Wallace F Marshall

List of Publications by Year
in descending order

151 papers	12,988 citations	38720 50 h-index	26591 107 g-index
176 all docs	176 docs citations	176 times ranked	13445 citing authors

#	Article	IF	Citations
1	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.	0.9	8
2	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.	1.3	13
3	Biosynthesis of Linear Protein Nanoarrays Using the Flagellar Axoneme. ACS Synthetic Biology, 2022, 11, 1454-1465.	1.9	2
4	Determining protein polarization proteome-wide using physical dissection of individual Stentor coeruleus cells. Current Biology, 2022, , .	1.8	4
5	Modeling cell biological features of meiotic chromosome pairing to study interlock resolution. PLoS Computational Biology, 2022, 18, e1010252.	1.5	5
6	Deep Convolutional and Recurrent Neural Networks for Cell Motility Discrimination and Prediction. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2021, 18, 562-574.	1.9	21
7	Drosophila Embryo Preparation and Microinjection for Live Cell Microscopy Performed using an Automated High Content Analyzer. Journal of Visualized Experiments, 2021, , .	0.2	0
8	Analysis of Motility Patterns of Stentor During and After Oral Apparatus Regeneration using Cell Tracking. Journal of Visualized Experiments, 2021, , .	0.2	0
9	Microfluidic guillotine reveals multiple timescales and mechanical modes of wound response in Stentor coeruleus. BMC Biology, 2021, 19, 63.	1.7	13
10	Analysis of biological noise in the flagellar length control system. IScience, 2021, 24, 102354.	1.9	19
11	Regeneration in Stentor coeruleus. Frontiers in Cell and Developmental Biology, 2021, 9, 753625.	1.8	13
12	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.	1.8	21
13	Axopodia and the cellular â€œarmsâ€•race. Cytoskeleton, 2020, 77, 483-484.	1.0	1
14	Pattern Formation and Complexity in Single Cells. Current Biology, 2020, 30, R544-R552.	1.8	13
15	Reorganization of complex ciliary flows around regenerating<i>Stentor coeruleus</i>. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190167.	1.8	26
16	Multi-scale spatial heterogeneity enhances particle clearance in airway ciliary arrays. Nature Physics, 2020, 16, 958-964.	6.5	52
17	Aging induces aberrant state transition kinetics in murine muscle stem cells. Development (Cambridge), 2020, 147, .	1.2	58
18	Scaling of Subcellular Structures. Annual Review of Cell and Developmental Biology, 2020, 36, 219-236.	4.0	29

#	Article	IF	Citations
19	Towards computer-aided design of cellular structure. Physical Biology, 2020, 17, 023001.	0.8	4
20	Speed and Diffusion of Kinesin-2 Are Competing Limiting Factors in Flagellar Length-Control Model. Biophysical Journal, 2020, 118, 2790-2800.	0.2	6
21	Simple Rules Determine Distinct Patterns of Branching Morphogenesis. Cell Systems, 2019, 9, 221-227.	2.9	9
22	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.	3.3	20
23	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.	0.8	11
24	Microtubules are necessary for proper Reticulon localization during mitosis. PLoS ONE, 2019, 14, e0226327.	1.1	8
25	Cellular Cognition: Sequential Logic in a Giant Protist. Current Biology, 2019, 29, R1303-R1305.	1.8	11
26	Electron cryo-tomography provides insight into procentriole architecture and assembly mechanism. ELife, 2019, 8, .	2.8	25
27	An inordinate fondness for protists. Current Biology, 2018, 28, R92-R95.	1.8	0
28	Mechanical Forces Program the Orientation of Cell Division during Airway Tube Morphogenesis. Developmental Cell, 2018, 44, 313-325.e5.	3.1	70
29	Methods for the Study of Regeneration in Stentor. Journal of Visualized Experiments, 2018, , .	0.2	12
30	Diffusion as a Ruler: Modeling Kinesin Diffusion as a Lenth Sensor for Intraflagellar Transport. Biophysical Journal, 2018, 114, 335a-336a.	0.2	1
31	Cell learning. Current Biology, 2018, 28, R1180-R1184.	1.8	30
32	A Dilution Model for Embryonic Scaling. Developmental Cell, 2018, 46, 529-530.	3.1	0
33	Diffusion as a Ruler: Modeling Kinesin Diffusion asÂaÂLength Sensor for Intraflagellar Transport. Biophysical Journal, 2018, 114, 663-674.	0.2	57
34	Will biologists become computer scientists?. EMBO Reports, 2018, 19, .	2.0	13
35	Inferring cell state by quantitative motility analysis reveals a dynamic state system and broken detailed balance. PLoS Computational Biology, 2018, 14, e1005927.	1.5	49
36	Intraflagellar Transport and Ciliary Dynamics. Cold Spring Harbor Perspectives in Biology, 2017, 9, a021998.	2.3	183

