

Rebecca Heald

List of Publications by Year in descending order

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116
papers

11,468
citations

44042

48
h-index

30894

102
g-index

151
all docs

151
docs citations

151
times ranked

9653
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-organization of microtubules into bipolar spindles around artificial chromosomes in <i>Xenopus</i> egg extracts. <i>Nature</i> , 1996, 382, 420-425.	13.7	921
2	Genome evolution in the allotetraploid frog <i>Xenopus laevis</i> . <i>Nature</i> , 2016, 538, 336-343.	13.7	849
3	Mutations of phosphorylation sites in lamin A that prevent nuclear lamina disassembly in mitosis. <i>Cell</i> , 1990, 61, 579-589.	13.5	628
4	Visualization of a Ran-GTP Gradient in Interphase and Mitotic <i>Xenopus</i> Egg Extracts. <i>Science</i> , 2002, 295, 2452-2456.	6.0	496
5	Dissection of the Mammalian Midbody Proteome Reveals Conserved Cytokinesis Mechanisms. <i>Science</i> , 2004, 305, 61-66.	6.0	448
6	Human <i>wee1</i> maintains mitotic timing by protecting the nucleus from cytoplasmically activated <i>cdc2</i> kinase. <i>Cell</i> , 1993, 74, 463-474.	13.5	446
7	A model for the proposed roles of different microtubule-based motor proteins in establishing spindle bipolarity. <i>Current Biology</i> , 1998, 8, 903-913.	1.8	394
8	Importin β Is a Mitotic Target of the Small GTPase Ran in Spindle Assembly. <i>Cell</i> , 2001, 104, 95-106.	13.5	373
9	Analysis of a RanGTP-regulated gradient in mitotic somatic cells. <i>Nature</i> , 2006, 440, 697-701.	13.7	339
10	Spindle Assembly in <i>Xenopus</i> Egg Extracts: Respective Roles of Centrosomes and Microtubule Self-Organization. <i>Journal of Cell Biology</i> , 1997, 138, 615-628.	2.3	328
11	Mechanisms of Mitotic Spindle Assembly and Function. <i>International Review of Cytology</i> , 2008, 265, 111-158.	6.2	313
12	Formation of Spindle Poles by Dynein/Dynactin-Dependent Transport of Numa. <i>Journal of Cell Biology</i> , 2000, 149, 851-862.	2.3	292
13	Mechanisms and Molecules of the Mitotic Spindle. <i>Current Biology</i> , 2004, 14, R797-R805.	1.8	290
14	The RanGTP gradient â€“ a GPS for the mitotic spindle. <i>Journal of Cell Science</i> , 2008, 121, 1577-1586.	1.2	259
15	A Rae1-Containing Ribonucleoprotein Complex Is Required for Mitotic Spindle Assembly. <i>Cell</i> , 2005, 121, 223-234.	13.5	257
16	Nuclear Size Is Regulated by Importin β and Ntf2 in <i>Xenopus</i> . <i>Cell</i> , 2010, 143, 288-298.	13.5	234
17	Cytoplasmic Volume Modulates Spindle Size During Embryogenesis. <i>Science</i> , 2013, 342, 856-860.	6.0	234
18	Importazole, a Small Molecule Inhibitor of the Transport Receptor Importin- β . <i>ACS Chemical Biology</i> , 2011, 6, 700-708.	1.6	211

