Antonina Roll-Mecak

List of Publications by Year
in descending order

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49 papers	4,149 citations	136950 32 h-index	197818 49 g-index
68 all docs	68 docs citations	68 times ranked	4001 citing authors

#	Article	IF	Citations
1	Structural basis of microtubule severing by the hereditary spastic paraplegia protein spastin. Nature, 2008, 451, 363-367.	27.8	299
2	Microtubule-severing enzymes. Current Opinion in Cell Biology, 2010, 22, 96-103.	5.4	258
3	X-Ray Structures of the Universal Translation Initiation Factor IF2/eIF5B. Cell, 2000, 103, 781-792.	28.9	227
4	Graded Control of Microtubule Severing by Tubulin Glutamylation. Cell, 2016, 164, 911-921.	28.9	198
5	Molecular Basis for Age-Dependent Microtubule Acetylation by Tubulin Acetyltransferase. Cell, 2014, 157, 1405-1415.	28.9	181
6	Severing enzymes amplify microtubule arrays through lattice GTP-tubulin incorporation. Science, 2018, 361, .	12.6	180
7	The Drosophila Homologue of the Hereditary Spastic Paraplegia Protein, Spastin, Severs and Disassembles Microtubules. Current Biology, 2005, 15, 650-655.	3.9	175
8	Writing and Reading the Tubulin Code. Journal of Biological Chemistry, 2015, 290, 17163-17172.	3.4	166
9	The Tubulin Code in Microtubule Dynamics and Information Encoding. Developmental Cell, 2020, 54, 7-20.	7.0	163
10	Tubulin isoform composition tunes microtubule dynamics. Molecular Biology of the Cell, 2017, 28, 3564-3572.	2.1	146
11	The chemical complexity of cellular microtubules: Tubulin postâ€translational modification enzymes and their roles in tuning microtubule functions. Cytoskeleton, 2012, 69, 442-463.	2.0	144
12	Microtubule-severing enzymes: From cellular functions to molecular mechanism. Journal of Cell Biology, 2018, 217, 4057-4069.	5.2	135
13	Uncoupling of Initiation Factor eIF5B/IF2 GTPase and Translational Activities by Mutations that Lower Ribosome Affinity. Cell, 2002, 111, 1015-1025.	28.9	123
14	Tubulin tyrosine ligase structure reveals adaptation of an ancient fold to bind and modify tubulin. Nature Structural and Molecular Biology, 2011, 18, 1250-1258.	8.2	114
15	Data publication with the structural biology data grid supports live analysis. Nature Communications, 2016, 7, 10882.	12.8	113
16	Structure and Dynamics of Single-isoform Recombinant Neuronal Human Tubulin. Journal of Biological Chemistry, 2016, 291, 12907-12915.	3.4	111
17	Structural Basis for Autoinhibition and Mutational Activation of Eukaryotic Initiation Factor 2Î± Protein Kinase GCN2*[boxs]. Journal of Biological Chemistry, 2005, 280, 29289-29299.	3.4	100
18	Katanin spiral and ring structures shed light on power stroke for microtubule severing. Nature Structural and Molecular Biology, 2017, 24, 717-725.	8.2	97