#	ARTICLE	IF	CITATIONS
37	Organelles â€“ understanding noise and heterogeneity in cell biology at an intermediate scale. Journal of Cell Science, 2017, 130, 819-826.	1.2	40
38	The Macronuclear Genome of Stentor coeruleus Reveals Tiny Introns in a Giant Cell. Current Biology, 2017, 27, 569-575.	1.8	105
39	Self-repairing cells: How single cells heal membrane ruptures and restore lost structures. Science, 2017, 356, 1022-1025.	6.0	91
40	Testing the time-of-flight model for flagellar length sensing. Molecular Biology of the Cell, 2017, 28, 3447-3456.	0.9	28
41	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.	3.3	27
42	Non-model model organisms. BMC Biology, 2017, 15, 55.	1.7	164
43	Organelle Size Scaling of the Budding Yeast Vacuole by Relative Growth and Inheritance. Current Biology, 2016, 26, 1221-1228.	1.8	21
44	Modeling meiotic chromosome pairing: nuclear envelope attachment, telomere-led active random motion, and anomalous diffusion. Physical Biology, 2016, 13, 026003.	0.8	26
45	Cell Geometry: How Cells Count and Measure Size. Annual Review of Biophysics, 2016, 45, 49-64.	4.5	62
46	Versatile protein tagging in cells with split fluorescent protein. Nature Communications, 2016, 7, 11046.	5.8	331
47	Preface. Methods in Cell Biology, 2015, 127, xxi-xxii.	0.5	1
48	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.	0.2	57
49	Subcellular Size. Cold Spring Harbor Perspectives in Biology, 2015, 7, a019059.	2.3	29
50	Efficient live fluorescence imaging of intraflagellar transport in mammalian primary cilia. Methods in Cell Biology, 2015, 127, 189-201.	0.5	16
51	How Cells Measure Length on Subcellular Scales. Trends in Cell Biology, 2015, 25, 760-768.	3.6	35
52	Mechanobiology of Ciliogenesis. BioScience, 2014, 64, 1084-1091.	2.2	9
53	The Kinase Regulator Mob1 Acts as a Patterning Protein for Stentor Morphogenesis. PLoS Biology, 2014, 12, e1001861.	2.6	55
54	TTC26/DYF13 is an intraflagellar transport protein required for transport of motility-related proteins into flagella. ELife, 2014, 3, e01566.	2.8	69

