Ronald D Vale

List of Publications by Year
in descending order

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91 papers	20,064 citations	31902 53 h-index	43802 91 g-index
109 all docs	109 docs citations	109 times ranked	23822 citing authors

#	Article	IF	Citations
1	The Molecular Motor Toolbox for Intracellular Transport. Cell, 2003, 112, 467-480.	13.5	1,773
2	Advanced methods of microscope control using Î¼Manager software. Journal of Biological Methods, 2014, 1, e10.	1.0	1,556
3	Computer Control of Microscopes Using ÂµManager. Current Protocols in Molecular Biology, 2010, 92, Unit14.20.	2.9	1,352
4	A Protein-Tagging System for Signal Amplification in Gene Expression and Fluorescence Imaging. Cell, 2014, 159, 635-646.	13.5	1,245
5	T cell costimulatory receptor CD28 is a primary target for PD-1â€“mediated inhibition. Science, 2017, 355, 1428-1433.	6.0	1,229
6	Phase separation of signaling molecules promotes T cell receptor signal transduction. Science, 2016, 352, 595-599.	6.0	941
7	Kinesin Walks Hand-Over-Hand. Science, 2004, 303, 676-678.	6.0	865
8	Single-Molecule Microscopy Reveals Plasma Membrane Microdomains Created by Protein-Protein Networks that Exclude or Trap Signaling Molecules in T Cells. Cell, 2005, 121, 937-950.	13.5	702
9	RNA phase transitions in repeat expansion disorders. Nature, 2017, 546, 243-247.	13.7	651
10	Single-Molecule Analysis of Dynein Processivity and Stepping Behavior. Cell, 2006, 126, 335-348.	13.5	571
11	Activation of cytoplasmic dynein motility by dynactin-cargo adapter complexes. Science, 2014, 345, 337-341.	6.0	509
12	The cytoplasmic dynein transport machinery and its many cargoes. Nature Reviews Molecular Cell Biology, 2018, 19, 382-398.	16.1	485
13	Regulation of microtubule motors by tubulin isotypes and post-translational modifications. Nature Cell Biology, 2014, 16, 335-344.	4.6	468
14	THE DESIGN PLAN OF KINESIN MOTORS. Annual Review of Cell and Developmental Biology, 1997, 13, 745-777.	4.0	435
15	Plasma Membrane Compartmentalization in Yeast by Messenger RNA Transport and a Septin Diffusion Barrier. Science, 2000, 290, 341-344.	6.0	400
16	Dynamics of Translation of Single mRNA Molecules InÂVivo. Cell, 2016, 165, 976-989.	13.5	397
17	Mechanisms for segregating T cell receptor and adhesion molecules during immunological synapse formation in Jurkat T cells. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20296-20301.	3.3	348
18	Biophysical mechanism of T-cell receptor triggering in a reconstituted system. Nature, 2012, 487, 64-69.	13.7	299

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19	Tuning the Antigen Density Requirement for CAR T-cell Activity. Cancer Discovery, 2020, 10, 702-723.	7.7	296
20	Engineering the Processive Run Length of the Kinesin Motor. Journal of Cell Biology, 2000, 151, 1093-1100.	2.3	264
21	Conversion of Unc104/KIF1A Kinesin into a Processive Motor After Dimerization. Science, 2002, 297, 2263-2267.	6.0	249
22	Single-molecule analysis of kinesin motility reveals regulation by the cargo-binding tail domain. Nature Cell Biology, 1999, 1, 293-297.	4.6	243
23	Isolation of a Structural Mechanism for Uncoupling T Cell Receptor Signaling from Peptide-MHC Binding. Cell, 2018, 174, 672-687.e27.	13.5	229
24	Chimeric antigen receptors that trigger phagocytosis. ELife, 2018, 7, .	2.8	210
25	Architectures of Lipid Transport Systems for the Bacterial Outer Membrane. Cell, 2017, 169, 273-285.e17.	13.5	194
26	The Affinity of the Dynein Microtubule-binding Domain Is Modulated by the Conformation of Its Coiled-coil Stalk. Journal of Biological Chemistry, 2005, 280, 23960-23965.	1.6	159
27	A DNA-Based T Cell Receptor Reveals a Role for Receptor Clustering in Ligand Discrimination. Cell, 2017, 169, 108-119.e20.	13.5	159
28	How kinesin waits between steps. Nature, 2007, 450, 750-754.	13.7	158
29	Role of the Kinesin Neck Region in Processive Microtubule-based Motility. Journal of Cell Biology, 1998, 140, 1407-1416.	2.3	151
30	Microtubule nucleation at the centrosome and beyond. Nature Cell Biology, 2015, 17, 1089-1093.	4.6	140
31	Myosin V motor proteins. Journal of Cell Biology, 2003, 163, 445-450.	2.3	139
32	Regulation of mRNA translation during mitosis. ELife, 2015, 4, .	2.8	138
33	In vitro membrane reconstitution of the T-cell receptor proximal signaling network. Nature Structural and Molecular Biology, 2014, 21, 133-142.	3.6	136
34	Controlling Kinesin by Reversible Disulfide Cross-Linking. Journal of Cell Biology, 2000, 151, 1081-1092.	2.3	128
35	Assembly and activation of dyneinâ€“dynactin by the cargo adaptor protein Hook3. Journal of Cell Biology, 2016, 214, 309-318.	2.3	128
36	Accelerating scientific publication in biology. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13439-13446.	3.3	127

