Marc W Kirschner

List of Publications by Year
in descending order

114 papers	33,331 citations	15504 65 h-index	22832 112 g-index
143 all docs	143 docs citations	143 times ranked	31565 citing authors

#	Article	IF	Citations
1	Dynamic instability of microtubule growth. Nature, 1984, 312, 237-242.	27.8	2,950
2	Droplet Barcoding for Single-Cell Transcriptomics Applied to Embryonic Stem Cells. Cell, 2015, 161, 1187-1201.	28.9	2,857
3	Cyclin is degraded by the ubiquitin pathway. Nature, 1991, 349, 132-138.	27.8	2,321
4	A major developmental transition in early xenopus embryos: I. characterization and timing of cellular changes at the midblastula stage. Cell, 1982, 30, 675-686.	28.9	1,619
5	Cyclin synthesis drives the early embryonic cell cycle. Nature, 1989, 339, 275-280.	27.8	1,236
6	Metabolite Profiling Identifies a Key Role for Glycine in Rapid Cancer Cell Proliferation. Science, 2012, 336, 1040-1044.	12.6	1,201
7	The role of cyclin synthesis and degradation in the control of maturation promoting factor activity. Nature, 1989, 339, 280-286.	27.8	1,141
8	A major developmental transition in early xenopus embryos: II. control of the onset of transcription. Cell, 1982, 30, 687-696.	28.9	1,043
9	A 20s complex containing CDC27 and CDC16 catalyzes the mitosis-specific conjugation of ubiquitin to cyclin B. Cell, 1995, 81, 279-288.	28.9	932
10	Homologies in both primary and secondary structure between nuclear envelope and intermediate filament proteins. Nature, 1986, 319, 463-468.	27.8	836
11	Geminin, an Inhibitor of DNA Replication, Is Degraded during Mitosis. Cell, 1998, 93, 1043-1053.	28.9	825
12	Microtubule assembly nucleated by isolated centrosomes. Nature, 1984, 312, 232-237.	27.8	772
13	Identification of a Vertebrate Sister-Chromatid Separation Inhibitor Involved in Transformation and Tumorigenesis. Science, 1999, 285, 418-422.	12.6	761
14	The KEN box: an APC recognition signal distinct from the D box targeted by Cdh1. Genes and Development, 2000, 14, 655-665.	5.9	601
15	The Roles of APC and Axin Derived from Experimental and Theoretical Analysis of the Wnt Pathway. PLoS Biology, 2003, 1, e10.	5.6	556
16	Mechanism of N-Wasp Activation by Cdc42 and Phosphatidylinositol 4,5-Bisphosphate. Journal of Cell Biology, 2000, 150, 1299-1310.	5.2	546
17	Separate domains of p21 involved in the inhibition of Cdk kinase and PCNA. Nature, 1995, 374, 386-388.	27.8	545
18	The dynamics of gene expression in vertebrate embryogenesis at single-cell resolution. Science, 2018, 360, .	12.6	471

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19	Direct Binding of CDC20 Protein Family Members Activates the Anaphase-Promoting Complex in Mitosis and G1. Molecular Cell, 1998, 2, 163-171.	9.7	466
20	Dual Inhibition of Sister Chromatid Separation at Metaphase. Cell, 2001, 107, 715-726.	28.9	417
21	Sites of microtubule assembly and disassembly in the mitotic spindle. Cell, 1986, 45, 515-527.	28.9	406
22	Polewards chromosome movement driven by microtubule depolymerization in vitro. Nature, 1988, 331, 499-504.	27.8	403
23	Toca-1 Mediates Cdc42-Dependent Actin Nucleation by Activating the N-WASP-WIP Complex. Cell, 2004, 118, 203-216.	28.9	394
24	An Actin-Based Wave Generator Organizes Cell Motility. PLoS Biology, 2007, 5, e221.	5.6	371
25	Cell Growth and Size Homeostasis in Proliferating Animal Cells. Science, 2009, 325, 167-171.	12.6	370
26	Using buoyant mass to measure the growth of single cells. Nature Methods, 2010, 7, 387-390.	19.0	338
27	On being the right (cell) size. Science, 2015, 348, 1245075.	12.6	325
28	Multiple phases of chondrocyte enlargement underlie differences in skeletal proportions. Nature, 2013, 495, 375-378.	27.8	318
29	The Meaning of Systems Biology. Cell, 2005, 121, 503-504.	28.9	300
30	A Noncanonical Frizzled2 Pathway Regulates Epithelial-Mesenchymal Transition and Metastasis. Cell, 2014, 159, 844-856.	28.9	296
31	Cell-cycle-regulated activation of Akt kinase by phosphorylation at its carboxyl terminus. Nature, 2014, 508, 541-545.	27.8	285
32	Dynamics extracted from fixed cells reveal feedback linking cell growth to cell cycle. Nature, 2013, 494, 480-483.	27.8	275
33	The Processivity of Multiubiquitination by the APC Determines the Order of Substrate Degradation. Cell, 2006, 124, 89-103.	28.9	256
34	Identification of a Cullin Homology Region in a Subunit of the Anaphase-Promoting Complex. Science, 1998, 279, 1219-1222.	12.6	234
35	Deep Proteomics of the Xenopus laevis Egg using an mRNA-Derived Reference Database. Current Biology, 2014, 24, 1467-1475.	3.9	234
36	Temporal and spatial regulation of fibronectin in early Xenopus development. Cell, 1984, 36, 729-740.	28.9	229