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19	Intrinsically disordered tubulin tails: complex tuners of microtubule functions?. Seminars in Cell and Developmental Biology, 2015, 37, 11-19.	5.0	90
20	Making more microtubules by severing: a common theme of noncentrosomal microtubule arrays?. Journal of Cell Biology, 2006, 175, 849-851.	5.2	89
21	Physical and Functional Interaction between the Eukaryotic Orthologs of Prokaryotic Translation Initiation Factors IF1 and IF2. Molecular and Cellular Biology, 2000, 20, 7183-7191.	2.3	84
22	Multivalent Microtubule Recognition by Tubulin Tyrosine Ligase-like Family Glutamylases. Cell, 2015, 161, 1112-1123.	28.9	83
23	Loss of RPGR glutamylation underlies the pathogenic mechanism of retinal dystrophy caused by <i>TTLL5</i> mutations. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2925-34.	7.1	79
24	ER proteins decipher the tubulin code to regulate organelle distribution. Nature, 2022, 601, 132-138.	27.8	75
25	X-ray Structure of Translation Initiation Factor eIF2Î³. Journal of Biological Chemistry, 2004, 279, 10634-10642.	3.4	73
26	Engaging the ribosome: universal IFs of translation. Trends in Biochemical Sciences, 2001, 26, 705-709.	7.5	71
27	How cells exploit tubulin diversity to build functional cellular microtubule mosaics. Current Opinion in Cell Biology, 2019, 56, 102-108.	5.4	70
28	Katanin Grips the Î²-Tubulin Tail through an Electropositive Double Spiral to Sever Microtubules. Developmental Cell, 2020, 52, 118-131.e6.	7.0	58
29	Î±-tubulin tail modifications regulate microtubule stability through selective effector recruitment, not changes in intrinsic polymer dynamics. Developmental Cell, 2021, 56, 2016-2028.e4.	7.0	55
30	An allosteric network in spastin couples multiple activities required for microtubule severing. Nature Structural and Molecular Biology, 2019, 26, 671-678.	8.2	51
31	The tubulin code in neuronal polarity. Current Opinion in Neurobiology, 2018, 51, 95-102.	4.2	47
32	Mechanisms of microtubule dynamics and force generation examined with computational modeling and electron cryotomography. Nature Communications, 2020, 11, 3765.	12.8	47
33	Structural determinants of microtubule minus end preference in CAMSAP CKK domains. Nature Communications, 2019, 10, 5236.	12.8	36
34	Generation of Differentially Modified Microtubules Using In Vitro Enzymatic Approaches. Methods in Enzymology, 2014, 540, 149-166.	1.0	35
35	Structural basis for polyglutamate chain initiation and elongation by TTLL family enzymes. Nature Structural and Molecular Biology, 2020, 27, 802-813.	8.2	35
36	Crystal Structures of Tubulin Acetyltransferase Reveal a Conserved Catalytic Core and the Plasticity of the Essential N Terminus. Journal of Biological Chemistry, 2012, 287, 41569-41575.	3.4	32

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37	X-ray structure ofSaccharomyces cerevisiae homologous mitochondrial matrix factor 1 (Hmf1). Proteins: Structure, Function and Bioinformatics, 2002, 48, 431-436.	2.6	22
38	Crystal structure of tubulin tyrosine ligase-like 3 reveals essential architectural elements unique to tubulin monoglycylases. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6545-6550.	7.1	19
39	In Vitro Microtubule Severing Assays. Methods in Molecular Biology, 2013, 1046, 323-334.	0.9	16
40	Tubulin Tyrosine Ligase and Stathmin Compete for Tubulin Binding In Vitro. Journal of Molecular Biology, 2013, 425, 2412-2414.	4.2	13
41	Phosphinic acid-based inhibitors of tubulin polyglutamylases. Bioorganic and Medicinal Chemistry Letters, 2013, 23, 4408-4412.	2.2	12
42	A Microtubule-Myelination Connection. Cell, 2019, 179, 54-56.	28.9	5
43	Watching microtubules grow one tubulin at a time. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 7163-7165.	7.1	5
44	In Vitro Microtubule Dynamics Assays Using Dark-Field Microscopy. Methods in Molecular Biology, 2020, 2101, 39-51.	0.9	5
45	Shining Light at Microtubule Crossroads. Science, 2013, 342, 1180-1181.	12.6	4
46	In Vitro Reconstitution Assays of Microtubule Amplification and Lattice Repair by the Microtubule-Severing Enzymes Katanin and Spastin. Methods in Molecular Biology, 2020, 2101, 27-38.	0.9	3
47	Editorial overview: Microtubules in nervous system development. Developmental Neurobiology, 2021, 81, 229-230.	3.0	1
48	Phosphinic acid-based inhibitors of tubulin polyglycylation. Chemical Communications, 2022, 58, 6530-6533.	4.1	1
49	A look under the hood of the machine that makes cilia beat. Nature Structural and Molecular Biology, 2022, 29, 416-418.	8.2	1