Ral Padrn

List of Publications by Year in Descending Order

52 papers	1,822 citations	23 h-index	41 g-index
70 ext. papers	2,179 ext. citations	6.8 avg, IF	4.26 L-index

#	Paper	IF	Citations
52	Relaxed tarantula skeletal muscle has two ATP energy-saving mechanisms. *Journal of General Physiology*, **2021**, 153,	3.4	3
51	Myosin Sequestration Regulates Sarcomere Function, Cardiomyocyte Energetics, and Metabolism, Informing the Pathogenesis of Hypertrophic Cardiomyopathy. *Circulation*, **2020**, 141, 828-842	16.7	66
50	O labeling on Ser45 but not on Ser35 supports the cooperative phosphorylation mechanism on tarantula thick filament activation. *Biochemical and Biophysical Research Communications*, **2020**, 524, 198-204	3.4	2
49	The myosin interacting-heads motif present in live tarantula muscle explains tetanic and posttetanic phosphorylation mechanisms. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 11865-11874	11.5	15
48	Cryo-EM structure of the inhibited (10S) form of myosin II. *Nature*, **2020**, 588, 521-525	50.4	23
47	Interacting-heads motif has been conserved as a mechanism of myosin II inhibition since before the origin of animals. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E1991-E2000	11.5	44
46	Lessons from a tarantula: new insights into myosin interacting-heads motif evolution and its implications on disease. *Biophysical Reviews*, **2018**, 10, 1465-1477	3.7	23
45	Lessons from a tarantula: new insights into muscle thick filament and myosin interacting-heads motif structure and function. *Biophysical Reviews*, **2017**, 9, 461-480	3.7	20
44	Effects of myosin variants on interacting-heads motif explain distinct hypertrophic and dilated cardiomyopathy phenotypes. *ELife*, **2017**, 6,	8.9	87
43	Conserved Intramolecular Interactions Maintain Myosin Interacting-Heads Motifs Explaining Tarantula Muscle Super-Relaxed State Structural Basis. *Journal of Molecular Biology*, **2016**, 428, 1142-1164	6.5	53
42	An invertebrate smooth muscle with striated muscle myosin filaments. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E5660-8	11.5	34
41	Improved Imaging, 3D Reconstruction and Homology Modeling of Tarantula Thick Filaments. *Biophysical Journal*, **2015**, 108, 589a	2.9	2
40	Sequential myosin phosphorylation activates tarantula thick filament via a disorder-order transition. *Molecular BioSystems*, **2015**, 11, 2167-79		15
39	Tarantula myosin free head regulatory light chain phosphorylation stiffens N-terminal extension, releasing it and blocking its docking back. *Molecular BioSystems*, **2015**, 11, 2180-9		19
38	The Inhibited, Interacting-Heads Motif Characterizes Myosin II from the Earliest Animals with Muscles. *Biophysical Journal*, **2015**, 108, 301a	2.9	4
37	Schistosome Muscles Contain Striated Muscle-Like Myosin Filaments in a Smooth Muscle-Like Architecture. *Biophysical Journal*, **2014**, 106, 159a	2.9	5
36	A method for 3D-reconstruction of a muscle thick filament using the tilt series images of a single filament electron tomogram. *Journal of Structural Biology*, **2014**, 186, 265-72	3.4	2

