Thomas D Pollard

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214 papers	27,404 citations	83 h-index	164 g-index
238 ext. papers	30,396 ext. citations	11.2 avg, IF	7.59 L-index

#	Paper	IF	Citations
214	Cellular motility driven by assembly and disassembly of actin filaments. *Cell*, **2003**, 112, 453-65	56.2	3285
213	Actin, a central player in cell shape and movement. *Science*, **2009**, 326, 1208-12	33.3	1340
212	Molecular mechanisms controlling actin filament dynamics in nonmuscle cells. *Annual Review of Biophysics and Biomolecular Structure*, **2000**, 29, 545-76		1144
211	Actin and myosin and cell movement. *CRC Critical Reviews in Biochemistry*, **1974**, 2, 1-65		888
210	Regulation of actin filament assembly by Arp2/3 complex and formins. *Annual Review of Biophysics and Biomolecular Structure*, **2007**, 36, 451-77		741
209	Regulation of actin filament network formation through ARP2/3 complex: activation by a diverse array of proteins. *Annual Review of Biochemistry*, **2001**, 70, 649-76	29.1	563
208	Mechanism of actin filament turnover by severing and nucleation at different concentrations of ADF/cofilin. *Molecular Cell*, **2006**, 24, 13-23	17.6	512
207	Direct observation of dendritic actin filament networks nucleated by Arp2/3 complex and WASP/Scar proteins. *Nature*, **2000**, 404, 1007-11	50.4	449
206	Identification of a factor in conventional muscle actin preparations which inhibits actin filament self-association. *Biochemical and Biophysical Research Communications*, **1980**, 96, 18-27	3.4	442
205	Counting cytokinesis proteins globally and locally in fission yeast. *Science*, **2005**, 310, 310-4	33.3	440
204	Control of the assembly of ATP- and ADP-actin by formins and profilin. *Cell*, **2006**, 124, 423-35	56.2	434
203	Activation by Cdc42 and PIP(2) of Wiskott-Aldrich syndrome protein (WASp) stimulates actin nucleation by Arp2/3 complex. *Journal of Cell Biology*, **2000**, 150, 1311-20	7.3	417
202	Crystal structure of Arp2/3 complex. *Science*, **2001**, 294, 1679-84	33.3	413
201	Pyrene actin: documentation of the validity of a sensitive assay for actin polymerization. *Journal of Muscle Research and Cell Motility*, **1983**, 4, 253-62	3.5	403
200	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
199	Acanthamoeba Myosin. *Journal of Biological Chemistry*, **1973**, 248, 4682-4690	5.4	340
198	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

197	Real-time measurements of actin filament polymerization by total internal reflection fluorescence microscopy. *Biophysical Journal*, **2005**, 88, 1387-402	2.9	323
196	Actin and Actin-Binding Proteins. *Cold Spring Harbor Perspectives in Biology*, **2016**, 8,	10.2	321
195	Assembly mechanism of the contractile ring for cytokinesis by fission yeast. *Science*, **2008**, 319, 97-100	33.3	294
194	Quantitative analysis of the effect of Acanthamoeba profilin on actin filament nucleation and elongation. *Biochemistry*, **1984**, 23, 6631-41	3.2	283
193	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
192	Membrane fission by dynamin: what we know and what we need to know. *EMBO Journal*, **2016**, 35, 2270-2284	9.4	267
191	Binding of myosin I to membrane lipids. *Nature*, **1989**, 340, 565-8	50.4	263
190	A guide to simple and informative binding assays. *Molecular Biology of the Cell*, **2010**, 21, 4061-7	3.5	259
189	Interaction of WASP/Scar proteins with actin and vertebrate Arp2/3 complex. *Nature Cell Biology*, **2001**, 3, 76-82	23.4	254
188	Understanding cytokinesis: lessons from fission yeast. *Nature Reviews Molecular Cell Biology*, **2010**, 11, 149-55	48.7	250
187	Influence of the C terminus of Wiskott-Aldrich syndrome protein (WASp) and the Arp2/3 complex on actin polymerization. *Biochemistry*, **1999**, 38, 15212-22	3.2	243
186	Mechanics of cytokinesis in eukaryotes. *Current Opinion in Cell Biology*, **2010**, 22, 50-6	9	240
185	Mechanism of interaction of Acanthamoeba actophorin (ADF/Cofilin) with actin filaments. *Journal of Biological Chemistry*, **1999**, 274, 15538-46	5.4	238
184	The cytoskeleton, cellular motility and the reductionist agenda. *Nature*, **2003**, 422, 741-5	50.4	232
183	Interactions of ADF/cofilin, Arp2/3 complex, capping protein and profilin in remodeling of branched actin filament networks. *Current Biology*, **2000**, 10, 1273-82	6.3	220
182	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
181	The structural basis of actin filament branching by the Arp2/3 complex. *Journal of Cell Biology*, **2008** , 180, 887-95	7.3	218
180	An actin-binding protein from Acanthamoeba regulates actin filament polymerization and interactions. *Nature*, **1980**, 288, 455-9	50.4	207