#	ARTICLE	IF	CITATIONS
19	Katanin Contributes to Interspecies Spindle Length Scaling in <i>Xenopus</i> . <i>Cell</i> , 2011, 147, 1397-1407.	13.5	184
20	Genome-wide analysis demonstrates conserved localization of messenger RNAs to mitotic microtubules. <i>Journal of Cell Biology</i> , 2007, 179, 1365-1373.	2.3	157
21	Investigating mitotic spindle assembly and function in vitro using <i>Xenopus laevis</i> egg extracts. <i>Nature Protocols</i> , 2006, 1, 2305-2314.	5.5	155
22	Thirty years of search and capture: The complex simplicity of mitotic spindle assembly. <i>Journal of Cell Biology</i> , 2015, 211, 1103-1111.	2.3	148
23	Motor Function in the Mitotic Spindle Minireview. <i>Cell</i> , 2000, 102, 399-402.	13.5	126
24	A computational model predicts <i>Xenopus</i> meiotic spindle organization. <i>Journal of Cell Biology</i> , 2010, 191, 1239-1249.	2.3	125
25	Mechanisms of Intracellular Scaling. <i>Annual Review of Cell and Developmental Biology</i> , 2012, 28, 113-135.	4.0	123
26	REEP3/4 Ensure Endoplasmic Reticulum Clearance from Metaphase Chromatin and Proper Nuclear Envelope Architecture. <i>Developmental Cell</i> , 2013, 26, 315-323.	3.1	120
27	Histone H1 is essential for mitotic chromosome architecture and segregation in <i>Xenopus laevis</i> egg extracts. <i>Journal of Cell Biology</i> , 2005, 169, 859-869.	2.3	116
28	Mitotic spindle scaling during <i>Xenopus</i> development by kif2a and importin β . <i>ELife</i> , 2013, 2, e00290.	2.8	116
29	<i>Xenopus tropicalis</i> egg extracts provide insight into scaling of the mitotic spindle. <i>Journal of Cell Biology</i> , 2007, 176, 765-770.	2.3	110
30	Microtubule dynamics. <i>Journal of Cell Science</i> , 2002, 115, 3-4.	1.2	110
31	A Comparative Analysis of Spindle Morphometrics across Metazoans. <i>Current Biology</i> , 2015, 25, 1542-1550.	1.8	98
32	Nuclear actin and protein 4.1: Essential interactions during nuclear assembly in vitro. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 10752-10757.	3.3	96
33	Methods for Studying Spindle Assembly and Chromosome Condensation in <i>Xenopus</i> Egg Extracts. <i>Methods in Molecular Biology</i> , 2006, 322, 459-474.	0.4	96
34	Importin β Partitioning to the Plasma Membrane Regulates Intracellular Scaling. <i>Cell</i> , 2019, 176, 805-815.e8.	13.5	94
35	The perichromosomal layer. <i>Chromosoma</i> , 2005, 114, 377-388.	1.0	91
36	Regulation of Op18 during Spindle Assembly in <i>Xenopus</i> Egg Extracts. <i>Journal of Cell Biology</i> , 2001, 153, 149-158.	2.3	84