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37	Hemichordate genomes and deuterostome origins. Nature, 2015, 527, 459-465.	27.8	217
38	UBE2S drives elongation of K11-linked ubiquitin chains by the Anaphase-Promoting Complex. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1355-1360.	7.1	204
39	Stable isotope-free relative and absolute quantitation of protein phosphorylation stoichiometry by MS. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3948-3953.	7.1	202
40	New features of microtubule behaviour observed in vivo. Nature, 1988, 334, 356-359.	27.8	197
41	Direct observation of mammalian cell growth and size regulation. Nature Methods, 2012, 9, 910-912.	19.0	197
42	Substrate degradation by the proteasome: A single-molecule kinetic analysis. Science, 2015, 348, 1250834.	12.6	188
43	Mapping Gene Expression in Two Xenopus Species: Evolutionary Constraints and Developmental Flexibility. Developmental Cell, 2011, 20, 483-496.	7.0	187
44	On the Relationship of Protein and mRNA Dynamics in Vertebrate Embryonic Development. Developmental Cell, 2015, 35, 383-394.	7.0	182
45	Structure of the Mad2 spindle assembly checkpoint protein and its interaction with Cdc20. Nature Structural Biology, 2000, 7, 224-229.	9.7	181
46	Optimizing Optical Flow Cytometry for Cell Volume-Based Sorting and Analysis. PLoS ONE, 2011, 6, e16053.	2.5	164
47	Hem-1 Complexes Are Essential for Rac Activation, Actin Polymerization, and Myosin Regulation during Neutrophil Chemotaxis. PLoS Biology, 2006, 4, e38.	5.6	154
48	Self-Assembly of Filopodia-Like Structures on Supported Lipid Bilayers. Science, 2010, 329, 1341-1345.	12.6	153
49	Cell cycle-regulated multi-site phosphorylation of Neurogenin 2 coordinates cell cycling with differentiation during neurogenesis. Development (Cambridge), 2011, 138, 4267-4277.	2.5	151
50	Structural basis for dynamic regulation of the human 26S proteasome. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12991-12996.	7.1	147
51	Physiological regulation of Î²-catenin stability by Tcf3 and CK1Ïµ. Journal of Cell Biology, 2001, 154, 983-994.	5.2	142
52	Accurate Multiplexed Proteomics at the MS2 Level Using the Complement Reporter Ion Cluster. Analytical Chemistry, 2012, 84, 9214-9221.	6.5	138
53	VHL substrate transcription factor ZHX2 as an oncogenic driver in clear cell renal cell carcinoma. Science, 2018, 361, 290-295.	12.6	134
54	Kinetic Responses of Î²-Catenin Specify the Sites of Wnt Control. Science, 2012, 338, 1337-1340.	12.6	126

