Clare M Waterman

List of Publications by Year
in descending order

108 papers	18,583 citations	16411 64 h-index	26548 107 g-index
118 all docs	118 docs citations	118 times ranked	17667 citing authors

#	Article	IF	Citations
1	A B-cell actomyosin arc network couples integrin co-stimulation to mechanical force-dependent immune synapse formation. ELife, 2022, 11, .	2.8	13
2	MARK2 regulates directed cell migration through modulation of myosin II contractility and focal adhesion organization. Current Biology, 2022, 32, 2704-2718.e6.	1.8	12
3	Myosin II isoforms promote internalization of spatially distinct clathrin-independent endocytosis cargoes through modulation of cortical tension downstream of ROCK2. Molecular Biology of the Cell, 2021, 32, 226-236.	0.9	11
4	NLRP3 Inflammasome Assembly in Neutrophils Is Supported by PAD4 and Promotes NETosis Under Sterile Conditions. Frontiers in Immunology, 2021, 12, 683803.	2.2	79
5	Contractility, focal adhesion orientation, and stress fiber orientation drive cancer cell polarity and migration along wavy ECM substrates. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	39
6	Survey of cancer cell anatomy in nonadhesive confinement reveals a role for filamin-A and fascin-1 in leader blebâ€“based migration. Molecular Biology of the Cell, 2021, 32, 1772-1791.	0.9	10
7	Mechanosensing through Direct Binding of Tensed F-Actin by LIM Domains. Developmental Cell, 2020, 55, 468-482.e7.	3.1	94
8	Cellular Mechanisms of NETosis. Annual Review of Cell and Developmental Biology, 2020, 36, 191-218.	4.0	216
9	Reply to Liu: The disassembly of the actin cytoskeleton is an early event during NETosis. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 22655-22656.	3.3	2
10	Physical Constraints and Forces Involved in Phagocytosis. Frontiers in Immunology, 2020, 11, 1097.	2.2	81
11	Misregulation of ELK1, AP1, and E12 Transcription Factor Networks Is Associated with Melanoma Progression. Cancers, 2020, 12, 458.	1.7	5
12	NETosis proceeds by cytoskeleton and endomembrane disassembly and PAD4-mediated chromatin decondensation and nuclear envelope rupture. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7326-7337.	3.3	219
13	Coupling of Î²2 integrins to actin by a mechanosensitive molecular clutch drives complement receptor-mediated phagocytosis. Nature Cell Biology, 2019, 21, 1357-1369.	4.6	98
14	Filopodia and focal adhesions: An integrated system driving branching morphogenesis in neuronal pathfinding and angiogenesis. Developmental Biology, 2019, 451, 86-95.	0.9	56
15	Single-shot super-resolution total internal reflection fluorescence microscopy. Nature Methods, 2018, 15, 425-428.	9.0	57
16	ARAP2 inhibits Akt independently of its effects on focal adhesions. Biology of the Cell, 2018, 110, 257-270.	0.7	8
17	A Structural Model for Vinculin Insertion into PIP2-Containing Membranes and the Effect of Insertion on Vinculin Activation and Localization. Structure, 2017, 25, 264-275.	1.6	23
18	Local pulsatile contractions are an intrinsic property of the myosin 2A motor in the cortical cytoskeleton of adherent cells. Molecular Biology of the Cell, 2017, 28, 240-251.	0.9	48