179	Structure of Arp2/3 complex in its activated state and in actin filament branch junctions. *Science*, **2001**, 293, 2456-9	33.3	205
178	Propulsion of organelles isolated from Acanthamoeba along actin filaments by myosin-I. *Nature*, **1986**, 322, 754-6	50.4	203
177	Structure, subunit topology, and actin-binding activity of the Arp2/3 complex from Acanthamoeba. *Journal of Cell Biology*, **1997**, 136, 331-43	7.3	194
176	Inhibition of the Arp2/3 complex-nucleated actin polymerization and branch formation by tropomyosin. *Current Biology*, **2001**, 11, 1300-4	6.3	187
175	Leiomodin is an actin filament nucleator in muscle cells. *Science*, **2008**, 320, 239-43	33.3	180
174	Kinetic evidence for a monomer activation step in actin polymerization. *Biochemistry*, **1983**, 22, 2193-202	3.2	177
173	Review of the mechanism of processive actin filament elongation by formins. *Cytoskeleton*, **2009**, 66, 606-17		173
172	Human platelet myosin. I. Purification by a rapid method applicable to other nonmuscle cells. *Analytical Biochemistry*, **1974**, 60, 258-66	3.1	170
171	The Arp2/3 complex nucleates actin filament branches from the sides of pre-existing filaments. *Nature Cell Biology*, **2001**, 3, 306-10	23.4	168
170	Dependence of the mechanical properties of actin/alpha-actinin gels on deformation rate. *Nature*, **1987**, 325, 828-30	50.4	166
169	The role of the FH1 domain and profilin in formin-mediated actin-filament elongation and nucleation. *Current Biology*, **2008**, 18, 9-19	6.3	164
168	Cytoplasmic filaments of Amoeba proteus. I. The role of filaments in consistency changes and movement. *Journal of Cell Biology*, **1970**, 46, 267-89	7.3	153
167	Dynamic cross-linking by alpha-actinin determines the mechanical properties of actin filament networks. *Journal of Biological Chemistry*, **1998**, 273, 9570-6	5.4	152
166	Polymerization kinetics of ADP- and ADP-Pi-actin determined by fluorescence microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 8827-32	11.5	150
165	Cofilin dissociates Arp2/3 complex and branches from actin filaments. *Current Biology*, **2009**, 19, 537-45	6.3	149
164	Identification of a second myosin-II in Schizosaccharomyces pombe: Myp2p is conditionally required for cytokinesis. *Molecular Biology of the Cell*, **1997**, 8, 2693-705	3.5	148
163	Model of formin-associated actin filament elongation. *Molecular Cell*, **2006**, 21, 455-66	17.6	144
162	Fission yeast myosin-I, Myo1p, stimulates actin assembly by Arp2/3 complex and shares functions with WASp. *Journal of Cell Biology*, **2000**, 151, 789-800	7.3	143