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55	Dual RING E3 Architectures Regulate Multiubiquitination and Ubiquitin Chain Elongation by APC/C. Cell, 2016, 165, 1440-1453.	28.9	126
56	The Gonium pectorale genome demonstrates co-option of cell cycle regulation during the evolution of multicellularity. Nature Communications, 2016, 7, 11370.	12.8	125
57	Phosphorylation changes associated with the early cell cycle in Xenopus eggs. Developmental Biology, 1987, 119, 442-453.	2.0	123
58	Resonant microchannel volume and mass measurements show that suspended cells swell during mitosis. Journal of Cell Biology, 2015, 211, 757-763.	5.2	123
59	Preprints for the life sciences. Science, 2016, 352, 899-901.	12.6	119
60	The Nuclear Proteome of a Vertebrate. Current Biology, 2015, 25, 2663-2671.	3.9	117
61	APCCdc20 Suppresses Apoptosis through Targeting Bim for Ubiquitination and Destruction. Developmental Cell, 2014, 29, 377-391.	7.0	110
62	Exploiting polypharmacology for drug target deconvolution. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5048-5053.	7.1	95
63	Cell size sensing in animal cells coordinates anabolic growth rates and cell cycle progression to maintain cell size uniformity. ELife, 2018, 7, .	6.0	93
64	Size homeostasis in adherent cells studied by synthetic phase microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16687-16692.	7.1	92
65	Large-scale detection of ubiquitination substrates using cell extracts and protein microarrays. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2543-2548.	7.1	87
66	Noncanonical open reading frames encode functional proteins essential for cancer cell survival. Nature Biotechnology, 2021, 39, 697-704.	17.5	85
67	The master cell cycle regulator APC-Cdc20 regulates ciliary length and disassembly of the primary cilium. ELife, 2014, 3, e03083.	6.0	71
68	Gap 1 phase length and mouse embryonic stem cell self-renewal. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12550-12555.	7.1	69
69	Specificity of the anaphase-promoting complex: A single-molecule study. Science, 2015, 348, 1248737.	12.6	69
70	Molecular ties between the cell cycle and differentiation in embryonic stem cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9503-9508.	7.1	67
71	Proteolysis and DNA Replication: The CDC34 Requirement in the Xenopus Egg Cell Cycle. Science, 1997, 277, 1672-1676.	12.6	66
72	The mechanism and pattern of yolk consumption provide insight into embryonic nutrition inXenopus. Development (Cambridge), 2009, 136, 1539-1548.	2.5	64

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73	Emi1 preferentially inhibits ubiquitin chain elongation by the anaphase-promoting complex. Nature Cell Biology, 2013, 15, 797-806.	10.3	64
74	Mouse embryonic stem cells can differentiate via multiple paths to the same state. ELife, 2017, 6, .	6.0	63
75	Size uniformity of animal cells is actively maintained by a p38 MAPK-dependent regulation of G1-length. ELife, 2018, 7, .	6.0	61
76	Anteroposterior axis patterning by early canonical Wnt signaling during hemichordate development. PLoS Biology, 2018, 16, e2003698.	5.6	60
77	Remodeling of the Metabolome during Early Frog Development. PLoS ONE, 2011, 6, e16881.	2.5	59
78	The surface contraction waves of Xenopus eggs reflect the metachronous cell-cycle state of the cytoplasm. Current Biology, 1997, 7, 451-454.	3.9	57
79	Quantitative Lys-Ïµ-Gly-Gly (diGly) Proteomics Coupled with Inducible RNAi Reveals Ubiquitin-mediated Proteolysis of DNA Damage-inducible Transcript 4 (DDIT4) by the E3 Ligase HUWE1. Journal of Biological Chemistry, 2014, 289, 28942-28955.	3.4	57
80	The APC/C E3 Ligase Complex Activator FZR1 Restricts BRAF Oncogenic Function. Cancer Discovery, 2017, 7, 424-441.	9.4	57
81	Hippo pathway mediates resistance to cytotoxic drugs. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E3729-E3738.	7.1	57
82	Phosphoinositides and membrane curvature switch the mode of actin polymerization via selective recruitment of toca-1 and Snx9. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7193-7198.	7.1	56
83	Domain structure of separase and its binding to securin as determined by EM. Nature Structural and Molecular Biology, 2005, 12, 552-553.	8.2	50
84	Addressing systemic problems in the biomedical research enterprise. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1912-1913.	7.1	50
85	Anaphase specific auto-cleavage of separase. FEBS Letters, 2002, 528, 246-250.	2.8	49
86	Protein and lipid mass concentration measurement in tissues by stimulated Raman scattering microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117938119.	7.1	46
87	FUNCTIONAL GENOMICS: Expression Cloning in the Test Tube. Science, 1997, 277, 973-974.	12.6	44
88	Proteomics of phosphorylation and protein dynamics during fertilization and meiotic exit in the Xenopus egg. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10838-E10847.	7.1	43
89	Single-molecule dynamics of Dishevelled at the plasma membrane and Wnt pathway activation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16690-16701.	7.1	42
90	Proteomic and Metabolomic Characterization of a Mammalian Cellular Transition from Quiescence to Proliferation. Cell Reports, 2017, 20, 721-736.	6.4	41