#	ARTICLE	IF	CITATIONS
55	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.	0.9	76
56	Quantitative analysis and modeling of katanin function in flagellar length control. Molecular Biology of the Cell, 2014, 25, 3686-3698.	0.9	24
57	Stentor coeruleus. Current Biology, 2014, 24, R783-R784.	1.8	25
58	Actin Is Required for IFT Regulation in Chlamydomonas reinhardtii. Current Biology, 2014, 24, 2025-2032.	1.8	66
59	Organelle Size Scaling of the Budding Yeast Vacuole Is Tuned by Membrane Trafficking Rates. Biophysical Journal, 2014, 106, 1986-1996.	0.2	55
60	The Golgi Is a Measuring Cup. Developmental Cell, 2014, 29, 259-260.	3.1	0
61	Intrinsic and Extrinsic Noise in the Flagellar Length Control System. Biophysical Journal, 2014, 106, 637a.	0.2	0
62	Differential Geometry Meets the Cell. Cell, 2013, 154, 265-266.	13.5	14
63	Analysis of Ciliary Assembly and Function in Planaria. Methods in Enzymology, 2013, 525, 245-264.	0.4	41
64	Ciliary Regulation: Disassembly Takes the Spotlight. Current Biology, 2013, 23, R1001-R1003.	1.8	8
65	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.	3.3	8
66	Chemical Screening Methods for Flagellar Phenotypes in Chlamydomonas. Methods in Enzymology, 2013, 525, 351-369.	0.4	0
67	Ciliary Secretion: Switching the Cellular Antenna to â€˜Transmitâ€™. Current Biology, 2013, 23, R471-R473.	1.8	18
68	Isolation of Mammalian Primary Cilia. Methods in Enzymology, 2013, 525, 311-325.	0.4	13
69	Preface. Methods in Enzymology, 2013, 524, xv-xvii.	0.4	0
70	Avalanche-like behavior in ciliary import. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3925-3930.	3.3	110
71	Visualizing Cytoplasmic Flow During Single-cell Wound Healing in Stentor coeruleus. Journal of Visualized Experiments, 2013, , e50848.	0.2	11
72	Intraflagellar transport drives flagellar surface motility. ELife, 2013, 2, e00744.	2.8	85

#	Article	IF	Citations
73	Three-dimensional structure of basal body triplet revealed by electron cryo-tomography. EMBO Journal, 2012, 31, 552-562.	3.5	125
74	The role of retrograde intraflagellar transport in flagellar assembly, maintenance, and function. Journal of Cell Biology, 2012, 199, 151-167.	2.3	103
75	Mitochondrial Network Size Scaling in Budding Yeast. Science, 2012, 338, 822-824.	6.0	158
76	Centrosome positioning in vertebrate development. Journal of Cell Science, 2012, 125, 4951-4961.	1.2	103
77	Organelle Size Equalization by a Constitutive Process. Current Biology, 2012, 22, 2173-2179.	1.8	39
78	A Chemical Screen Identifies Class A G-Protein Coupled Receptors As Regulators of Cilia. ACS Chemical Biology, 2012, 7, 911-919.	1.6	38
79	How Cells Know the Size of Their Organelles. Science, 2012, 337, 1186-1189.	6.0	106
80	Stages of ciliogenesis and regulation of ciliary length. Differentiation, 2012, 83, S30-S42.	1.0	189
81	What determines cell size?. BMC Biology, 2012, 10, 101.	1.7	196
82	Centrosome Loss in the Evolution of Planarians. Science, 2012, 335, 461-463.	6.0	154
83	Cell Biology 2.0. Trends in Cell Biology, 2012, 22, 611-612.	3.6	1
84	Centriole asymmetry determines algal cell geometry. Current Opinion in Plant Biology, 2012, 15, 632-637.	3.5	18
85	Organelle size control systems: From cell geometry to organelleâ€directed medicine. BioEssays, 2012, 34, 721-724.	1.2	37
86	Proteomic Analysis of Mammalian Primary Cilia. Current Biology, 2012, 22, 414-419.	1.8	235
87	Control of Mitotic Spindle Angle by the RAS-Regulated ERK1/2 Pathway Determines Lung Tube Shape. Science, 2011, 333, 342-345.	6.0	158
88	Ciliogenesis: building the cell's antenna. Nature Reviews Molecular Cell Biology, 2011, 12, 222-234.	16.1	849
89	Centrosome Size: Scaling Without Measuring. Current Biology, 2011, 21, R594-R596.	1.8	5
90	Origins of cellular geometry. BMC Biology, 2011, 9, 57.	1.7	45

