David R Kovar

List of Publications by Year in Descending Order

70 papers	4,839 citations	35 h-index	69 g-index
78 ext. papers	5,870 ext. citations	9.4 avg, IF	5.72 L-index

#	Paper	IF	Citations
70	Stir it up: The role of actin in mitochondrial mixing during mitosis. *Developmental Cell*, **2021**, 56, 1080-1087	12.2	
69	LIM domain proteins in cell mechanobiology. *Cytoskeleton*, **2021**, 78, 303-311	2.4	2
68	Formin Cdc12's specific actin assembly properties are tailored for cytokinesis in fission yeast. *Biophysical Journal*, **2021**, 120, 2984-2997	2.9	2
67	Mechanism of actin filament nucleation. *Biophysical Journal*, **2021**, 120, 4399-4417	2.9	1
66	exoenzyme Y directly bundles actin filaments. *Journal of Biological Chemistry*, **2020**, 295, 3506-3517	5.4	4
65	F-Actin Cytoskeleton Network Self-Organization Through Competition and Cooperation. *Annual Review of Cell and Developmental Biology*, **2020**, 36, 35-60	12.6	19
64	Evolutionarily diverse LIM domain-containing proteins bind stressed actin filaments through a conserved mechanism. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 25532-25542	11.5	24
63	Cofilin drives rapid turnover and fluidization of entangled F-actin. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 12629-12637	11.5	18
62	Wound Healing Coordinates Actin Architectures to Regulate Mechanical Work. *Nature Physics*, **2019**, 15, 696-705	16.2	20
61	Mechanical and kinetic factors drive sorting of F-actin cross-linkers on bundles. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 16192-16197	11.5	19
60	Filament Nucleation Tunes Mechanical Memory in Active Polymer Networks. *Advanced Functional Materials*, **2019**, 29, 1905243	15.6	6
59	formin FOR1 and profilin PRF1 are optimized for acute rapid actin filament assembly. *Molecular Biology of the Cell*, **2019**, 30, 3123-3135	3.5	6
58	Cooperation between tropomyosin and α-actinin inhibits fimbrin association with actin filament networks in fission yeast. *ELife*, **2019**, 8,	8.9	14
57	Ena/VASP processive elongation is modulated by avidity on actin filaments bundled by the filopodia cross-linker fascin. *Molecular Biology of the Cell*, **2019**, 30, 851-862	3.5	20
56	Feeling the force: formin's role in mechanotransduction. *Current Opinion in Cell Biology*, **2019**, 56, 130-140	9	17
55	Partitioning and Enhanced Self-Assembly of Actin in Polypeptide Coacervates. *Biophysical Journal*, **2018**, 114, 1636-1645	2.9	43
54	Actin Cross-Linking Toxin Is a Universal Inhibitor of Tandem-Organized and Oligomeric G-Actin Binding Proteins. *Current Biology*, **2018**, 28, 1536-1547.e9	6.3	11

53	When Is "Enough" Enough?. *Cell Systems*, **2017**, 4, 480-482	10.6	1
52	The bacterial virulence factors VopL and VopF nucleate actin from the pointed end. *Journal of Cell Biology*, **2017**, 216, 1267-1276	7.3	12
51	Mechanoregulated inhibition of formin facilitates contractile actomyosin ring assembly. *Nature Communications*, **2017**, 8, 703	17.4	44
50	Competition between Tropomyosin, Fimbrin, and ADF/Cofilin drives their sorting to distinct actin filament networks. *ELife*, **2017**, 6,	8.9	50
49	Internetwork competition for monomers governs actin cytoskeleton organization. *Nature Reviews Molecular Cell Biology*, **2016**, 17, 799-810	48.7	86
48	The F-actin bundler α-actinin Ain1 is tailored for ring assembly and constriction during cytokinesis in fission yeast. *Molecular Biology of the Cell*, **2016**, 27, 1821-33	3.5	35
47	In Vitro Biochemical Characterization of Cytokinesis Actin-Binding Proteins. *Methods in Molecular Biology*, **2016**, 1369, 151-79	1.4	9
46	Fascin- and α-Actinin-Bundled Networks Contain Intrinsic Structural Features that Drive Protein Sorting. *Current Biology*, **2016**, 26, 2697-2706	6.3	58
45	Fission yeast profilin is tailored to facilitate actin assembly by the cytokinesis formin Cdc12. *Molecular Biology of the Cell*, **2015**, 26, 283-93	3.5	5
44	ACTIN-DIRECTED TOXIN. ACD toxin-produced actin oligomers poison formin-controlled actin polymerization. *Science*, **2015**, 349, 535-9	33.3	31
43	Actin age orchestrates myosin-5 and myosin-6 run lengths. *Current Biology*, **2015**, 25, 2057-62	6.3	31
42	Disassembly activity of actin-depolymerizing factor (ADF) is associated with distinct cellular processes in apicomplexan parasites. *Molecular Biology of the Cell*, **2015**, 26, 3001-12	3.5	15
41	Profilin regulates F-actin network homeostasis by favoring formin over Arp2/3 complex. *Developmental Cell*, **2015**, 32, 43-53	10.2	160
40	Profilin-1 serves as a gatekeeper for actin assembly by Arp2/3-dependent and -independent pathways. *Developmental Cell*, **2015**, 32, 54-67	10.2	171
39	Plasmodium falciparum coronin organizes arrays of parallel actin filaments potentially guiding directional motility in invasive malaria parasites. *Malaria Journal*, **2015**, 14, 280	3.6	33
38	Cytoskeletal dynamics: a view from the membrane. *Journal of Cell Biology*, **2015**, 209, 329-37	7.3	112
37	High-resolution temporal analysis reveals a functional timeline for the molecular regulation of cytokinesis. *Developmental Cell*, **2014**, 30, 209-23	10.2	61
36	Enabled negatively regulates diaphanous-driven actin dynamics in vitro and in vivo. *Developmental Cell*, **2014**, 28, 394-408	10.2	47