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19	Adaptive optics improves multiphoton super-resolution imaging. Nature Methods, 2017, 14, 869-872.	9.0	97
20	Two Distinct Actin Networks Mediate Traction Oscillations to Confer Focal Adhesion Mechanosensing. Biophysical Journal, 2017, 112, 780-794.	0.2	54
21	Actin retrograde flow actively aligns and orients ligand-engaged integrins in focal adhesions. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10648-10653.	3.3	95
22	Direction of actin flow dictates integrin LFA-1 orientation during leukocyte migration. Nature Communications, 2017, 8, 2047.	5.8	83
23	Mechanosensation: A Catch Bond That Only Hooks One Way. Current Biology, 2017, 27, R1158-R1160.	1.8	10
24	The molecular clutch model for mechanotransduction evolves. Nature Cell Biology, 2016, 18, 459-461.	4.6	73
25	Simultaneous multiview capture and fusion improves spatial resolution in wide-field and light-sheet microscopy. Optica, 2016, 3, 897.	4.8	53
26	Illuminating Cell Adhesion: Modern Microscopy Approaches to Study Integrin-Based Focal Adhesions. , 2016, , 119-140.		1
27	Actomyosin Cortical Mechanical Properties in Nonadherent Cells Determined by Atomic Force Microscopy. Biophysical Journal, 2016, 110, 2528-2539.	0.2	100
28	The FAKâ€"Arp2/3 interaction promotes leading edge advance and haptosensing by coupling nascent adhesions to lamellipodia actin. Molecular Biology of the Cell, 2016, 27, 1085-1100.	0.9	73
29	YAP Nuclear Localization in the Absence of Cell-Cell Contact Is Mediated by a Filamentous Actin-dependent, Myosin II- and Phospho-YAP-independent Pathway during Extracellular Matrix Mechanosensing. Journal of Biological Chemistry, 2016, 291, 6096-6110.	1.6	188
30	Cytosolic pressure provides a propulsive force comparable to actin polymerization during lamellipod protrusion. Scientific Reports, 2015, 5, 12314.	1.6	18
31	Inverted formin 2 in focal adhesions promotes dorsal stress fiber and fibrillar adhesion formation to drive extracellular matrix assembly. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E2447-56.	3.3	35
32	Molecular mechanism of vinculin activation and nanoscale spatial organization in focal adhesions. Nature Cell Biology, 2015, 17, 880-892.	4.6	247
33	Rac1-Dependent Phosphorylation and Focal Adhesion Recruitment of Myosin IIA Regulates Migration and Mechanosensing. Current Biology, 2015, 25, 175-186.	1.8	95
34	Myosin II controls cellular branching morphogenesis and migration in three dimensions by minimizing cell-surfaceÂcurvature. Nature Cell Biology, 2015, 17, 137-147.	4.6	109
35	Vinculin is required for cell polarization, migration, and extracellular matrix remodeling in 3D collagen. FASEB Journal, 2015, 29, 4555-4567.	0.2	90
36	Specification of Architecture and Function of Actin Structures by Actin Nucleation Factors. Annual Review of Biophysics, 2015, 44, 285-310.	4.5	85

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37	Integration of actin dynamics and cell adhesion by a three-dimensional, mechanosensitive molecular clutch. Nature Cell Biology, 2015, 17, 955-963.	4.6	421
38	Incoherent structured illumination improves optical sectioning and contrast in multiphoton super-resolution microscopy. Optics Express, 2015, 23, 5327.	1.7	17
39	Cortical Actin Tension, Elastic Modulus and Cytosolic Pressure in Fibroblasts Determined using Atomic Force Microscopy. Biophysical Journal, 2015, 108, 140a.	0.2	2
40	Erk regulation of actin capping and bundling by Eps8 promotes cortex tension and leader bleb-based migration. ELife, 2015, 4, e08314.	2.8	96
41	Rac1 and Aurora A regulate MCAK to polarize microtubule growth in migrating endothelial cells. Journal of Cell Biology, 2014, 206, 97-112.	2.3	53
42	High-Resolution Traction Force Microscopy. Methods in Cell Biology, 2014, 123, 367-394.	0.5	181
43	Spinning Disk Confocal Imaging of Neutrophil Migration in Zebrafish. Methods in Molecular Biology, 2014, 1124, 219-233.	0.4	21
44	Guiding cell migration by tugging. Current Opinion in Cell Biology, 2013, 25, 619-626.	2.6	132
45	Localization-Based Super-Resolution Imaging of Cellular Structures. Methods in Molecular Biology, 2013, 1046, 59-84.	0.4	7
46	Spatially isotropic four-dimensional imaging with dual-view plane illumination microscopy. Nature Biotechnology, 2013, 31, 1032-1038.	9.4	290
47	Vinculinâ€“actin interaction couples actin retrograde flow to focal adhesions, but is dispensable for focal adhesion growth. Journal of Cell Biology, 2013, 202, 163-177.	2.3	230
48	Orientation-specific responses to sustained uniaxial stretching in focal adhesion growth and turnover. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E2352-61.	3.3	73
49	Interdisciplinary Graduate Training in Teaching Labs. Science, 2012, 338, 1542-1543.	6.0	29
50	Force Fluctuations within Focal Adhesions Mediate ECM-Rigidity Sensing to Guide Directed Cell Migration. Cell, 2012, 151, 1513-1527.	13.5	716
51	Stiffness-controlled three-dimensional extracellular matrices for high-resolution imaging of cell behavior. Nature Protocols, 2012, 7, 2056-2066.	5.5	178
52	Advances in light-based imaging of three-dimensional cellular ultrastructure. Current Opinion in Cell Biology, 2012, 24, 125-133.	2.6	27
53	Automated Screening of Microtubule Growth Dynamics Identifies MARK2 as a Regulator of Leading Edge Microtubules Downstream of Rac1 in Migrating Cells. PLoS ONE, 2012, 7, e41413.	1.1	39
54	Isolation of Focal Adhesion Proteins for Biochemical and Proteomic Analysis. Methods in Molecular Biology, 2011, 757, 297-323.	0.4	56

