Wallace F Marshall

List of Publications by Year
in descending order

151 papers	13,517 citations	35864 50 h-index	24352 108 g-index
199 all docs	199 docs citations	199 times ranked	14385 citing authors

#	Article	IF	Citations
1	Ciliogenesis: building the cell's antenna. Nature Reviews Molecular Cell Biology, 2011, 12, 222-234.	36.9	865
2	Perturbation of Nuclear Architecture by Long-Distance Chromosome Interactions. Cell, 1996, 85, 745-759.	27.7	445
3	Intraflagellar transport balances continuous turnover of outer doublet microtubules. Journal of Cell Biology, 2001, 155, 405-414.	5.1	397
4	Versatile protein tagging in cells with split fluorescent protein. Nature Communications, 2016, 7, 11046.	13.0	361
5	Proteomic Analysis of Isolated Chlamydomonas Centrioles Reveals Orthologs of Ciliary-Disease Genes. Current Biology, 2005, 15, 1090-1098.	4.0	310
6	Telomeres Cluster De Novo before the Initiation of Synapsis: A Three-dimensional Spatial Analysis of Telomere Positions before and during Meiotic Prophase. Journal of Cell Biology, 1997, 137, 5-18.	5.1	294
7	De Novo Formation of Leftâ€"Right Asymmetry by Posterior Tilt of Nodal Cilia. PLoS Biology, 2005, 3, e268.	5.4	279
8	Proteomic Analysis of Mammalian Primary Cilia. Current Biology, 2012, 22, 414-419.	4.0	246
9	Cilia: Tuning in to the Cell's Antenna. Current Biology, 2006, 16, R604-R614.	4.0	244
10	Flagellar Length Control System: Testing a Simple Model Based on Intraflagellar Transport and Turnover. Molecular Biology of the Cell, 2005, 16, 270-278.	2.4	226
11	What determines cell size?. BMC Biology, 2012, 10, 101.	3.8	206
12	Genome-wide transcriptional analysis of flagellar regeneration in Chlamydomonas reinhardtii identifies orthologs of ciliary disease genes. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3703-3707.	7.5	205
13	Homologous Chromosome Pairing in Drosophila melanogaster Proceeds through Multiple Independent Initiations. Journal of Cell Biology, 1998, 141, 5-20.	5.1	202
14	Intraflagellar transport particle size scales inversely with flagellar length: revisiting the balance-point length control model. Journal of Cell Biology, 2009, 187, 81-89.	5.1	201
15	Intraflagellar Transport and Ciliary Dynamics. Cold Spring Harbor Perspectives in Biology, 2017, 9, a021998.	5.3	194
16	Stages of ciliogenesis and regulation of ciliary length. Differentiation, 2012, 83, S30-S42.	1.9	193
17	Building the Centriole. Current Biology, 2010, 20, R816-R825.	4.0	189
18	Non-model model organisms. BMC Biology, 2017, 15, 55.	3.8	171

#	Article	IF	Citations
19	Axon Guidance by Diffusible Chemoattractants: A Gradient of Netrin Protein in the Developing Spinal Cord. Journal of Neuroscience, 2006, 26, 8866-8874.	3.8	153
20	Scaling properties of cell and organelle size. Organogenesis, 2010, 6, 88-96.	1.3	135
21	The cell biological basis of ciliary disease. Journal of Cell Biology, 2008, 180, 17-21.	5.1	133
22	Kinetics and regulation of de novo centriole assembly. Current Biology, 2001, 11, 308-317.	4.0	130
23	Three-dimensional structure of basal body triplet revealed by electron cryo-tomography. EMBO Journal, 2012, 31, 552-562.	7.6	129
24	Molecular Architecture of the Centriole Proteome: The Conserved WD40 Domain Protein POC1 Is Required for Centriole Duplication and Length Control. Molecular Biology of the Cell, 2009, 20, 1150-1166.	2.4	125
25	Quantitative Modeling in Cell Biology: What Is It Good for?. Developmental Cell, 2006, 11, 279-287.	7.0	124
26	Chapter 1 Basal Bodies. Current Topics in Developmental Biology, 2008, 85, 1-22.	5.7	119
27	Avalanche-like behavior in ciliary import. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3925-3930.	7.5	117
28	Cilia orientation and the fluid mechanics of development. Current Opinion in Cell Biology, 2008, 20, 48-52.	5.5	115
29	The Macronuclear Genome of Stentor coeruleus Reveals Tiny Introns in a Giant Cell. Current Biology, 2017, 27, 569-575.	4.0	115
30	How Cells Know the Size of Their Organelles. Science, 2012, 337, 1186-1189.	19.8	112
31	Order and Disorder in the Nucleus. Current Biology, 2002, 12, R185-R192.	4.0	111
32	Chromosome elasticity and mitotic polar ejection force measured in living Drosophila embryos by four-dimensional microscopy-based motion analysis. Current Biology, 2001, 11, 569-578.	4.0	108
33	The role of retrograde intraflagellar transport in flagellar assembly, maintenance, and function. Journal of Cell Biology, 2012, 199, 151-167.	5.1	107
34	Centrosome positioning in vertebrate development. Journal of Cell Science, 2012, 125, 4951-4961.	2.0	107
35	Building the cell: design principles of cellular architecture. Nature Reviews Molecular Cell Biology, 2008, 9, 593-602.	36.9	104
36	Deconstructing the nucleus: global architecture from local interactions. Current Opinion in Genetics and Development, 1997, 7, 259-263.	3.4	101