161	Interaction of actin monomers with Acanthamoeba actophorin (ADF/cofilin) and profilin. *Journal of Biological Chemistry*, **1998**, 273, 25106-11	5.4	143
160	Hydrolysis of ATP by polymerized actin depends on the bound divalent cation but not profilin. *Biochemistry*, **2002**, 41, 597-602	3.2	139
159	Interactions of Acanthamoeba profilin with actin and nucleotides bound to actin. *Biochemistry*, **1998**, 37, 10871-80	3.2	137
158	Quantitative analysis of the mechanism of endocytic actin patch assembly and disassembly in fission yeast. *Molecular Biology of the Cell*, **2010**, 21, 2894-904	3.5	131
157	Structure and function of the Arp2/3 complex. *Current Opinion in Structural Biology*, **2002**, 12, 768-74	8.1	121
156	A conserved amphipathic helix in WASP/Scar proteins is essential for activation of Arp2/3 complex. *Nature Structural and Molecular Biology*, **2003**, 10, 591-8	17.6	121
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150	Annealing accounts for the length of actin filaments formed by spontaneous polymerization. *Biophysical Journal*, **1999**, 77, 2911-9	2.9	107
149	Structural and biochemical characterization of two binding sites for nucleation-promoting factor WASp-VCA on Arp2/3 complex. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, E463-71	11.5	105
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141	Nucleotide-dependent conformational states of actin. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 12723-8	11.5	97
140	Mechanism of actin polymerization revealed by cryo-EM structures of actin filaments with three different bound nucleotides. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 4265-4274	11.5	95
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137	Acanthamoeba Myosin. *Journal of Biological Chemistry*, **1973**, 248, 4691-4697	5.4	93
136	Cytoskeletal functions of cytoplasmic contractile proteins. *Journal of Supramolecular Structure*, **1976**, 5, 317-34		90
135	Molecular organization of cytokinesis nodes and contractile rings by super-resolution fluorescence microscopy of live fission yeast. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E5876-E5885	11.5	89
134	Measurement of rate constants for actin filament elongation in solution. *Analytical Biochemistry*, **1983**, 134, 406-12	3.1	89
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126	Electron Microscopic Identification of Actin Associated with Isolated Amoeba Plasma Membranes. *Journal of Biological Chemistry*, **1973**, 248, 448-450	5.4	80

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118	Crystal structure of the actin-binding protein actophorin from Acanthamoeba. *Nature Structural and Molecular Biology*, **1997**, 4, 369-73	17.6	66
117	Molecular Mechanism of Cytokinesis. *Annual Review of Biochemistry*, **2019**, 88, 661-689	29.1	66
116	Formins filter modified actin subunits during processive elongation. *Journal of Structural Biology*, **2012**, 177, 32-9	3.4	65
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114	Insights into the influence of nucleotides on actin family proteins from seven structures of Arp2/3 complex. *Molecular Cell*, **2007**, 26, 449-57	17.6	64
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110	Identification of functionally important residues of Arp2/3 complex by analysis of homology models from diverse species. *Journal of Molecular Biology*, **2004**, 336, 551-65	6.5	59
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106	Nucleotide-free actin: stabilization by sucrose and nucleotide binding kinetics. *Biochemistry*, **1995**, 34, 5452-61	3.2	58
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100	Myosin-II tails confer unique functions in Schizosaccharomyces pombe: characterization of a novel myosin-II tail. *Molecular Biology of the Cell*, **2000**, 11, 79-91	3.5	53
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83	Energetic requirements for processive elongation of actin filaments by FH1FH2-formins. *Journal of Biological Chemistry*, **2009**, 284, 12533-40	5.4	37
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81	Anillin-related protein Mid1p coordinates the assembly of the cytokinetic contractile ring in fission yeast. *Molecular Biology of the Cell*, **2012**, 23, 3982-92	3.5	34
80	Synergies between Aip1p and capping protein subunits (Acp1p and Acp2p) in clathrin-mediated endocytosis and cell polarization in fission yeast. *Molecular Biology of the Cell*, **2014**, 25, 3515-27	3.5	33
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77	Overview of the Cytoskeleton from an Evolutionary Perspective. *Cold Spring Harbor Perspectives in Biology*, **2018**, 10,	10.2	32
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