

# Ronald D Vale

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

92  
papers

14,391  
citations

50  
h-index

109  
g-index

109  
ext. papers

17,948  
ext. citations

19.6  
avg, IF

7.1  
L-index

#	Paper	IF	Citations
92	The molecular motor toolbox for intracellular transport. <i>Cell</i> , <b>2003</b> , 112, 467-80	56.2	1520
91	Computer control of microscopes using µManager. <i>Current Protocols in Molecular Biology</i> , <b>2010</b> , Chapter 14, Unit14.20	2.9	964
90	Advanced methods of microscope control using µManager software. <i>Journal of Biological Methods</i> , <b>2014</b> , 1,	1.4	890
89	A protein-tagging system for signal amplification in gene expression and fluorescence imaging. <i>Cell</i> , <b>2014</b> , 159, 635-46	56.2	874
88	T cell costimulatory receptor CD28 is a primary target for PD-1-mediated inhibition. <i>Science</i> , <b>2017</b> , 355, 1428-1433	33.3	764
87	Kinesin walks hand-over-hand. <i>Science</i> , <b>2004</b> , 303, 676-8	33.3	749
86	Single-molecule microscopy reveals plasma membrane microdomains created by protein-protein networks that exclude or trap signaling molecules in T cells. <i>Cell</i> , <b>2005</b> , 121, 937-50	56.2	624
85	Phase separation of signaling molecules promotes T cell receptor signal transduction. <i>Science</i> , <b>2016</b> , 352, 595-9	33.3	568
84	Single-molecule analysis of dynein processivity and stepping behavior. <i>Cell</i> , <b>2006</b> , 126, 335-48	56.2	482
83	RNA phase transitions in repeat expansion disorders. <i>Nature</i> , <b>2017</b> , 546, 243-247	50.4	406
82	The design plan of kinesin motors. <i>Annual Review of Cell and Developmental Biology</i> , <b>1997</b> , 13, 745-77	12.6	388
81	Plasma membrane compartmentalization in yeast by messenger RNA transport and a septin diffusion barrier. <i>Science</i> , <b>2000</b> , 290, 341-4	33.3	367
80	Activation of cytoplasmic dynein motility by dynactin-cargo adapter complexes. <i>Science</i> , <b>2014</b> , 345, 337-41	33.3	353
79	Regulation of microtubule motors by tubulin isoforms and post-translational modifications. <i>Nature Cell Biology</i> , <b>2014</b> , 16, 335-44	23.4	335
78	Mechanisms for segregating T cell receptor and adhesion molecules during immunological synapse formation in Jurkat T cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 20296-301	11.5	304
77	Dynamics of Translation of Single mRNA Molecules In Vivo. <i>Cell</i> , <b>2016</b> , 165, 976-89	56.2	275
76	The cytoplasmic dynein transport machinery and its many cargoes. <i>Nature Reviews Molecular Cell Biology</i> , <b>2018</b> , 19, 382-398	48.7	271

75	Biophysical mechanism of T-cell receptor triggering in a reconstituted system. <i>Nature</i> , <b>2012</b> , 487, 64-9	50.4	234
74	Engineering the processive run length of the kinesin motor. <i>Journal of Cell Biology</i> , <b>2000</b> , 151, 1093-100	7.3	227
73	Conversion of Unc104/KIF1A kinesin into a processive motor after dimerization. <i>Science</i> , <b>2002</b> , 297, 2263-7	33.3	210
72	Single-molecule analysis of kinesin motility reveals regulation by the cargo-binding tail domain. <i>Nature Cell Biology</i> , <b>1999</b> , 1, 293-7	23.4	205
71	Role of the kinesin neck region in processive microtubule-based motility. <i>Journal of Cell Biology</i> , <b>1998</b> , 140, 1407-16	7.3	143
70	Isolation of a Structural Mechanism for Uncoupling T Cell Receptor Signaling from Peptide-MHC Binding. <i>Cell</i> , <b>2018</b> , 174, 672-687.e27	56.2	141
69	How kinesin waits between steps. <i>Nature</i> , <b>2007</b> , 450, 750-4	50.4	141
68	The affinity of the dynein microtubule-binding domain is modulated by the conformation of its coiled-coil stalk. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 23960-5	5.4	130
67	Myosin V motor proteins: marching stepwise towards a mechanism. <i>Journal of Cell Biology</i> , <b>2003</b> , 163, 445-50	7.3	128
66	Architectures of Lipid Transport Systems for the Bacterial Outer Membrane. <i>Cell</i> , <b>2017</b> , 169, 273-285.e17	56.2	127
65	Controlling kinesin by reversible disulfide cross-linking. Identifying the motility-producing conformational change. <i>Journal of Cell Biology</i> , <b>2000</b> , 151, 1081-92	7.3	119
64	A DNA-Based T Cell Receptor Reveals a Role for Receptor Clustering in Ligand Discrimination. <i>Cell</i> , <b>2017</b> , 169, 108-119.e20	56.2	108
63	Chimeric antigen receptors that trigger phagocytosis. <i>ELife</i> , <b>2018</b> , 7,	8.9	106
62	In vitro membrane reconstitution of the T-cell receptor proximal signaling network. <i>Nature Structural and Molecular Biology</i> , <b>2014</b> , 21, 133-42	17.6	104
61	Tuning the Antigen Density Requirement for CAR T-cell Activity. <i>Cancer Discovery</i> , <b>2020</b> , 10, 702-723	24.4	103
60	Three-dimensional structure of a tubulin-motor-protein complex. <i>Nature</i> , <b>1995</b> , 376, 271-4	50.4	102
59	Microtubule nucleation at the centrosome and beyond. <i>Nature Cell Biology</i> , <b>2015</b> , 17, 1089-93	23.4	98
58	Chemomechanical cycle of kinesin differs from that of myosin. <i>Nature</i> , <b>1993</b> , 361, 168-70	50.4	98