#	Article	IF	Citations
37	Self-repairing cells: How single cells heal membrane ruptures and restore lost structures. Science, 2017, 356, 1022-1025.	19.8	98
38	Intraflagellar transport drives flagellar surface motility. ELife, 2013, 2, e00744.	5.9	87
39	FAP20 is an inner junction protein of doublet microtubules essential for both the planar asymmetrical waveform and stability of flagella in<i>Chlamydomonas</i>. Molecular Biology of the Cell, 2014, 25, 1472-1483.	2.4	83
40	Mechanical Forces Program the Orientation of Cell Division during Airway Tube Morphogenesis. Developmental Cell, 2018, 44, 313-325.e5.	7.0	74
41	Actin Is Required for IFT Regulation in Chlamydomonas reinhardtii. Current Biology, 2014, 24, 2025-2032.	4.0	68
42	The Mother Centriole Plays an Instructive Role in Defining Cell Geometry. PLoS Biology, 2007, 5, e149.	5.4	63
43	Cell Geometry: How Cells Count and Measure Size. Annual Review of Biophysics, 2016, 45, 49-64.	10.0	63
44	Centriole evolution. Current Opinion in Cell Biology, 2009, 21, 14-19.	5.5	61
45	A Systematic Comparison of Mathematical Models for Inherent Measurement of Ciliary Length: How a Cell Can Measure Length and Volume. Biophysical Journal, 2015, 108, 1361-1379.	0.5	60
46	Aging induces aberrant state transition kinetics in murine muscle stem cells. Development (Cambridge), 2020, 147, .	2.6	60
47	Organelle Size Scaling of the Budding Yeast Vacuole Is Tuned by Membrane Trafficking Rates. Biophysical Journal, 2014, 106, 1986-1996.	0.5	59
48	Diffusion as a Ruler: Modeling Kinesin Diffusion asÂaÂLength Sensor for Intraflagellar Transport. Biophysical Journal, 2018, 114, 663-674.	0.5	59
49	The Kinase Regulator Mob1 Acts as a Patterning Protein for Stentor Morphogenesis. PLoS Biology, 2014, 12, e1001861.	5.4	57
50	Multi-scale spatial heterogeneity enhances particle clearance in airway ciliary arrays. Nature Physics, 2020, 16, 958-964.	11.7	57
51	CELLULAR LENGTH CONTROL SYSTEMS. Annual Review of Cell and Developmental Biology, 2004, 20, 677-693.	9.3	55
52	Flagellar Length Control in Chlamydomonasâ€"A Paradigm for Organelle Size Regulation. International Review of Cytology, 2007, 260, 175-212.	4.8	53
53	Katanin Knockdown Supports a Role for Microtubule Severing in Release of Basal Bodies before Mitosis in<i>Chlamydomonas</i>. Molecular Biology of the Cell, 2009, 20, 379-388.	2.4	51
54	Inferring cell state by quantitative motility analysis reveals a dynamic state system and broken detailed balance. PLoS Computational Biology, 2018, 14, e1005927.	3.0	51