#	Article	IF	Citations
91	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.	1.0	24
92	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.	3.3	35
93	Building the Centriole. Current Biology, 2010, 20, R816-R825.	1.8	188
94	Cilia self-organize in response to planar cell polarity and flow. Nature Cell Biology, 2010, 12, 314-315.	4.6	16
95	Scaling properties of cell and organelle size. Organogenesis, 2010, 6, 88-96.	0.4	133
96	Total Internal Reflection Fluorescence (TIRF) Microscopy of Chlamydomonas Flagella. Methods in Cell Biology, 2009, 93, 157-177.	0.5	43
97	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.	0.9	120
98	Quantitative High-Throughput Assays for Flagella-Based Motility in Chlamydomonas Using Plate-Well Image Analysis and Transmission Correlation Spectroscopy. Journal of Biomolecular Screening, 2009, 14, 133-141.	2.6	13
99	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.	0.9	50
100	Intraflagellar transport particle size scales inversely with flagellar length: revisiting the balance-point length control model. Journal of Cell Biology, 2009, 187, 81-89.	2.3	194
101	ASQ2 Encodes a TBCC-like Protein Required for Mother-Daughter Centriole Linkage and Mitotic Spindle Orientation. Current Biology, 2009, 19, 1238-1243.	1.8	34
102	Centriole evolution. Current Opinion in Cell Biology, 2009, 21, 14-19.	2.6	59
103	Building the cell: design principles of cellular architecture. Nature Reviews Molecular Cell Biology, 2008, 9, 593-602.	16.1	102
104	Cilia orientation and the fluid mechanics of development. Current Opinion in Cell Biology, 2008, 20, 48-52.	2.6	112
105	Chapter 1 Basal Bodies. Current Topics in Developmental Biology, 2008, 85, 1-22.	1.0	116
106	Donâ€™t Blink: Observing the Ultra-Fast Contraction of Spasmonemes. Biophysical Journal, 2008, 94, 4-5.	0.2	4
107	Engineering design principles for organelle size control systems. Seminars in Cell and Developmental Biology, 2008, 19, 520-524.	2.3	13
108	Controlling size within cells. Seminars in Cell and Developmental Biology, 2008, 19, 479-479.	2.3	1

#	Article	IF	Citations
109	The cell biological basis of ciliary disease. Journal of Cell Biology, 2008, 180, 17-21.	2.3	133
110	Modeling Recursive RNA Interference. PLoS Computational Biology, 2008, 4, e1000183.	1.5	12
111	Use of Transcriptomic Data to Support Organelle Proteomic Analysis. Methods in Molecular Biology, 2008, 432, 403-414.	0.4	2
112	The Mother Centriole Plays an Instructive Role in Defining Cell Geometry. PLoS Biology, 2007, 5, e149.	2.6	61
113	Flagellar Length Control in Chlamydomonasâ€"A Paradigm for Organelle Size Regulation. International Review of Cytology, 2007, 260, 175-212.	6.2	52
114	Stability and Robustness of an Organelle Number Control System: Modeling and Measuring Homeostatic Regulation of Centriole Abundance. Biophysical Journal, 2007, 93, 1818-1833.	0.2	32
115	What is the function of centrioles?. Journal of Cellular Biochemistry, 2007, 100, 916-922.	1.2	34
116	Centriole Assembly: The Origin of Nine-ness. Current Biology, 2007, 17, R1057-R1059.	1.8	7
117	The <i>Chlamydomonas</i> Genome Reveals the Evolution of Key Animal and Plant Functions. Science, 2007, 318, 245-250.	6.0	2,354
118	Quantitative Modeling in Cell Biology: What Is It Good for?. Developmental Cell, 2006, 11, 279-287.	3.1	117
119	Cilia: Tuning in to the Cell's Antenna. Current Biology, 2006, 16, R604-R614.	1.8	243
120	Axon Guidance by Diffusible Chemoattractants: A Gradient of Netrin Protein in the Developing Spinal Cord. Journal of Neuroscience, 2006, 26, 8866-8874.	1.7	149
121	Discriminating Between Models of Flagellar Length Control. FASEB Journal, 2006, 20, A954.	0.2	0
122	Proteomic Analysis of Isolated Chlamydomonas Centrioles Reveals Orthologs of Ciliary-Disease Genes. Current Biology, 2005, 15, 1090-1098.	1.8	307
123	De Novo Formation of Leftâ€"Right Asymmetry by Posterior Tilt of Nodal Cilia. PLoS Biology, 2005, 3, e268.	2.6	273
124	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.	3.3	203
125	Flagellar Length Control System: Testing a Simple Model Based on Intraflagellar Transport and Turnover. Molecular Biology of the Cell, 2005, 16, 270-278.	0.9	216
126	PCR-based assay for mating type and diploidy in <i>Chlamydomonas</i>. BioTechniques, 2004, 37, 534-536.	0.8	31

