molecular Microbiology, 2014, 94, 988-1005.	1.2	42
57	Response of <i>Escherichia coli</i> growth rate to osmotic shock. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7807-7812.	3.3	170
58	Membrane Tension in Rapidly Moving Cells Is Determined by Cytoskeletal Forces. Current Biology, 2013, 23, 1409-1417.	1.8	221
59	Electrophoresis of Cellular Membrane Components Creates the Directional Cue Guiding Keratocyte Galvanotaxis. Current Biology, 2013, 23, 560-568.	1.8	143
60	Analysis of Surface Protein Expression Reveals the Growth Pattern of the Gram-Negative Outer Membrane. PLoS Computational Biology, 2012, 8, e1002680.	1.5	54
61	Choosing orientation: influence of cargo geometry and ActA polarization on actin comet tails. Molecular Biology of the Cell, 2012, 23, 614-629.	0.9	20
62	Nonthermal ATP-dependent fluctuations contribute to the in vivo motion of chromosomal loci. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7338-7343.	3.3	282
63	Surface-Layer (S-Layer) Proteins Sap and EA1 Govern the Binding of the S-Layer-Associated Protein BslO at the Cell Septa of Bacillus anthracis. Journal of Bacteriology, 2012, 194, 3833-3840.	1.0	39
64	Analytical Tools To Distinguish the Effects of Localization Error, Confinement, and Medium Elasticity on the Velocity Autocorrelation Function. Biophysical Journal, 2012, 102, 2443-2450.	0.2	102
65	Thermodynamics of Biological Processes. Methods in Enzymology, 2011, 492, 27-59.	0.4	45
66	Mutations in the nucleotide binding pocket of MreB can alter cell curvature and polar morphology in <i>Caulobacter</i>. Molecular Microbiology, 2011, 81, 368-394.	1.2	57
67	An Adhesion-Dependent Switch between Mechanisms That Determine Motile Cell Shape. PLoS Biology, 2011, 9, e1001059.	2.6	270
68	Myosin II contributes to cell-scale actin network treadmilling through network disassembly. Nature, 2010, 465, 373-377.	13.7	343
69	Bacterial Chromosomal Loci Move Subdiffusively through a Viscoelastic Cytoplasm. Physical Review Letters, 2010, 104, 238102.	2.9	527
70	Bipedal Locomotion in Crawling Cells. Biophysical Journal, 2010, 98, 933-942.	0.2	94
71	Subdiffusive motion of a polymer composed of subdiffusive monomers. Physical Review E, 2010, 82, 011913.	0.8	116
72	Mu Gets in the Loop. Molecular Cell, 2010, 39, 1-3.	4.5	9

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73	Reduced amino acid alphabets exhibit an improved sensitivity and selectivity in fold assignment. Bioinformatics, 2009, 25, 1356-1362.	1.8	59
74	Intracellular fluid flow in rapidly moving cells. Nature Cell Biology, 2009, 11, 1219-1224.	4.6	156
75	Mechanism of shape determination in motile cells. Nature, 2008, 453, 475-480.	13.7	658
76	Close Packing of Listeria monocytogenes ActA, a Natively Unfolded Protein, Enhances F-actin Assembly without Dimerization. Journal of Biological Chemistry, 2008, 283, 23852-23862.	1.6	28
77	Biophysical Aspects of Actin-Based Cell Motility in Fish Epithelial Keratocytes. Biological and Medical Physics Series, 2008, , 31-58.	0.3	9
78	New Directions in Actinâ€Based Motility of Intracellular Bacterial Pathogens. FASEB Journal, 2008, 22, 530.2.	0.2	0
79	A kinematic description of the trajectories of Listeria monocytogenes propelled by actin comet tails. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8229-8234.	3.3	74
80	Emergence of Large-Scale Cell Morphology and Movement from Local Actin Filament Growth Dynamics. PLoS Biology, 2007, 5, e233.	2.6	173
81	Differential force microscope for long time-scale biophysical measurements. Review of Scientific Instruments, 2007, 78, 043711.	0.6	17
82	Direct measurement of force generation by actin filament polymerization using an optical trap. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2181-2186.	3.3	323
83	Actinâ€"myosin network reorganization breaks symmetry at the cell rear to spontaneously initiate polarized cell motility. Journal of Cell Biology, 2007, 178, 1207-1221.	2.3	248