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91	Genome-wide Screening Identifies SFMBT1 as an Oncogenic Driver in Cancer with VHL Loss. Molecular Cell, 2020, 77, 1294-1306.e5.	9.7	41
92	The genome of the giant Nomuraâ€™s jellyfish sheds light on the early evolution of active predation. BMC Biology, 2019, 17, 28.	3.8	38
93	A nontranscriptional role for Oct4 in the regulation of mitotic entry. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15768-15773.	7.1	35
94	Conformational Landscape of the p28-Bound Human Proteasome Regulatory Particle. Molecular Cell, 2017, 67, 322-333.e6.	9.7	35
95	Kinesin superfamily protein Kif26b links Wnt5a-Ror signaling to the control of cell and tissue behaviors in vertebrates. ELife, 2017, 6, .	6.0	33
96	Computationally enhanced quantitative phase microscopy reveals autonomous oscillations in mammalian cell growth. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27388-27399.	7.1	32
97	YAP regulates cell size and growth dynamics via non-cell autonomous mediators. ELife, 2020, 9, .	6.0	28
98	Identification of Ubiquitin Ligase Substrates by In Vitro Expression Cloning. Methods in Enzymology, 2005, 399, 404-414.	1.0	23
99	Protein microarrays for genome-wide posttranslational modification analysis. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2011, 3, 347-356.	6.6	23
100	Phylogenomic analyses of the genusDrosophilareveals genomic signals of climate adaptation. Molecular Ecology Resources, 2022, 22, 1559-1581.	4.8	15
101	Quantitative measurement of the catastrophe rate of dynamic microtubules. Cytoskeleton, 1999, 43, 43-51.	4.4	10
102	Intelligent highâ€throughput intervention testing platform in Daphnia. Aging Cell, 2022, 21, e13571.	6.7	9
103	The nonredundant nature of the Axin2 regulatory network in the canonical Wnt signaling pathway. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	8
104	Lack of age-related respiratory changes in Daphnia. Biogerontology, 2022, 23, 85-97.	3.9	4
105	Postâ€Translational Modification Profilingâ€”a Highâ€Content Assay for Identifying Protein Modifications in Mammalian Cellular Systems. Current Protocols in Protein Science, 2014, 77, 27.8.1-27.8.13.	2.8	3
106	A cell type annotation Jamboreeâ€”Revival of Ð° communal science forum. Genesis, 2020, 58, e23383.	1.6	3
107	Quantitative Proteomics Reveals Remodeling of Protein Repertoire Across Life Phases of Daphnia pulex. Proteomics, 2019, 19, e1900155.	2.2	2
108	Corrigendum to: Anaphase specific auto-cleavage of separase (FEBS 26464). FEBS Letters, 2002, 531, 381-381.	2.8	1

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109	Cell Biology as a World View. Molecular Biology of the Cell, 2010, 21, 3803-3803.	2.1	1
110	In Memory of Harold Weintraub. Molecular Biology of the Cell, 1995, 6, 757-758.	2.1	0
111	Bruce Alberts, Science 's New Editor. Science, 2008, 319, 1199-1199.	12.6	0
112	What makes the cell cycle tick? a celebration of the awesome power of biochemistry and the frog egg. Molecular Biology of the Cell, 2020, 31, 2874-2878.	2.1	0
113	E-Publication Proposal. Science, 1999, 285, 1013-1013.	12.6	0
114	TBIO-26. NON-CANONICAL OPEN READING FRAMES ENCODE FUNCTIONAL PROTEINS ESSENTIAL FOR CANCER CELL SURVIVAL. Neuro-Oncology, 2020, 22, iii471-iii471.	1.2	0