

# Matthew D Welch

## List of Publications by Citations

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74  
papers

7,389  
citations

39  
h-index

85  
g-index

167  
ext. papers

8,358  
ext. citations

12.7  
avg, IF

6.17  
L-index

#	Paper	IF	Citations
74	The ARP2/3 complex: an actin nucleator comes of age. <i>Nature Reviews Molecular Cell Biology</i> , <b>2006</b> , 7, 713-26	48.7	693
73	A nucleator arms race: cellular control of actin assembly. <i>Nature Reviews Molecular Cell Biology</i> , <b>2010</b> , 11, 237-51	48.7	680
72	Actin polymerization is induced by Arp2/3 protein complex at the surface of <i>Listeria monocytogenes</i> . <i>Nature</i> , <b>1997</b> , 385, 265-9	50.4	501
71	The human Arp2/3 complex is composed of evolutionarily conserved subunits and is localized to cellular regions of dynamic actin filament assembly. <i>Journal of Cell Biology</i> , <b>1997</b> , 138, 375-84	7.3	396
70	Cellular control of actin nucleation. <i>Annual Review of Cell and Developmental Biology</i> , <b>2002</b> , 18, 247-88	12.6	380
69	Actin-based motility of intracellular pathogens. <i>Current Opinion in Microbiology</i> , <b>2005</b> , 8, 35-45	7.9	304
68	<i>Mycobacterium marinum</i> escapes from phagosomes and is propelled by actin-based motility. <i>Journal of Experimental Medicine</i> , <b>2003</b> , 198, 1361-8	16.6	228
67	The Wiskott-Aldrich syndrome protein directs actin-based motility by stimulating actin nucleation with the Arp2/3 complex. <i>Current Biology</i> , <b>1999</b> , 9, 555-8	6.3	227
66	Spatial control of actin polymerization during neutrophil chemotaxis. <i>Nature Cell Biology</i> , <b>1999</b> , 1, 75-81	23.4	218
65	Formation of filopodia-like bundles in vitro from a dendritic network. <i>Journal of Cell Biology</i> , <b>2003</b> , 160, 951-62	7.3	206
64	WHAMM is an Arp2/3 complex activator that binds microtubules and functions in ER to Golgi transport. <i>Cell</i> , <b>2008</b> , 134, 148-61	56.2	202
63	Three regions within ActA promote Arp2/3 complex-mediated actin nucleation and <i>Listeria monocytogenes</i> motility. <i>Journal of Cell Biology</i> , <b>2000</b> , 150, 527-38	7.3	159
62	Actin-based motility drives baculovirus transit to the nucleus and cell surface. <i>Journal of Cell Biology</i> , <b>2010</b> , 190, 187-95	7.3	157
61	Visualization and molecular analysis of actin assembly in living cells. <i>Journal of Cell Biology</i> , <b>1998</b> , 143, 1919-30	7.3	157
60	New mechanisms and functions of actin nucleation. <i>Current Opinion in Cell Biology</i> , <b>2011</b> , 23, 4-13	9	153
59	Identification of a bacterial factor required for actin-based motility of <i>Burkholderia pseudomallei</i> . <i>Molecular Microbiology</i> , <b>2005</b> , 56, 40-53	4.1	150
58	Pathogens and polymers: microbe-host interactions illuminate the cytoskeleton. <i>Journal of Cell Biology</i> , <b>2011</b> , 195, 7-17	7.3	149