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37	Preprints for the life sciences. Science, 2016, 352, 899-901.	6.0	119
38	How Dynein Moves Along Microtubules. Trends in Biochemical Sciences, 2016, 41, 94-105.	3.7	116
39	CD47 Ligation Repositions the Inhibitory Receptor SIRPA to Suppress Integrin Activation and Phagocytosis. Immunity, 2020, 53, 290-302.e6.	6.6	116
40	Three-dimensional structure of a tubulin-motor-protein complex. Nature, 1995, 376, 271-274.	13.7	109
41	Chemomechanical cycle of kinesin differs from that of myosin. Nature, 1993, 361, 168-170.	13.7	107
42	Single-molecule observations of neck linker conformational changes in the kinesin motor protein. Nature Structural and Molecular Biology, 2006, 13, 887-894.	3.6	101
43	Allosteric Communication in the Dynein Motor Domain. Cell, 2014, 159, 857-868.	13.5	97
44	De novo mutations in KIF1A cause progressive encephalopathy and brain atrophy. Annals of Clinical and Translational Neurology, 2015, 2, 623-635.	1.7	96
45	A composition-dependent molecular clutch between T cell signaling condensates and actin. ELife, 2019, 8, .	2.8	86
46	Î¼Manager: Open Source Software for Light Microscope Imaging. Microscopy Today, 2007, 15, 42-43.	0.2	84
47	A Ras-like domain in the light intermediate chain bridges the dynein motor to a cargo-binding region. ELife, 2014, 3, e03351.	2.8	84
48	In vitro reconstitution of T cell receptor-mediated segregation of the CD45 phosphatase. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9338-E9345.	3.3	83
49	Clustering of a kinesin-14 motor enables processive retrograde microtubule-based transport in plants. Nature Plants, 2015, 1, .	4.7	77
50	Ten simple rules to consider regarding preprint submission. PLoS Computational Biology, 2017, 13, e1005473.	1.5	77
51	Phosphorylation of Î²-Tubulin by the Down Syndrome Kinase, Minibrain/DYRK1a, Regulates Microtubule Dynamics and Dendrite Morphogenesis. Neuron, 2016, 90, 551-563.	3.8	75
52	Inhibitors of Kinesin Activity from Structure-Based Computer Screening. Biochemistry, 2000, 39, 2805-2814.	1.2	73
53	Cellular aspect ratio and cell division mechanics underlie the patterning of cell progeny in diverse mammalian epithelia. ELife, 2018, 7, .	2.8	69
54	Altered Actin Centripetal Retrograde Flow in Physically Restricted Immunological Synapses. PLoS ONE, 2010, 5, e11878.	1.1	66