#	Article	IF	Citations
55	Female Meiosis: Coming Unglued with Age. Current Biology, 2010, 20, R699-R702.	4.0	50
56	Origins of cellular geometry. BMC Biology, 2011, 9, 57.	3.8	48
57	Cell learning. Current Biology, 2018, 28, R1180-R1184.	4.0	47
58	How centrioles work: lessons from green yeast. Current Opinion in Cell Biology, 2000, 12, 119-125.	5.5	44
59	Total Internal Reflection Fluorescence (TIRF) Microscopy of Chlamydomonas Flagella. Methods in Cell Biology, 2009, 93, 157-177.	2.0	44
60	Analysis of Ciliary Assembly and Function in Planaria. Methods in Enzymology, 2013, 525, 245-264.	1.7	42
61	Organelles â€“ understanding noise and heterogeneity in cell biology at an intermediate scale. Journal of Cell Science, 2017, 130, 819-826.	2.0	41
62	Organelle Size Equalization by a Constitutive Process. Current Biology, 2012, 22, 2173-2179.	4.0	40
63	A Chemical Screen Identifies Class A G-Protein Coupled Receptors As Regulators of Cilia. ACS Chemical Biology, 2012, 7, 911-919.	3.5	40
64	Organelle size control systems: From cell geometry to organelleâ€directed medicine. BioEssays, 2012, 34, 721-724.	2.6	37
65	CLUMPED CHLOROPLASTS 1 is required for plastid separation in <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18530-18535.	7.5	36
66	How Cells Measure Length on Subcellular Scales. Trends in Cell Biology, 2015, 25, 760-768.	8.0	36
67	Size control in dynamic organelles. Trends in Cell Biology, 2002, 12, 414-419.	8.0	35
68	What is the function of centrioles?. Journal of Cellular Biochemistry, 2007, 100, 916-922.	2.6	35
69	ASQ2 Encodes a TBCC-like Protein Required for Mother-Daughter Centriole Linkage and Mitotic Spindle Orientation. Current Biology, 2009, 19, 1238-1243.	4.0	34
70	PCR-Based Assay for Mating Type and Diploidy in <i>Chlamydomonas</i>. BioTechniques, 2004, 37, 534-536.	1.8	32
71	Stability and Robustness of an Organelle Number Control System: Modeling and Measuring Homeostatic Regulation of Centriole Abundance. Biophysical Journal, 2007, 93, 1818-1833.	0.5	32
72	Modeling meiotic chromosome pairing: nuclear envelope attachment, telomere-led active random motion, and anomalous diffusion. Physical Biology, 2016, 13, 026003.	1.8	31

#	Article	IF	Citations
73	Scaling of Subcellular Structures. Annual Review of Cell and Developmental Biology, 2020, 36, 219-236.	9.3	31
74	Subcellular Size. Cold Spring Harbor Perspectives in Biology, 2015, 7, a019059.	5.3	29
75	Testing the time-of-flight model for flagellar length sensing. Molecular Biology of the Cell, 2017, 28, 3447-3456.	2.4	29
76	Reorganization of complex ciliary flows around regenerating<i>Stentor coeruleus</i>. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190167.	4.1	29
77	Flagellar Motility: All Pull Together. Current Biology, 2004, 14, R992-R993.	4.0	28
78	Microfluidic guillotine for single-cell wound repair studies. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7283-7288.	7.5	28
79	Deep Convolutional and Recurrent Neural Networks for Cell Motility Discrimination and Prediction. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2021, 18, 562-574.	3.2	28
80	Cell division: The renaissance of the centriole. Current Biology, 1999, 9, R218-R220.	4.0	27
81	Stentor coeruleus. Current Biology, 2014, 24, R783-R784.	4.0	26
82	Gene expression and nuclear architecture during development and differentiation. Mechanisms of Development, 2003, 120, 1217-1230.	1.7	25
83	A cellâ€based screen for inhibitors of flagellaâ€driven motility in <i>Chlamydomonas</i> reveals a novel modulator of ciliary length and retrograde actin flow. Cytoskeleton, 2011, 68, 188-203.	2.2	25
84	Quantitative analysis and modeling of katanin function in flagellar length control. Molecular Biology of the Cell, 2014, 25, 3686-3698.	2.4	25
85	Testing the role of intraflagellar transport in flagellar length control using length-altering mutants of<i>Chlamydomonas</i>. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190159.	4.1	25
86	Analysis of biological noise in the flagellar length control system. IScience, 2021, 24, 102354.	4.1	24
87	Organelle Size Scaling of the Budding Yeast Vacuole by Relative Growth and Inheritance. Current Biology, 2016, 26, 1221-1228.	4.0	23
88	Single-cell analysis of habituation in Stentor coeruleus. Current Biology, 2023, 33, 241-251.e4.	4.0	21
89	Dynamics of living cells in a cytomorphological state space. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21556-21562.	7.5	20
90	Human cilia proteome contains homolog of zebrafish polycystic kidney disease gene qilin. Current Biology, 2004, 14, R913-R914.	4.0	19