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37	Cell structure and dynamics. <i>Current Opinion in Cell Biology</i> , 2011, 23, 1-3.	2.6	83
38	Centrosome proteins form an insoluble perinuclear matrix during muscle cell differentiation. <i>BMC Cell Biology</i> , 2009, 10, 28.	3.0	78
39	TPX2 levels modulate meiotic spindle size and architecture in <i>Xenopus</i> egg extracts. <i>Journal of Cell Biology</i> , 2014, 206, 385-393.	2.3	73
40	Micromanipulation Studies of Chromatin Fibers in <i>Xenopus</i> Egg Extracts Reveal ATP-dependent Chromatin Assembly Dynamics. <i>Molecular Biology of the Cell</i> , 2007, 18, 464-474.	0.9	71
41	Interplay Between Spindle Architecture and Function. <i>International Review of Cell and Molecular Biology</i> , 2013, 306, 83-125.	1.6	69
42	Paternal chromosome loss and metabolic crisis contribute to hybrid inviability in <i>Xenopus</i> . <i>Nature</i> , 2018, 553, 337-341.	13.7	69
43	Microtubules: 50 years on from the discovery of tubulin. <i>Nature Reviews Molecular Cell Biology</i> , 2016, 17, 322-328.	16.1	67
44	Identification of a Novel Protein Regulating Microtubule Stability through a Chemical Approach. <i>Chemistry and Biology</i> , 2004, 11, 135-146.	6.2	65
45	Mitotic noncoding RNA processing promotes kinetochore and spindle assembly in <i>Xenopus</i> . <i>Journal of Cell Biology</i> , 2016, 214, 133-141.	2.3	64
46	A cyclin-dependent kinase inhibitor inducing cancer cell differentiation: Biochemical identification using <i>Xenopus</i> egg extracts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999, 96, 4797-4802.	3.3	62
47	Morphology and function of membrane-bound organelles. <i>Current Opinion in Cell Biology</i> , 2014, 26, 79-86.	2.6	57
48	Xorbit/CLASP links dynamic microtubules to chromosomes in the <i>Xenopus</i> meiotic spindle. <i>Journal of Cell Biology</i> , 2006, 172, 19-25.	2.3	55
49	The condensin complex is required for proper spindle assembly and chromosome segregation in <i>Xenopus</i> egg extracts. <i>Journal of Cell Biology</i> , 2003, 161, 1041-1051.	2.3	52
50	Biological Scaling Problems and Solutions in Amphibians. <i>Cold Spring Harbor Perspectives in Biology</i> , 2016, 8, a019166.	2.3	43
51	Microtubule-based motor function in mitosis. <i>Current Opinion in Structural Biology</i> , 1999, 9, 268-274.	2.6	42
52	Synthesis and Biological Evaluation of Myoseverin Derivatives: Microtubule Assembly Inhibitors. <i>Journal of Medicinal Chemistry</i> , 2001, 44, 4497-4500.	2.9	42
53	Mitotic Spindle Assembly around RCC1-Coated Beads in <i>Xenopus</i> Egg Extracts. <i>PLoS Biology</i> , 2011, 9, e1001225.	2.6	41
54	Chromosome movement: Dynein-out at the kinetochore. <i>Current Biology</i> , 2001, 11, R128-R131.	1.8	40

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55	Histone H1 compacts DNA under force and during chromatin assembly. <i>Molecular Biology of the Cell</i> , 2012, 23, 4864-4871.	0.9	40
56	Multiple domains of human CLASP contribute to microtubule dynamics and organization in vitro and in <i>Xenopus</i> egg extracts. <i>Cytoskeleton</i> , 2012, 69, 155-165.	1.0	40
57	Preparation of Cellular Extracts from <i>Xenopus</i> Eggs and Embryos. <i>Cold Spring Harbor Protocols</i> , 2018, 2018, pdb.prot097055.	0.2	38
58	Discovery of Selective Aminothiazole Aurora Kinase Inhibitors. <i>ACS Chemical Biology</i> , 2008, 3, 180-192.	1.6	37
59	Spindles get the Ran around. <i>Trends in Cell Biology</i> , 2000, 10, 1-4.	3.6	36
60	Two Distinct Domains of Protein 4.1 Critical for Assembly of Functional Nuclei in Vitro. <i>Journal of Biological Chemistry</i> , 2002, 277, 44339-44346.	1.6	36
61	Regulatory remodeling in the allo-tetraploid frog <i>Xenopus laevis</i> . <i>Genome Biology</i> , 2017, 18, 198.	3.8	34
62	Mitotic chromosome size scaling in <i>Xenopus</i> . <i>Cell Cycle</i> , 2011, 10, 3863-3870.	1.3	33
63	N-Terminal Phosphorylation of p60 Katanin Directly Regulates Microtubule Severing. <i>Journal of Molecular Biology</i> , 2013, 425, 214-221.	2.0	32
64	Enzymatically Generated CRISPR Libraries for Genome Labeling and Screening. <i>Developmental Cell</i> , 2015, 34, 373-378.	3.1	32
65	Essential roles for cohesin in kinetochore and spindle function in <i>Xenopus</i> egg extracts. <i>Journal of Cell Science</i> , 2006, 119, 5057-5066.	1.2	31
66	RanGTP and CLASP1 cooperate to position the mitotic spindle. <i>Molecular Biology of the Cell</i> , 2013, 24, 2506-2514.	0.9	31
67	Adenomatous Polyposis Coli Associates with the Microtubule-Destabilizing Protein XMCAK. <i>Current Biology</i> , 2004, 14, 2033-2038.	1.8	30
68	Xnf7 Contributes to Spindle Integrity through Its Microtubule-Bundling Activity. <i>Current Biology</i> , 2005, 15, 1755-1761.	1.8	29
69	Subcellular scaling: does size matter for cell division?. <i>Current Opinion in Cell Biology</i> , 2018, 52, 88-95.	2.6	27
70	Katanin-like protein Katnal2 is required for ciliogenesis and brain development in <i>Xenopus</i> embryos. <i>Developmental Biology</i> , 2018, 442, 276-287.	0.9	27
71	The Long and the Short of it: Linker Histone H1 is Required for Metaphase Chromosome Compaction. <i>Cell Cycle</i> , 2006, 5, 589-591.	1.3	26
72	Two Protein 4.1 Domains Essential for Mitotic Spindle and Aster Microtubule Dynamics and Organization in Vitro. <i>Journal of Biological Chemistry</i> , 2004, 279, 27591-27598.	1.6	22