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55	Disease-associated mutations in human BICD2 hyperactivate motility of dyneinâ€“dynactin. Journal of Cell Biology, 2017, 216, 3051-3060.	2.3	60
56	High-content imaging-based pooled CRISPR screens in mammalian cells. Journal of Cell Biology, 2021, 220, .	2.3	53
57	CRACR2a is a calcium-activated dynein adaptor protein that regulates endocytic traffic. Journal of Cell Biology, 2019, 218, 1619-1633.	2.3	51
58	Insights into centriole geometry revealed by cryotomography of doublet and triplet centrioles. ELife, 2018, 7, .	2.8	50
59	Coupled membrane lipid miscibility and phosphotyrosine-driven protein condensation phase transitions. Biophysical Journal, 2021, 120, 1257-1265.	0.2	49
60	A 6-nm ultra-photostable DNA FluoroCube for fluorescence imaging. Nature Methods, 2020, 17, 437-441.	9.0	41
61	Structure of the radial spoke head and insights into its role in mechanoregulation of ciliary beating. Nature Structural and Molecular Biology, 2021, 28, 20-28.	3.6	39
62	A novel method of affinityâ€purifying proteins using a bisâ€arsenical fluorescein. Protein Science, 2000, 9, 213-217.	3.1	37
63	Rewired signaling network in T cells expressing the chimeric antigen receptor (<scp>CAR</scp>). EMBO Journal, 2020, 39, e104730.	3.5	37
64	In vitro microtubule-based organelle transport in wild-typeDictyostelium and cells overexpressing a truncated dynein heavy chain. Cytoskeleton, 1998, 40, 304-314.	4.4	36
65	Electron cryotomography of intact motile cilia defines the basal body to axoneme transition. Journal of Cell Biology, 2020, 219, .	2.3	35
66	Searching for kinesin's mechanical amplifier. Philosophical Transactions of the Royal Society B: Biological Sciences, 2000, 355, 449-457.	1.8	31
67	HkRP3 Is a Microtubule-Binding Protein Regulating Lytic Granule Clustering and NK Cell Killing. Journal of Immunology, 2015, 194, 3984-3996.	0.4	31
68	Nanometer-accuracy distance measurements between fluorophores at the single-molecule level. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4275-4284.	3.3	31
69	DNA origami patterning of synthetic T cell receptors reveals spatial control of the sensitivity and kinetics of signal activation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	28
70	Priority of discovery in the life sciences. ELife, 2016, 5, .	2.8	28
71	Tight nanoscale clustering of FcÎ³ receptors using DNA origami promotes phagocytosis. ELife, 2021, 10, .	2.8	27
72	The value of asking questions. Molecular Biology of the Cell, 2013, 24, 680-682.	0.9	26

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73	Reconstitution of TCR Signaling Using Supported Lipid Bilayers. Methods in Molecular Biology, 2017, 1584, 65-76.	0.4	24
74	Coupling of ATPase activity, microtubule binding, and mechanics in the dynein motor domain. EMBO Journal, 2019, 38, e101414.	3.5	23
75	Microscopes for Fluorimeters: The Era of Single Molecule Measurements. Cell, 2008, 135, 779-785.	13.5	19
76	Evaluating how we evaluate. Molecular Biology of the Cell, 2012, 23, 3285-3289.	0.9	18
77	Impact of New Camera Technologies on Discoveries in Cell Biology. Biological Bulletin, 2016, 231, 5-13.	0.7	18
78	Spatial control of Draper receptor signaling initiates apoptotic cell engulfment. Journal of Cell Biology, 2018, 217, 3977-3992.	2.3	17
79	Induction of focal adhesions and motility inDrosophilaS2 cells. Molecular Biology of the Cell, 2014, 25, 3861-3869.	0.9	15
80	A one-hybrid system for detecting RNA-protein interactions. Genes To Cells, 1996, 1, 317-323.	0.5	13
81	Cell Sorting in Hydra vulgaris Arises from Differing Capacities for Epithelialization between Cell Types. Current Biology, 2020, 30, 3713-3723.e3.	1.8	12
82	A new direction for kinesin. Nature, 1990, 347, 713-714.	13.7	11
83	An acquisition and analysis pipeline for scanning angle interference microscopy. Nature Methods, 2016, 13, 897-898.	9.0	11
84	It's a Wonderful Life: A Career as an Academic Scientist. Molecular Biology of the Cell, 2010, 21, 11-14.	0.9	10
85	Three-color single-molecule imaging reveals conformational dynamics of dynein undergoing motility. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	9
86	Direct detection of SARS-CoV-2 RNA using high-contrast pH-sensitive dyes. Journal of Biomolecular Techniques, 2021, 32, 121-133.	0.8	9
87	The biological sciences in India. Journal of Cell Biology, 2009, 184, 342-353.	2.3	6
88	Preface. Methods in Enzymology, 2014, 540, xix-xxiii.	0.4	5
89	Characterization of a microtubule assembly inhibitor fromXenopus oocytes. Cytoskeleton, 2000, 45, 51-57.	4.4	3
90	How lucky can one be? A perspective from a young scientist at the right place at the right time. Nature Medicine, 2012, 18, 1486-1488.	15.2	1

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91	Computer Control of Microscopes Using ÂµManager. , 2010, 92, 14.20.1.		1