35	A mechanism for actin filament severing by malaria parasite actin depolymerizing factor 1 via a low affinity binding interface. *Journal of Biological Chemistry*, **2014**, 289, 4043-54	5.4	21
34	Ena/VASP Enabled is a highly processive actin polymerase tailored to self-assemble parallel-bundled F-actin networks with Fascin. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 4121-6	11.5	92
33	HopW1 from Pseudomonas syringae disrupts the actin cytoskeleton to promote virulence in Arabidopsis. *PLoS Pathogens*, **2014**, 10, e1004232	7.6	60
32	Homeostatic actin cytoskeleton networks are regulated by assembly factor competition for monomers. *Current Biology*, **2014**, 24, 579-85	6.3	137
31	Actin assembly factors regulate the gelation kinetics and architecture of F-actin networks. *Biophysical Journal*, **2013**, 104, 1709-19	2.9	9
30	Rickettsia Sca2 has evolved formin-like activity through a different molecular mechanism. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E2677-86	11.5	30
29	The formins Cdc12 and For3 cooperate during contractile ring assembly in cytokinesis. *Journal of Cell Biology*, **2013**, 203, 101-14	7.3	36
28	Assembly kinetics determine the architecture of α-actinin crosslinked F-actin networks. *Nature Communications*, **2012**, 3, 861	17.4	64
27	Three's company: the fission yeast actin cytoskeleton. *Trends in Cell Biology*, **2011**, 21, 177-87	18.3	78
26	Minimal requirements for actin filament disassembly revealed by structural analysis of malaria parasite actin-depolymerizing factor 1. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 9869-74	11.5	39
25	The functionally distinct fission yeast formins have specific actin-assembly properties. *Molecular Biology of the Cell*, **2011**, 22, 3826-39	3.5	33
24	Mechanism of actin filament nucleation by Vibrio VopL and implications for tandem W domain nucleation. *Nature Structural and Molecular Biology*, **2011**, 18, 1060-7	17.6	49
23	Actin filament bundling by fimbrin is important for endocytosis, cytokinesis, and polarization in fission yeast. *Journal of Biological Chemistry*, **2011**, 286, 26964-77	5.4	89
22	Rickettsia Sca2 is a bacterial formin-like mediator of actin-based motility. *Nature Cell Biology*, **2010**, 12, 1057-63	23.4	120
21	Fimbrin and tropomyosin competition regulates endocytosis and cytokinesis kinetics in fission yeast. *Current Biology*, **2010**, 20, 1415-22	6.3	110
20	Formin-Mediated Actin Assembly **2010**, 279-316		2
19	Role of tropomyosin in formin-mediated contractile ring assembly in fission yeast. *Molecular Biology of the Cell*, **2009**, 20, 2160-73	3.5	61
18	Incompatibility with formin Cdc12p prevents human profilin from substituting for fission yeast profilin: insights from crystal structures of fission yeast profilin. *Journal of Biological Chemistry*, **2009**, 284, 2088-97	5.4	29

17	Formin differentially utilizes profilin isoforms to rapidly assemble actin filaments. *Journal of Biological Chemistry*, **2009**, 284, 673-684	5.4	50
16	Identification and characterization of a small molecule inhibitor of formin-mediated actin assembly. *Chemistry and Biology*, **2009**, 16, 1158-68		241
15	The cytokinesis formins from the nematode worm and fission yeast differentially mediate actin filament assembly. *Journal of Biological Chemistry*, **2008**, 283, 23872-83	5.4	50
14	Intracellular motility: myosin and tropomyosin in actin cable flow. *Current Biology*, **2007**, 17, R244-7	6.3	7
13	Molecular details of formin-mediated actin assembly. *Current Opinion in Cell Biology*, **2006**, 18, 11-7	9	197
12	Cell polarity: formin on the move. *Current Biology*, **2006**, 16, R535-8	6.3	11
11	Assembly of the cytokinetic contractile ring from a broad band of nodes in fission yeast. *Journal of Cell Biology*, **2006**, 174, 391-402	7.3	219
10	Control of the assembly of ATP- and ADP-actin by formins and profilin. *Cell*, **2006**, 124, 423-35	56.2	434
9	Model of formin-associated actin filament elongation. *Molecular Cell*, **2006**, 21, 455-66	17.6	144
8	Profilin-mediated competition between capping protein and formin Cdc12p during cytokinesis in fission yeast. *Molecular Biology of the Cell*, **2005**, 16, 2313-24	3.5	98
7	Insertional assembly of actin filament barbed ends in association with formins produces piconewton forces. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 14725-30	11.5	362
6	Structure of the actin crosslinking core of fimbrin. *Structure*, **2004**, 12, 999-1013	5.2	84
5	Spatial and temporal pathway for assembly and constriction of the contractile ring in fission yeast cytokinesis. *Developmental Cell*, **2003**, 5, 723-34	10.2	327
4	The fission yeast cytokinesis formin Cdc12p is a barbed end actin filament capping protein gated by profilin. *Journal of Cell Biology*, **2003**, 161, 875-87	7.3	280
3	Fluorescently-labeled fimbrin decorates a dynamic actin filament network in live plant cells. *Planta*, **2001**, 213, 390-5	4.7	52
2	Chlamydomonas reinhardtiiproduces a profilin with unusual biochemical properties. *Journal of Cell Science*, **2001**, 114, 4293-4305	5.3	32
1	Cofilin Drives Rapid Turnover and Fluidization of Entangled F-actin		5