57	Regulation of mRNA translation during mitosis. <i>ELife</i> , <b>2015</b> , 4,	8.9	92
56	Accelerating scientific publication in biology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 13439-46	11.5	90
55	Assembly and activation of dynein-dynactin by the cargo adaptor protein Hook3. <i>Journal of Cell Biology</i> , <b>2016</b> , 214, 309-18	7.3	90
54	Single-molecule observations of neck linker conformational changes in the kinesin motor protein. <i>Nature Structural and Molecular Biology</i> , <b>2006</b> , 13, 887-94	17.6	89
53	How Dynein Moves Along Microtubules. <i>Trends in Biochemical Sciences</i> , <b>2016</b> , 41, 94-105	10.3	82
52	Manager: Open Source Software for Light Microscope Imaging. <i>Microscopy Today</i> , <b>2007</b> , 15, 42-43	0.4	70
51	De novo mutations in KIF1A cause progressive encephalopathy and brain atrophy. <i>Annals of Clinical and Translational Neurology</i> , <b>2015</b> , 2, 623-35	5.3	68
50	Inhibitors of kinesin activity from structure-based computer screening. <i>Biochemistry</i> , <b>2000</b> , 39, 2805-14	3.2	68
49	SCIENTIFIC COMMUNITY. Preprints for the life sciences. <i>Science</i> , <b>2016</b> , 352, 899-901	33.3	68
48	Allosteric communication in the dynein motor domain. <i>Cell</i> , <b>2014</b> , 159, 857-68	56.2	67
47	Altered actin centripetal retrograde flow in physically restricted immunological synapses. <i>PLoS ONE</i> , <b>2010</b> , 5, e11878	3.7	61
46	A Ras-like domain in the light intermediate chain bridges the dynein motor to a cargo-binding region. <i>ELife</i> , <b>2014</b> , 3, e03351	8.9	57
45	Clustering of a kinesin-14 motor enables processive retrograde microtubule-based transport in plants. <i>Nature Plants</i> , <b>2015</b> , 1,	11.5	53
44	Phosphorylation of $\beta$ Tubulin by the Down Syndrome Kinase, Minibrain/DYRK1a, Regulates Microtubule Dynamics and Dendrite Morphogenesis. <i>Neuron</i> , <b>2016</b> , 90, 551-63	13.9	51
43	In vitro reconstitution of T cell receptor-mediated segregation of the CD45 phosphatase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E9338-E9345	11.5	50
42	A composition-dependent molecular clutch between T cell signaling condensates and actin. <i>ELife</i> , <b>2019</b> , 8,	8.9	46
41	CD47 Ligation Repositions the Inhibitory Receptor SIRPA to Suppress Integrin Activation and Phagocytosis. <i>Immunity</i> , <b>2020</b> , 53, 290-302.e6	32.3	42
40	Cellular aspect ratio and cell division mechanics underlie the patterning of cell progeny in diverse mammalian epithelia. <i>ELife</i> , <b>2018</b> , 7,	8.9	36