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55	Analysis of the myosin-II-responsive focal adhesion proteome reveals a role for Î²-Pix in negative regulation of focal adhesion maturation. Nature Cell Biology, 2011, 13, 383-393.	4.6	553
56	Microscopy in 3D: a biologist's toolbox. Trends in Cell Biology, 2011, 21, 682-691.	3.6	133
57	Sorting Nexin 27 Protein Regulates Trafficking of a p21-activated Kinase (PAK) Interacting Exchange Factor (Î²-Pix)-G Protein-coupled Receptor Kinase Interacting Protein (GIT) Complex via a PDZ Domain Interaction. Journal of Biological Chemistry, 2011, 286, 39403-39416.	1.6	42
58	How we discovered fluorescent speckle microscopy. Molecular Biology of the Cell, 2011, 22, 3940-3942.	0.9	7
59	Distinct ECM mechanosensing pathways regulate microtubule dynamics to control endothelial cell branching morphogenesis. Journal of Cell Biology, 2011, 192, 321-334.	2.3	100
60	Pak1 regulates focal adhesion strength, myosin IIA distribution, and actin dynamics to optimize cell migration. Journal of Cell Biology, 2011, 193, 1289-1303.	2.3	82
61	Effects of brefeldin A-inhibited guanine nucleotide-exchange (BIG) 1 and KANK1 proteins on cell polarity and directed migration during wound healing. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19228-19233.	3.3	37
62	Adhesive F-actin Waves: A Novel Integrin-Mediated Adhesion Complex Coupled to Ventral Actin Polymerization. PLoS ONE, 2011, 6, e26631.	1.1	75
63	Protrusion and actin assembly are coupled to the organization of lamellar contractile structures. Experimental Cell Research, 2010, 316, 2027-2041.	1.2	43
64	Nanoscale architecture of integrin-based cell adhesions. Nature, 2010, 468, 580-584.	13.7	1,323
65	Myosin II activity regulates vinculin recruitment to focal adhesions through FAK-mediated paxillin phosphorylation. Journal of Cell Biology, 2010, 188, 877-890.	2.3	483
66	Event Ordering in Live-Cell Imaging Determined from Temporal Cross-Correlation Asymmetry. Biophysical Journal, 2010, 98, 2432-2441.	0.2	11
67	Mechanical Integration of Actin and Adhesion Dynamics in Cell Migration. Annual Review of Cell and Developmental Biology, 2010, 26, 315-333.	4.0	819
68	A Zyxin-Mediated Mechanism for Actin Stress Fiber Maintenance and Repair. Developmental Cell, 2010, 19, 365-376.	3.1	193
69	Epidermal Growth Factorâ€"induced Contraction Regulates Paxillin Phosphorylation to Temporally Separate Traction Generation from De-adhesion. Molecular Biology of the Cell, 2009, 20, 3155-3167.	0.9	49
70	Local Cortical Tension by Myosin II Guides 3D Endothelial Cell Branching. Current Biology, 2009, 19, 260-265.	1.8	172
71	Interferometric fluorescent super-resolution microscopy resolves 3D cellular ultrastructure. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3125-3130.	3.3	816
72	High Resolution Traction Force Microscopy Based on Experimental and Computational Advances. Biophysical Journal, 2008, 94, 207-220.	0.2	514

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73	CENP-E combines a slow, processive motor and a flexible coiled coil to produce an essential motile kinetochore tether. Journal of Cell Biology, 2008, 181, 411-419.	2.3	129
74	PyK2 and FAK connections to p190Rho guanine nucleotide exchange factor regulate RhoA activity, focal adhesion formation, and cell motility. Journal of Cell Biology, 2008, 180, 187-203.	2.3	196
75	Traction stress in focal adhesions correlates biphasically with actin retrograde flow speed. Journal of Cell Biology, 2008, 183, 999-1005.	2.3	422
76	Caveolin-1 regulates cell polarization and directional migration through Src kinase and Rho GTPases. Journal of Cell Biology, 2007, 177, 683-694.	2.3	300
77	A Highâ€Resolution Multimode Digital Microscope System. Methods in Cell Biology, 2007, 81, 187-218.	0.5	28
78	mDia2 regulates actin and focal adhesion dynamics and organization in the lamella for efficient epithelial cell migration. Journal of Cell Science, 2007, 120, 3475-3487.	1.2	134
79	SNX9 Couples Actin Assembly to Phosphoinositide Signals and Is Required for Membrane Remodeling during Endocytosis. Developmental Cell, 2007, 13, 43-56.	3.1	177
80	Cofilin Activity Downstream of Pak1 Regulates Cell Protrusion Efficiency by Organizing Lamellipodium and Lamella Actin Networks. Developmental Cell, 2007, 13, 646-662.	3.1	184
81	Differential Transmission of Actin Motion Within Focal Adhesions. Science, 2007, 315, 111-115.	6.0	460
82	QUANTITATIVE FLUORESCENT SPECKLE MICROSCOPY OF CYTOSKELETON DYNAMICS. Annual Review of Biophysics and Biomolecular Structure, 2006, 35, 361-387.	18.3	194
83	Spatiotemporal Feedback between Actomyosin and Focal-Adhesion Systems Optimizes Rapid Cell Migration. Cell, 2006, 125, 1361-1374.	13.5	522
84	Decreased polarity and increased random motility in PtK1 epithelial cells correlate with inhibition of endosomal recycling. Journal of Cell Science, 2006, 119, 3571-3582.	1.2	29
85	Integrin-dependent actomyosin contraction regulates epithelial cell scattering. Journal of Cell Biology, 2005, 171, 153-164.	2.3	285
86	Correction: Spatial regulation of CLASP affinity for microtubules by Rac1 and GSK3Î² in migrating epithelial cells. Journal of Cell Biology, 2005, 171, 393-393.	2.3	0
87	Spatial regulation of CLASP affinity for microtubules by Rac1 and GSK3Î² in migrating epithelial cells. Journal of Cell Biology, 2005, 169, 929-939.	2.3	173
88	Cell migration without a lamellipodium. Journal of Cell Biology, 2005, 168, 619-631.	2.3	257
89	Periodic Patterns of Actin Turnover in Lamellipodia and Lamellae of Migrating Epithelial Cells Analyzed by Quantitative Fluorescent Speckle Microscopy. Biophysical Journal, 2005, 89, 3456-3469.	0.2	103
90	Simultaneous mapping of filamentous actin flow and turnover in migrating cells by quantitative fluorescent speckle microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 9660-9665.	3.3	155