57	Dynamic nuclear actin assembly by Arp2/3 complex and a baculovirus WASP-like protein. <i>Science</i> , <b>2006</b> , 314, 464-7	33.3	144
56	Arp2/3-mediated actin-based motility: a tail of pathogen abuse. <i>Cell Host and Microbe</i> , <b>2013</b> , 14, 242-55	23.4	143
55	The world according to Arp: regulation of actin nucleation by the Arp2/3 complex. <i>Trends in Cell Biology</i> , <b>1999</b> , 9, 423-7	18.3	143
54	Reconstitution of human Arp2/3 complex reveals critical roles of individual subunits in complex structure and activity. <i>Molecular Cell</i> , <b>2001</b> , 8, 1041-52	17.6	131
53	Rickettsia Sca2 is a bacterial formin-like mediator of actin-based motility. <i>Nature Cell Biology</i> , <b>2010</b> , 12, 1057-63	23.4	120
52	A Rickettsia WASP-like protein activates the Arp2/3 complex and mediates actin-based motility. <i>Cellular Microbiology</i> , <b>2004</b> , 6, 761-9	3.9	120
51	Salmonella effectors translocated across the vacuolar membrane interact with the actin cytoskeleton. <i>Molecular Microbiology</i> , <b>2003</b> , 48, 401-15	4.1	120
50	Pivotal role of VASP in Arp2/3 complex-mediated actin nucleation, actin branch-formation, and <i>Listeria monocytogenes</i> motility. <i>Journal of Cell Biology</i> , <b>2001</b> , 155, 89-100	7.3	108
49	Critical conformational changes in the Arp2/3 complex are induced by nucleotide and nucleation promoting factor. <i>Molecular Cell</i> , <b>2004</b> , 16, 269-79	17.6	101
48	The yeast actin cytoskeleton. <i>Current Opinion in Cell Biology</i> , <b>1994</b> , 6, 110-9	9	98
47	Antibacterial autophagy occurs at PI(3)P-enriched domains of the endoplasmic reticulum and requires Rab1 GTPase. <i>Autophagy</i> , <b>2011</b> , 7, 17-26	10.2	93
46	Cytoskeleton: actin and endocytosis--no longer the weakest link. <i>Current Biology</i> , <b>2001</b> , 11, R691-4	6.3	86
45	Virulent Burkholderia species mimic host actin polymerases to drive actin-based motility. <i>Cell</i> , <b>2015</b> , 161, 348-60	56.2	74
44	Actin-based motility and cell-to-cell spread of bacterial pathogens. <i>Current Opinion in Microbiology</i> , <b>2017</b> , 35, 48-57	7.9	68
43	Arp2/3 ATP hydrolysis-catalysed branch dissociation is critical for endocytic force generation. <i>Nature Cell Biology</i> , <b>2006</b> , 8, 826-33	23.4	64
42	Rickettsia actin-based motility occurs in distinct phases mediated by different actin nucleators. <i>Current Biology</i> , <b>2014</b> , 24, 98-103	6.3	62
41	Effects of Arp2 and Arp3 nucleotide-binding pocket mutations on Arp2/3 complex function. <i>Journal of Cell Biology</i> , <b>2005</b> , 168, 315-28	7.3	59
40	Rickettsia Sca4 Reduces Vinculin-Mediated Intercellular Tension to Promote Spread. <i>Cell</i> , <b>2016</b> , 167, 670-683.e10	56.2	56

39	Defining a core set of actin cytoskeletal proteins critical for actin-based motility of Rickettsia. <i>Cell Host and Microbe</i> , <b>2010</b> , 7, 388-98	23.4	52
38	An actin-filament-binding interface on the Arp2/3 complex is critical for nucleation and branch stability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 8159-64	11.5	48
37	Electron tomography and simulation of baculovirus actin comet tails support a tethered filament model of pathogen propulsion. <i>PLoS Biology</i> , <b>2014</b> , 12, e1001765	9.7	45
36	Repetitive N-WASP-binding elements of the enterohemorrhagic Escherichia coli effector EspF(U) synergistically activate actin assembly. <i>PLoS Pathogens</i> , <b>2008</b> , 4, e1000191	7.6	40
35	Rickettsia parkeri invasion of diverse host cells involves an Arp2/3 complex, WAVE complex and Rho-family GTPase-dependent pathway. <i>Cellular Microbiology</i> , <b>2012</b> , 14, 529-45	3.9	32
34	Evasion of autophagy mediated by Rickettsia surface protein OmpB is critical for virulence. <i>Nature Microbiology</i> , <b>2019</b> , 4, 2538-2551	26.6	31
33	Baculovirus Actin-Based Motility Drives Nuclear Envelope Disruption and Nuclear Egress. <i>Current Biology</i> , <b>2018</b> , 28, 2153-2159.e4	6.3	30
32	Systematic mutational analysis of the amino-terminal domain of the Listeria monocytogenes ActA protein reveals novel functions in actin-based motility. <i>Molecular Microbiology</i> , <b>2001</b> , 42, 1163-77	4.1	28
31	Inflammasome-mediated antagonism of type I interferon enhances Rickettsia pathogenesis. <i>Nature Microbiology</i> , <b>2020</b> , 5, 688-696	26.6	24
30	Structural insights into WHAMM-mediated cytoskeletal coordination during membrane remodeling. <i>Journal of Cell Biology</i> , <b>2012</b> , 199, 111-24	7.3	24
29	Purification and assay of the platelet Arp2/3 complex. <i>Methods in Enzymology</i> , <b>1998</b> , 298, 52-61	1.7	24
28	Novel use of a chimpanzee pseudogene for chromosomal mapping of human cytochrome c oxidase subunit IV. <i>Gene</i> , <b>1990</b> , 86, 209-16	3.8	23
27	Rab1 recruits WHAMM during membrane remodeling but limits actin nucleation. <i>Molecular Biology of the Cell</i> , <b>2016</b> , 27, 967-78	3.5	21
26	Cell migration, freshly squeezed. <i>Cell</i> , <b>2015</b> , 160, 581-582	56.2	20
25	RECON-Dependent Inflammation in Hepatocytes Enhances Listeria monocytogenes Cell-to-Cell Spread. <i>MBio</i> , <b>2018</b> , 9,	7.8	20
24	Nuclear localization of actin requires AC102 in Autographa californica multiple nucleopolyhedrovirus-infected cells. <i>Journal of General Virology</i> , <b>2012</b> , 93, 1795-1803	4.9	17
23	Actin-based motility of bacterial pathogens: mechanistic diversity and its impact on virulence. <i>Pathogens and Disease</i> , <b>2016</b> , 74,	4.2	16
22	A 2-pyridone-amide inhibitor targets the glucose metabolism pathway of Chlamydia trachomatis. <i>MBio</i> , <b>2014</b> , 6, e02304-14	7.8	15