84	Decoupling the Coupling: Surface Attachment in Actin-Based Motility. ACS Chemical Biology, 2007, 2, 221-224.	1.6	3
85	Comparison of quantitative methods for cellâ€shape analysis. Journal of Microscopy, 2007, 227, 140-156.	0.8	243
86	Mechanism of polarization of Listeria monocytogenes surface protein ActA. Molecular Microbiology, 2006, 59, 1262-1279.	1.2	72
87	Fine-scale time-lapse analysis of the biphasic, dynamic behaviour of the two Vibrio cholerae chromosomes. Molecular Microbiology, 2006, 60, 1164-1178.	1.2	70
88	Listeria monocytogenes Invades the Epithelial Junctions at Sites of Cell Extrusion. PLoS Pathogens, 2006, 2, e3.	2.1	172
89	Listeria monocytogenes Traffics from Maternal Organs to the Placenta and Back. PLoS Pathogens, 2006, 2, e66.	2.1	120
90	A correlation-based approach to calculate rotation and translation of moving cells. IEEE Transactions on Image Processing, 2006, 15, 1939-1951.	6.0	67

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91	Loading history determines the velocity of actin-network growth. Nature Cell Biology, 2005, 7, 1219-1223.	4.6	202
92	Adhesion controls bacterial actin polymerization-based movement. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 16233-16238.	3.3	28
93	Two independent spiral structures control cell shape in Caulobacter. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18608-18613.	3.3	122
94	Large-Scale Quantitative Analysis of Sources of Variation in the Actin Polymerization-Based Movement of Listeria monocytogenes. Biophysical Journal, 2005, 89, 703-723.	0.2	33
95	Bacterial Shape and ActA Distribution Affect Initiation of Listeria monocytogenes Actin-Based Motility. Biophysical Journal, 2005, 89, 2146-2158.	0.2	32
96	Bacteria make tracks to the pole. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8510-8511.	3.3	1
97	Repeated Cycles of Rapid Actin Assembly and Disassembly on Epithelial Cell Phagosomes. Molecular Biology of the Cell, 2004, 15, 5647-5658.	0.9	48
98	Comparative analysis of gene expression among low G+C gram-positive genomes. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 6182-6187.	3.3	50
99	Listeria monocytogenesActin-based Motility Varies Depending on Subcellular Location: A Kinematic Probe for Cytoarchitecture. Molecular Biology of the Cell, 2004, 15, 2164-2175.	0.9	32
100	Differentiation and developmental pathways of uropathogenic Escherichia coli in urinary tract pathogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 1333-1338.	3.3	551
101	Perspective: Discovery of antivirals against smallpox. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11178-11192.	3.3	93
102	Biophysical Parameters Influence Actin-based Movement, Trajectory, and Initiation in a Cell-free System. Molecular Biology of the Cell, 2004, 15, 2312-2323.	0.9	47
103	Complex spatial distribution and dynamics of an abundant Escherichia coli outer membrane protein, LamB. Molecular Microbiology, 2004, 53, 1771-1783.	1.2	82
104	High Affinity, Paralog-Specific Recognition of the Mena EVH1 Domain by a Miniature Protein. Journal of the American Chemical Society, 2004, 126, 4-5.	6.6	82
105	Crawling Toward a Unified Model of Cell Motility: Spatial and Temporal Regulation of Actin Dynamics. Annual Review of Biochemistry, 2004, 73, 209-239.	5.0	187
106	An introduction to cell motility for the physical scientist. Physical Biology, 2004, 1, T1-T10.	0.8	68
107	Listeria monocytogenes rotates around its long axis during actin-based motility. Current Biology, 2003, 13, R754-R756.	1.8	22
108	Ena/VASP proteins contribute to Listeria monocytogenes pathogenesis by controlling temporal and spatial persistence of bacterial actin-based motility. Molecular Microbiology, 2003, 49, 1361-1375.	1.2	66

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109	Influences of thermal acclimation and acute temperature change on the motility of epithelial wound-healing cells (keratocytes) of tropical,temperate and Antarctic fish. Journal of Experimental Biology, 2003, 206, 4539-4551.	0.8	49