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73	Kif2a Scales Meiotic Spindle Size in <i>Hymenochirus boettgeri</i> . <i>Current Biology</i> , 2019, 29, 3720-3727.e5.	1.8	22
74	Functional Comparison of H1 Histones in <i>Xenopus</i> Reveals Isoform-Specific Regulation by Cdk1 and RanGTP. <i>Current Biology</i> , 2010, 20, 1048-1052.	1.8	21
75	Glutamylation of Nap1 modulates histone H1 dynamics and chromosome condensation in <i>Xenopus</i> . <i>Journal of Cell Biology</i> , 2015, 209, 211-220.	2.3	18
76	Atomic force microscope imaging of chromatin assembled in <i>Xenopus laevis</i> egg extract. <i>Chromosoma</i> , 2011, 120, 245-254.	1.0	17
77	Spindle assembly in egg extracts of the Marsabit clawed frog, <i>Xenopus borealis</i> . <i>Cytoskeleton</i> , 2018, 75, 244-257.	1.0	17
78	A dynamic duo of microtubule modulators. <i>Nature Cell Biology</i> , 2000, 2, E11-E12.	4.6	16
79	Identification of a novel protein regulating microtubule stability through a chemical approach. <i>Chemistry and Biology</i> , 2004, 11, 135-46.	6.2	16
80	Analysis of microtubule polymerization in vitro and during the cell cycle in <i>Xenopus</i> egg extracts. <i>Methods</i> , 2006, 38, 29-34.	1.9	15
81	Scratch Screen for Inhibitors of Cell Migration. <i>Chemistry and Biology</i> , 2005, 12, 263-265.	6.2	14
82	Methods for the study of centrosome-independent spindle assembly in <i>Xenopus</i> extracts. <i>Methods in Cell Biology</i> , 2001, 67, 241-256.	0.5	13
83	A versatile multivariate image analysis pipeline reveals features of <i>Xenopus</i> extract spindles. <i>Journal of Cell Biology</i> , 2016, 213, 127-136.	2.3	13
84	The power of amphibians to elucidate mechanisms of size control and scaling. <i>Experimental Cell Research</i> , 2020, 392, 112036.	1.2	13
85	SnapShot: Motor Proteins in Spindle Assembly. <i>Cell</i> , 2008, 134, 548-548.e1.	13.5	12
86	Identification and characterization of centromeric sequences in <i>Xenopus laevis</i> . <i>Genome Research</i> , 2021, 31, 958-967.	2.4	12
87	Role of chromosomes in assembly of meiotic and mitotic spindles. , 1997, 3, 271-284.		12
88	Kinetochores function: The complications of becoming attached. <i>Current Biology</i> , 2001, 11, R855-R857.	1.8	11
89	Transcription brings the complex(ity) to the centromere. <i>Cell Cycle</i> , 2017, 16, 235-236.	1.3	11
90	Emergent properties of mitotic chromosomes. <i>Current Opinion in Cell Biology</i> , 2020, 64, 43-49.	2.6	11