#	Article	IF	Citations
91	Centriole asymmetry determines algal cell geometry. Current Opinion in Plant Biology, 2012, 15, 632-637.	7.3	18
92	Ciliary Secretion: Switching the Cellular Antenna to â€˜Transmitâ€™. Current Biology, 2013, 23, R471-R473.	4.0	18
93	Efficient live fluorescence imaging of intraflagellar transport in mammalian primary cilia. Methods in Cell Biology, 2015, 127, 189-201.	2.0	17
94	Regeneration in Stentor coeruleus. Frontiers in Cell and Developmental Biology, 2021, 9, 753625.	3.8	17
95	A simple method to generate human airway epithelial organoids with externally orientated apical membranes. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2022, 322, L420-L437.	3.0	17
96	Cilia self-organize in response to planar cell polarity and flow. Nature Cell Biology, 2010, 12, 314-315.	9.9	16
97	Pattern Formation and Complexity in Single Cells. Current Biology, 2020, 30, R544-R552.	4.0	16
98	Modeling meiotic chromosome pairing: a tug of war between telomere forces and a pairing-based Brownian ratchet leads to increased pairing fidelity. Physical Biology, 2019, 16, 046005.	1.8	15
99	Microfluidic guillotine reveals multiple timescales and mechanical modes of wound response in Stentor coeruleus. BMC Biology, 2021, 19, 63.	3.8	15
100	Quantitative High-Throughput Assays for Flagella-Based Motility in Chlamydomonas Using Plate-Well Image Analysis and Transmission Correlation Spectroscopy. SLAS Discovery, 2009, 14, 133-141.	2.8	14
101	Differential Geometry Meets the Cell. Cell, 2013, 154, 265-266.	27.7	14
102	Methods for the Study of Regeneration in Stentor. Journal of Visualized Experiments, 2018, , .	0.3	14
103	Engineering design principles for organelle size control systems. Seminars in Cell and Developmental Biology, 2008, 19, 520-524.	5.3	13
104	Isolation of Mammalian Primary Cilia. Methods in Enzymology, 2013, 525, 311-325.	1.7	13
105	Will biologists become computer scientists?. EMBO Reports, 2018, 19, .	4.5	13
106	Cellular Cognition: Sequential Logic in a Giant Protist. Current Biology, 2019, 29, R1303-R1305.	4.0	13
107	Modular, cascade-like transcriptional program of regeneration in Stentor. ELife, 0, 11, .	5.9	13
108	Tubulin Superfamily: Giving Birth to Triplets. Current Biology, 2003, 13, R55-R56.	4.0	12

#	Article	IF	Citations
109	Modeling Recursive RNA Interference. PLoS Computational Biology, 2008, 4, e1000183.	3.0	12
110	Visualizing Cytoplasmic Flow During Single-cell Wound Healing in Stentor coeruleus. Journal of Visualized Experiments, 2013, , e50848.	0.3	11
111	Simple Rules Determine Distinct Patterns of Branching Morphogenesis. Cell Systems, 2019, 9, 221-227.	6.2	10
112	The short flagella 1 (SHF1) gene in <i>Chlamydomonas</i> encodes a Crescerin TOG-domain protein required for late stages of flagellar growth. Molecular Biology of the Cell, 2022, 33, mbcE21090472.	2.4	10
113	Ciliary Regulation: Disassembly Takes the Spotlight. Current Biology, 2013, 23, R1001-R1003.	4.0	9
114	Statistical method for comparing the level of intracellular organization between cells. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E1006-15.	7.5	9
115	Mechanobiology of Ciliogenesis. BioScience, 2014, 64, 1084-1091.	4.8	9
116	Microtubules are necessary for proper Reticulon localization during mitosis. PLoS ONE, 2019, 14, e0226327.	2.5	8
117	Modeling cell biological features of meiotic chromosome pairing to study interlock resolution. PLoS Computational Biology, 2022, 18, e1010252.	3.0	8
118	Centriole Assembly: The Origin of Nine-ness. Current Biology, 2007, 17, R1057-R1059.	4.0	7
119	Speed and Diffusion of Kinesin-2 Are Competing Limiting Factors in Flagellar Length-Control Model. Biophysical Journal, 2020, 118, 2790-2800.	0.5	7
120	Centrosome Size: Scaling Without Measuring. Current Biology, 2011, 21, R594-R596.	4.0	5
121	Towards computer-aided design of cellular structure. Physical Biology, 2020, 17, 023001.	1.8	5
122	Determining protein polarization proteome-wide using physical dissection of individual Stentor coeruleus cells. Current Biology, 2022, 32, 2300-2308.e4.	4.0	5
123	No centriole, no centrosome. Trends in Cell Biology, 1999, 9, 94.	8.0	4
124	Sidereus Nuncius it ain't. Journal of Cell Science, 2002, 115, 3717-3717.	2.0	4
125	Donâ€™t Blink: Observing the Ultra-Fast Contraction of Spasmonemes. Biophysical Journal, 2008, 94, 4-5.	0.5	4
126	Testing the ion-current model for flagellar length sensing and IFT regulation. ELife, 0, 12, .	5.9	4