110	Compression forces generated by actin comet tails on lipid vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6493-6498.	3.3	177
111	A gene-expression program reflecting the innate immune response of cultured intestinal epithelial cells to infection by Listeria monocytogenes. Genome Biology, 2002, 4, R2.	13.9	43
112	The making of a gradient: IcsA (VirG) polarity in Shigella flexneri. Molecular Microbiology, 2002, 41, 861-872.	1.2	93
113	Systematic mutational analysis of the amino-terminal domain of the Listeria monocytogenes ActA protein reveals novel functions in actin-based motility. Molecular Microbiology, 2002, 42, 1163-1177.	1.2	33
114	Effects of Intermediate Filaments on Actin-Based Motility of Listeria monocytogenes. Biophysical Journal, 2001, 81, 3193-3203.	0.2	17
115	Actin-based motility is sufficient for bacterial membrane protrusion formation and host cell uptake. Cellular Microbiology, 2001, 3, 633-647.	1.1	95
116	Dendritic organization of actin comet tails. Current Biology, 2001, 11, 130-135.	1.8	172
117	The Polymerization Motor. Traffic, 2000, 1, 19-28.	1.3	134
118	Secrets of actin-based motility revealed by a bacterial pathogen. Nature Reviews Molecular Cell Biology, 2000, 1, 110-119.	16.1	162
119	Listeria monocytogenes Exploits Normal Host Cell Processes to Spread from Cell to Cellâœª. Journal of Cell Biology, 1999, 146, 1333-1350.	2.3	153
120	Cooperative symmetry-breaking by actin polymerization in a model for cell motility. Nature Cell Biology, 1999, 1, 493-499.	4.6	124
121	Functional Analysis of a Rickettsial OmpA Homology Domain of <i>Shigella flexneri</i> IcsA. Journal of Bacteriology, 1999, 181, 869-878.	1.0	10
122	Imaging techniques in microbiology. Current Opinion in Microbiology, 1998, 1, 346-351.	2.3	20
123	[11] Listeria monocytogenes-based assays for actin assembly factors. Methods in Enzymology, 1998, 298, 114-122.	0.4	19
124	Accelerating on a Treadmill: ADF/Cofilin Promotes Rapid Actin Filament Turnover in the Dynamic Cytoskeleton. Journal of Cell Biology, 1997, 136, 1165-1168.	2.3	160
125	Actin Dynamics and Force Generation in the Motility of Listeria Monocytogenes. Microscopy and Microanalysis, 1997, 3, 209-210.	0.2	0
126	New wrinkles in cytokinesis. Nature, 1997, 385, 388-389.	13.7	10

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127	Worm Sperm and Advances in Cell Locomotion. Cell, 1996, 84, 1-4.	13.5	81
128	Asymmetric distribution of the Listeria monocytogenes ActA protein is required and sufficient to direct actin-based motility. Molecular Microbiology, 1995, 17, 945-951.	1.2	130
129	The Cell Biology of Infection by Intracellular Bacterial Pathogens. Annual Review of Cell and Developmental Biology, 1995, 11, 213-239.	4.0	123
130	Regulation of the actin cytoskeleton in living cells. Seminars in Cell Biology, 1994, 5, 193-199.	3.5	45
131	Involvement of profilin in the actin-based motility of L. monocytogenes in cells and in cell-free extracts. Cell, 1994, 76, 505-517.	13.5	285
132	Actin-dependent motile forces and cell motility. Current Opinion in Cell Biology, 1994, 6, 82-86.	2.6	118
133	Actin Filament Dynamics in Cell Motility. Advances in Experimental Medicine and Biology, 1994, 358, 133-145.	0.8	14
134	Principles of locomotion for simple-shaped cells. Nature, 1993, 362, 167-171.	13.7	229
135	The three faces of profilin. Cell, 1993, 75, 835-838.	13.5	183
136	The rate of actin-based motility of intracellular Listeria monocytogenes equals the rate of actin polymerization. Nature, 1992, 357, 257-260.	13.7	526
137	Bacterial pathogens caught in the actin. Current Biology, 1992, 2, 649-651.	1.8	7
138	The nucleation-release model of actin filament dynamics in cell motility. Trends in Cell Biology, 1992, 2, 219-222.	3.6	72
139	Actin microfilament dynamics in locomoting cells. Nature, 1991, 352, 126-131.	13.7	774
140	Actin tracks. Nature, 1991, 354, 363-363.	13.7	1
141	Bacterial Manipulation of the Host Cell Cytoskeleton. , 0, , 275-297.		0