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91	Xenopus Hybrids Provide Insight Into Cell and Organism Size Control. <i>Frontiers in Physiology</i> , 2018, 9, 1758.	1.3	10
92	Centrosomes and Kinetochores, Who Needs 'Em? The Role of Noncentromeric Chromatin in Spindle Assembly. <i>Current Topics in Developmental Biology</i> , 2003, 56, 85-113.	1.0	9
93	Challenges facing the biologist doing chemical genetics. <i>Nature Chemical Biology</i> , 2006, 2, 55-58.	3.9	8
94	Xenopus Egg Extracts Increase Dynamics of Histone H1 on Sperm Chromatin. <i>PLoS ONE</i> , 2010, 5, e13111.	1.1	6
95	Burning the spindle at both ends. <i>Nature</i> , 2004, 427, 300-301.	13.7	5
96	Generation of Xenopus Haploid, Triploid, and Hybrid Embryos. <i>Methods in Molecular Biology</i> , 2019, 1920, 303-315.	0.4	5
97	The Use of Cell-Free <i>Xenopus</i> Extracts to Investigate Cytoplasmic Events. <i>Cold Spring Harbor Protocols</i> , 2019, 2019, pdb.top097048.	0.2	5
98	Serving Up a Plate of Chromosomes. <i>Science</i> , 2006, 311, 343-344.	6.0	4
99	Mitotic Spindle Assembly Mechanisms. , 2009, , 1-38.		4
100	A lab co-op helps young faculty members to thrive. <i>Nature</i> , 2018, 556, 409-409.	13.7	3
101	Centromere Glue Provides Spindle Cue. <i>Cell</i> , 2004, 118, 529-530.	13.5	2
102	Rebecca Heald. <i>Current Biology</i> , 2010, 20, R503-R504.	1.8	2
103	Cryptic No Longer: Arrays of CLASP1 TOG Domains. <i>Structure</i> , 2013, 21, 869-870.	1.6	2
104	RUVs Drive Chromosome Decondensation after Mitosis. <i>Developmental Cell</i> , 2014, 31, 259-260.	3.1	2
105	The Incredible Shrinking Spindle. <i>Developmental Cell</i> , 2018, 45, 421-423.	3.1	2
106	Mechanisms of Mitotic Spindle Assembly and Function. <i>FASEB Journal</i> , 2007, 21, A93.	0.2	2
107	Reconstitution of muscle cell microtubule organization in vitro. <i>Cytoskeleton</i> , 2021, 78, 492-502.	1.0	2
108	Mitotic spindles and microtubule dynamics in <i>Xenopus</i> egg extracts. <i>Seminars in Cell and Developmental Biology</i> , 1996, 7, 467-473.	2.3	1

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109	Mitotic Spindle Assembly In Vitro. <i>Current Protocols in Cell Biology</i> , 2001, 9, Unit 11.13.	2.3	1
110	Chromosome Congression: Another Fine Mesh Weâ€™ve Gotten into. <i>Developmental Cell</i> , 2005, 9, 314-315.	3.1	1
111	Altering membrane topology with Sar1 does not impair spindle assembly in <i>Xenopus</i> egg extracts. <i>Cytoskeleton</i> , 2012, 69, 591-599.	1.0	1
112	A DNA Crosslinker Collects Mitotic Chromosomes. <i>Developmental Cell</i> , 2017, 42, 440-442.	3.1	1
113	Cell Biology: The Health Hazards of Super-Sizing. <i>Current Biology</i> , 2019, 29, R289-R292.	1.8	1
114	The Role of Chromosome Architecture in Spindle Assembly and Anaphase: The Condensed Version. <i>Cell Cycle</i> , 2003, 2, 589-590.	1.3	0
115	Limiting Cytoplasmic Components Couple Spindle Size to Cell Size during Embryogenesis. <i>Biophysical Journal</i> , 2014, 106, 167a.	0.2	0
116	Cover Image, Volume 75, Issue 6. <i>Cytoskeleton</i> , 2018, 75, C1-C1.	1.0	0