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91	Regulation of Microtubule Destabilizing Activity of Op18/Stathmin Downstream of Rac1. Journal of Biological Chemistry, 2004, 279, 6196-6203.	1.6	209
92	Two Distinct Actin Networks Drive the Protrusion of Migrating Cells. Science, 2004, 305, 1782-1786.	6.0	721
93	Signal analysis of total internal reflection fluorescent speckle microscopy (TIR-FSM) and wide-field epi-fluorescence FSM of the actin cytoskeleton and focal adhesions in living cells. Journal of Microscopy, 2004, 216, 138-152.	0.8	30
94	Protein Kinase D-Mediated Anterograde Membrane Trafficking Is Required for Fibroblast Motility. Current Biology, 2004, 14, 88-98.	1.8	160
95	Quantitative Fluorescent Speckle Microscopy of the Actin Cytoskeleton in Migrating Cells. Microscopy and Microanalysis, 2004, 10, 1234-1235.	0.2	0
96	Conserved microtubuleâ€"actin interactions in cell movement and morphogenesis. Nature Cell Biology, 2003, 5, 599-609.	4.6	794
97	Regulation of leading edge microtubule and actin dynamics downstream of Rac1. Journal of Cell Biology, 2003, 161, 845-851.	2.3	238
98	Dual-wavelength fluorescent speckle microscopy reveals coupling of microtubule and actin movements in migrating cells. Journal of Cell Biology, 2002, 158, 31-37.	2.3	194
99	Focal loss of actin bundles causes microtubule redistribution and growth cone turning. Journal of Cell Biology, 2002, 157, 839-849.	2.3	176
100	New Directions for Fluorescent Speckle Microscopy. Current Biology, 2002, 12, R633-R640.	1.8	47
101	Converging Populations of F-Actin Promote Breakage of Associated Microtubules to Spatially Regulate Microtubule Turnover in Migrating Cells. Current Biology, 2002, 12, 1891-1899.	1.8	98
102	Importin Î² Is a Mitotic Target of the Small GTPase Ran in Spindle Assembly. Cell, 2001, 104, 95-106.	13.5	373
103	Microtubules Remodel Actomyosin Networks in Xenopus Egg Extracts via Two Mechanisms of F-Actin Transport. Journal of Cell Biology, 2000, 150, 361-376.	2.3	98
104	Positive feedback interactions between microtubule and actin dynamics during cell motility. Current Opinion in Cell Biology, 1999, 11, 61-67.	2.6	245
105	Actomyosin-based Retrograde Flow of Microtubules in the Lamella of Migrating Epithelial Cells Influences Microtubule Dynamic Instability and Turnover and Is Associated with Microtubule Breakage and Treadmilling. Journal of Cell Biology, 1997, 139, 417-434.	2.3	449
106	The interaction between cytoplasmic dynein and dynactin is required for fast axonal transport. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 12180-12185.	3.3	237
107	Production and presentation of digital movies. Trends in Cell Biology, 1997, 7, 503-506.	3.6	10
108	Membrane/microtubule tip attachment complexes (TACs) allow the assembly dynamics of plus ends to push and pull membranes into tubulovesicular networks in interphase Xenopus egg extracts.. Journal of Cell Biology, 1995, 130, 1161-1169.	2.3	108