#	Article	IF	Citations
127	CELLULAR LENGTH CONTROL SYSTEMS. Annual Review of Cell and Developmental Biology, 2004, 20, 677-693.	4.0	54
128	Centrioles: Bad to Be Bald?. Current Biology, 2004, 14, R659-R660.	1.8	1
129	Human cilia proteome contains homolog of zebrafish polycystic kidney disease gene qilin. Current Biology, 2004, 14, R913-R914.	1.8	18
130	Flagellar Motility: All Pull Together. Current Biology, 2004, 14, R992-R993.	1.8	28
131	Tubulin Superfamily: Giving Birth to Triplets. Current Biology, 2003, 13, R55-R56.	1.8	12
132	Gene expression and nuclear architecture during development and differentiation. Mechanisms of Development, 2003, 120, 1217-1230.	1.7	25
133	Sidereus Nuncius it ain't. Journal of Cell Science, 2002, 115, 3717-3717.	1.2	4
134	Order and Disorder in the Nucleus. Current Biology, 2002, 12, R185-R192.	1.8	111
135	Size control in dynamic organelles. Trends in Cell Biology, 2002, 12, 414-419.	3.6	35
136	Kinetics and regulation of de novo centriole assembly. Current Biology, 2001, 11, 308-317.	1.8	130
137	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.	1.8	107
138	A nucleolar protein at the center of centrosome duplication. Trends in Cell Biology, 2001, 11, 57.	3.6	1
139	Stay tuned for some importin news about spindle assembly. Trends in Cell Biology, 2001, 11, 148.	3.6	2
140	Intraflagellar transport balances continuous turnover of outer doublet microtubules. Journal of Cell Biology, 2001, 155, 405-414.	2.3	387
141	How centrioles work: lessons from green yeast. Current Opinion in Cell Biology, 2000, 12, 119-125.	2.6	44
142	Fried green centrosomes. Trends in Cell Biology, 2000, 10, 180.	3.6	0
143	Kendrin: a missing link between centrioles and spindle pole bodies. Trends in Cell Biology, 2000, 10, 313.	3.6	1
144	Mixed Greens. Trends in Cell Biology, 2000, 10, 303.	3.6	0

#	Article	IF	Citations
145	Cell division: The renaissance of the centriole. Current Biology, 1999, 9, R218-R220.	1.8	27
146	No centriole, no centrosome. Trends in Cell Biology, 1999, 9, 94.	3.6	4
147	Homologous Chromosome Pairing in Drosophila melanogaster Proceeds through Multiple Independent Initiations. Journal of Cell Biology, 1998, 141, 5-20.	2.3	195
148	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.	2.3	292
149	Mitosis in Living Budding Yeast: Anaphase A But No Metaphase Plate. Science, 1997, 277, 574-578.	6.0	357
150	Deconstructing the nucleus: global architecture from local interactions. Current Opinion in Genetics and Development, 1997, 7, 259-263.	1.5	100
151	Perturbation of Nuclear Architecture by Long-Distance Chromosome Interactions. Cell, 1996, 85, 745-759.	13.5	444