39	Disease-associated mutations in human BICD2 hyperactivate motility of dynein-dynactin. <i>Journal of Cell Biology</i> , <b>2017</b> , 216, 3051-3060	7.3	35
38	Insights into centriole geometry revealed by cryotomography of doublet and triplet centrioles. <i>ELife</i> , <b>2018</b> , 7,	8.9	35
37	In vitro microtubule-based organelle transport in wild-type Dictyostelium and cells overexpressing a truncated dynein heavy chain. <i>Cytoskeleton</i> , <b>1998</b> , 40, 304-14		33
36	A novel method of affinity-purifying proteins using a bis-arsenical fluorescein. <i>Protein Science</i> , <b>2000</b> , 9, 213-7	6.3	33
35	Searching for kinesin's mechanical amplifier. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2000</b> , 355, 449-57	5.8	28
34	CRACR2a is a calcium-activated dynein adaptor protein that regulates endocytic traffic. <i>Journal of Cell Biology</i> , <b>2019</b> , 218, 1619-1633	7.3	23
33	HkRP3 is a microtubule-binding protein regulating lytic granule clustering and NK cell killing. <i>Journal of Immunology</i> , <b>2015</b> , 194, 3984-96	5.3	22
32	A 6-nm ultra-photostable DNA FluoroCube for fluorescence imaging. <i>Nature Methods</i> , <b>2020</b> , 17, 437-441	21.6	18
31	Impact of New Camera Technologies on Discoveries in Cell Biology. <i>Biological Bulletin</i> , <b>2016</b> , 231, 5-13	1.5	18
30	Microscopes for fluorimeters: the era of single molecule measurements. <i>Cell</i> , <b>2008</b> , 135, 779-85	56.2	18
29	Structure of the radial spoke head and insights into its role in mechanoregulation of ciliary beating. <i>Nature Structural and Molecular Biology</i> , <b>2021</b> , 28, 20-28	17.6	17
28	Electron cryotomography of intact motile cilia defines the basal body to axoneme transition. <i>Journal of Cell Biology</i> , <b>2020</b> , 219,	7.3	16
27	Reconstitution of TCR Signaling Using Supported Lipid Bilayers. <i>Methods in Molecular Biology</i> , <b>2017</b> , 1584, 65-76	1.4	15
26	Priority of discovery in the life sciences. <i>ELife</i> , <b>2016</b> , 5,	8.9	15
25	High-content imaging-based pooled CRISPR screens in mammalian cells. <i>Journal of Cell Biology</i> , <b>2021</b> , 220,	7.3	15
24	Nanometer-accuracy distance measurements between fluorophores at the single-molecule level. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 4275-4284	11.5	14
23	Coupled membrane lipid miscibility and phosphotyrosine-driven protein condensation phase transitions. <i>Biophysical Journal</i> , <b>2021</b> , 120, 1257-1265	2.9	14
22	Rewired signaling network in T cells expressing the chimeric antigen receptor (CAR). <i>EMBO Journal</i> , <b>2020</b> , 39, e104730	13	13

21	The value of asking questions. <i>Molecular Biology of the Cell</i> , <b>2013</b> , 24, 680-2	3.5	12
20	Evaluating how we evaluate. <i>Molecular Biology of the Cell</i> , <b>2012</b> , 23, 3285-9	3.5	12
19	Induction of focal adhesions and motility in <i>Drosophila</i> S2 cells. <i>Molecular Biology of the Cell</i> , <b>2014</b> , 25, 3861-9	3.5	10
18	A one-hybrid system for detecting RNA-protein interactions. <i>Genes To Cells</i> , <b>1996</b> , 1, 317-23	2.3	10
17	Spatial control of Draper receptor signaling initiates apoptotic cell engulfment. <i>Journal of Cell Biology</i> , <b>2018</b> , 217, 3977-3992	7.3	9
16	Coupling of ATPase activity, microtubule binding, and mechanics in the dynein motor domain. <i>EMBO Journal</i> , <b>2019</b> , 38, e101414	13	8
15	An acquisition and analysis pipeline for scanning angle interference microscopy. <i>Nature Methods</i> , <b>2016</b> , 13, 897-898	21.6	7
14	It's a wonderful life: a career as an academic scientist. <i>Molecular Biology of the Cell</i> , <b>2010</b> , 21, 11-4	3.5	7
13	CD47 suppresses phagocytosis by repositioning SIRPA and preventing integrin activation		6
12	Cell Sorting in <i>Hydra vulgaris</i> Arises from Differing Capacities for Epithelialization between Cell Types. <i>Current Biology</i> , <b>2020</b> , 30, 3713-3723.e3	6.3	5
11	DNA origami patterning of synthetic T cell receptors reveals spatial control of the sensitivity and kinetics of signal activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	5
10	The biological sciences in India: aiming high for the future. <i>Journal of Cell Biology</i> , <b>2009</b> , 184, 342-53	7.3	4
9	Characterization of a microtubule assembly inhibitor from <i>Xenopus</i> oocytes. <i>Cytoskeleton</i> , <b>2000</b> , 45, 51-7		3
8	DNA origami patterning of synthetic T cell receptors reveals spatial control of the sensitivity and kinetics of signal activation		3
7	Tight nanoscale clustering of Fc $\gamma$ receptors using DNA origami promotes phagocytosis. <i>ELife</i> , <b>2021</b> , 10,	8.9	2
6	Three-color single-molecule imaging reveals conformational dynamics of dynein undergoing motility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	2
5	How lucky can one be? A perspective from a young scientist at the right place at the right time. <i>Nature Medicine</i> , <b>2012</b> , 18, 1486-8	50.5	1
4	High accuracy measurements of nanometer-scale distances between fluorophores at the single-molecule level		1

3 In Vitro Reconstitution of T Cell Receptor Mediated Segregation of the CD45 Phosphatase 1

2

1 Direct detection of SARS-CoV-2 RNA using high-contrast pH-sensitive dyes.. *Journal of Biomolecular Techniques*, **2021**, 32, 121-133 1.1 0