#	Article	IF	Citations
127	The flagellar length control system: exploring the physical biology of organelle size. Physical Biology, 2023, 20, 021001.	1.8	4
128	Stay tuned for some importin news about spindle assembly. Trends in Cell Biology, 2001, 11, 148.	8.0	2
129	Axopodia and the cellular â€œarmsâ€•race. Cytoskeleton, 2020, 77, 483-484.	2.2	2
130	Use of Transcriptomic Data to Support Organelle Proteomic Analysis. Methods in Molecular Biology, 2008, 432, 403-414.	0.7	2
131	Biosynthesis of Linear Protein Nanoarrays Using the Flagellar Axoneme. ACS Synthetic Biology, 2022, 11, 1454-1465.	4.0	2
132	Kendrin: a missing link between centrioles and spindle pole bodies. Trends in Cell Biology, 2000, 10, 313.	8.0	1
133	A nucleolar protein at the center of centrosome duplication. Trends in Cell Biology, 2001, 11, 57.	8.0	1
134	From cells on up. EMBO Reports, 2003, 4, 556-559.	4.5	1
135	Centrioles: Bad to Be Bald?. Current Biology, 2004, 14, R659-R660.	4.0	1
136	Controlling size within cells. Seminars in Cell and Developmental Biology, 2008, 19, 479-479.	5.3	1
137	Chemical Screening Methods for Flagellar Phenotypes in Chlamydomonas. Methods in Enzymology, 2013, 525, 351-369.	1.7	1
138	Diffusion as a Ruler: Modeling Kinesin Diffusion as a Lenth Sensor for Intraflagellar Transport. Biophysical Journal, 2018, 114, 335a-336a.	0.5	1
139	Mitochondrial networks through the lens of mathematics. Physical Biology, 2023, 20, 051001.	1.8	1
140	Fried green centrosomes. Trends in Cell Biology, 2000, 10, 180.	8.0	0
141	Mixed Greens. Trends in Cell Biology, 2000, 10, 303.	8.0	0
142	The Golgi Is a Measuring Cup. Developmental Cell, 2014, 29, 259-260.	7.0	0
143	Intrinsic and Extrinsic Noise in the Flagellar Length Control System. Biophysical Journal, 2014, 106, 637a.	0.5	0
144	An inordinate fondness for protists. Current Biology, 2018, 28, R92-R95.	4.0	0

#	Article	IF	Citations
145	A Dilution Model for Embryonic Scaling. Developmental Cell, 2018, 46, 529-530.	7.0	0
146	Drosophila Embryo Preparation and Microinjection for Live Cell Microscopy Performed using an Automated High Content Analyzer. Journal of Visualized Experiments, 2021, , .	0.3	0
147	Analysis of Motility Patterns of Stentor During and After Oral Apparatus Regeneration Using Cell Tracking. Journal of Visualized Experiments, 2021, , .	0.3	0
148	Discriminating Between Models of Flagellar Length Control. FASEB Journal, 2006, 20, A954.	0.4	0
149	The nuclear transport factor CSE1 drives macronuclear volume increase and macronuclear node coalescence in Stentor coeruleus. IScience, 2023, 26, 107318.	4.1	0
150	Modeling homologous chromosome recognition via nonspecific interactions. Proceedings of the National Academy of Sciences of the United States of America, 2024, 121, .	7.5	0
151	Extraordinary model systems for regeneration. Development (Cambridge), 2024, 151, .	2.6	0