21	Baculovirus AC102 Is a Nucleocapsid Protein That Is Crucial for Nuclear Actin Polymerization and Nucleocapsid Morphogenesis. <i>Journal of Virology</i> , <b>2018</b> , 92,	6.6	13
20	Membrane-deforming proteins play distinct roles in actin pedestal biogenesis by enterohemorrhagic Escherichia coli. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 20613-24	5.4	13
19	Lysine methylation shields an intracellular pathogen from ubiquitylation and autophagy. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	13
18	Mechanical competition triggered by innate immune signaling drives the collective extrusion of bacterially infected epithelial cells. <i>Developmental Cell</i> , <b>2021</b> , 56, 443-460.e11	10.2	12
17	Expression of an epitope-tagged virulence protein in Rickettsia parkeri using transposon insertion. <i>PLoS ONE</i> , <b>2012</b> , 7, e37310	3.7	11
16	Role of Sca2 and RickA in the Dissemination of Rickettsia parkeri in Amblyomma maculatum. <i>Infection and Immunity</i> , <b>2018</b> , 86,	3.7	9
15	A streamlined method for transposon mutagenesis of Rickettsia parkeri yields numerous mutations that impact infection. <i>PLoS ONE</i> , <b>2018</b> , 13, e0197012	3.7	9
14	Turning on the Arp2/3 complex at atomic resolution. <i>Structure</i> , <b>2002</b> , 10, 131-5	5.2	7
13	Trypanosomes have divergent kinesin-2 proteins that function differentially in flagellum biosynthesis and cell viability. <i>Journal of Cell Science</i> , <b>2020</b> , 133,	5.3	4
12	Establishing Intracellular Infection: Escape from the Phagosome and Intracellular Colonization (Rickettsiaceae)	154-174	
11	A Metabolic Dependency for Host Isoprenoids in the Obligate Intracellular Pathogen Rickettsia parkeri Underlies a Sensitivity to the Statin Class of Host-Targeted Therapeutics. <i>MSphere</i> , <b>2019</b> , 4,	5	4
10	Baculovirus actin-rearrangement-inducing factor ARIF-1 induces the formation of dynamic invadosome clusters. <i>Molecular Biology of the Cell</i> , <b>2021</b> , 32, 1433-1445	3.5	2
9	Interferon receptor-deficient mice are susceptible to eschar-associated rickettsiosis		1
8	Baculovirus AC102 is a nucleocapsid protein that is crucial for nuclear actin polymerization and nucleocapsid morphogenesis		1
7	A metabolic dependency for host isoprenoids in the obligate intracellular pathogen Rickettsia parkeri underlies a sensitivity for the statin class of host-targeted therapeutics		1
6	Plasma membrane protrusions mediate host cell-cell fusion induced by .. <i>Molecular Biology of the Cell</i> , <b>2022</b> , mbcE22020056	3.5	0
5	Matthew Welch: The many branches of actin regulation. Interview by Ben Short. <i>Journal of Cell Biology</i> , <b>2011</b> , 192, 206-7	7.3	
4	Lessons from the enemy: what pathogens have taught us about the control of cytoskeletal dynamics. <i>FASEB Journal</i> , <b>2007</b> , 21, A37	0.9	

- 3 Exploitation of cytoplasmic and nuclear actin by baculoviruses. *FASEB Journal*, **2008**, 22, 530.3 0.9
- 2 Mobilization of the actin cytoskeleton by microbial pathogens. *FASEB Journal*, **2013**, 27, 76.2 0.9
- 1 Introducing Preprint Highlights.. *Molecular Biology of the Cell*, **2022**, 33, ed1 3.5