35	Different head environments in tarantula thick filaments support a cooperative activation process. *Biophysical Journal*, **2013**, 105, 2114-22	2.9	20
34	The myosin interacting-heads motif is present in the relaxed thick filament of the striated muscle of scorpion. *Journal of Structural Biology*, **2012**, 180, 469-78	3.4	29
33	Matching structural densities from different biophysical origins with gain and bias. *Journal of Structural Biology*, **2011**, 173, 445-50	3.4	3
32	A molecular model of phosphorylation-based activation and potentiation of tarantula muscle thick filaments. *Journal of Molecular Biology*, **2011**, 414, 44-61	6.5	49
31	Direct visualization of myosin-binding protein C bridging myosin and actin filaments in intact muscle. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 11423-8	11.5	118
30	Blebbistatin stabilizes the helical order of myosin filaments by promoting the switch 2 closed state. *Biophysical Journal*, **2008**, 95, 3322-9	2.9	43
29	Understanding the organisation and role of myosin binding protein C in normal striated muscle by comparison with MyBP-C knockout cardiac muscle. *Journal of Molecular Biology*, **2008**, 384, 60-72	6.5	95
28	Three-dimensional reconstruction of tarantula myosin filaments suggests how phosphorylation may regulate myosin activity. *Journal of Molecular Biology*, **2008**, 384, 780-97	6.5	110
27	Atomic model of a myosin filament in the relaxed state. *Nature*, **2005**, 436, 1195-9	50.4	236
26	Helical order in tarantula thick filaments requires the "closed" conformation of the myosin head. *Journal of Molecular Biology*, **2004**, 342, 1223-36	6.5	27
25	Heterogeneity of Z-band structure within a single muscle sarcomere: implications for sarcomere assembly. *Journal of Molecular Biology*, **2003**, 332, 161-9	6.5	30
24	Mechanism of phosphorylation of the regulatory light chain of myosin from tarantula striated muscle. *Journal of Muscle Research and Cell Motility*, **2001**, 22, 51-9	3.5	22
23	Purification of native myosin filaments from muscle. *Biophysical Journal*, **2001**, 81, 2817-26	2.9	21
22	A new model for the surface arrangement of myosin molecules in tarantula thick filaments. *Journal of Molecular Biology*, **2000**, 298, 239-60	6.5	22
21	Towards an atomic model of the thick filaments of muscle. *Journal of Molecular Biology*, **1998**, 275, 35-41	6.5	22
20	The action of local anesthetics on myelin structure and nerve conduction in toad sciatic nerve. *Biophysical Journal*, **1997**, 72, 2581-7	2.9	13
19	Three-dimensional reconstruction of thick filaments from rapidly frozen, freeze-substituted tarantula muscle. *Journal of Structural Biology*, **1995**, 115, 250-7	3.4	11
18	Direct visualization of myosin filament symmetry in tarantula striated muscle by electron microscopy. *Journal of Structural Biology*, **1993**, 111, 17-21	3.4	6

17	Visualization of myosin helices in sections of rapidly frozen relaxed tarantula muscle. *Journal of Structural Biology*, **1992**, 108, 269-76	3.4	11
16	Structure of the myosin filaments of relaxed and rigor vertebrate striated muscle studied by rapid freezing electron microscopy. *Journal of Molecular Biology*, **1992**, 228, 474-87	6.5	43
15	X-ray diffraction study of the structural changes accompanying phosphorylation of tarantula muscle. *Journal of Muscle Research and Cell Motility*, **1991**, 12, 235-41	3.5	25
14	Direct determination of myosin filament symmetry in scallop striated adductor muscle by rapid freezing and freeze substitution. *Journal of Molecular Biology*, **1991**, 220, 125-32	6.5	18
13	Disorder induced in nonoverlap myosin cross-bridges by loss of adenosine triphosphate. *Biophysical Journal*, **1989**, 56, 927-33	2.9	30
12	A method for quick-freezing live muscles at known instants during contraction with simultaneous recording of mechanical tension. *Journal of Microscopy*, **1988**, 151, 81-102	1.9	33
11	Structural changes accompanying phosphorylation of tarantula muscle myosin filaments. *Journal of Cell Biology*, **1987**, 105, 1319-27	7.3	92
10	Arrangement of the heads of myosin in relaxed thick filaments from tarantula muscle. *Journal of Molecular Biology*, **1985**, 184, 429-39	6.5	89
9	X-ray diffraction evidence that actin is a 100 Åfilament. *Nature*, **1984**, 307, 56-58	50.4	53
8	The effect of the ATP analogue AMPPNP on the structure of crossbridges in vertebrate skeletal muscles: X-ray diffraction and mechanical studies. *Journal of Muscle Research and Cell Motility*, **1984** , 5, 613-55	3.5	39
7	Repetitive propagation of action potentials destabilizes the structure of the myelin sheath. A dynamic x-ray diffraction study. *Biophysical Journal*, **1982**, 39, 183-8	2.9	14
6	In vivo structure of frog sciatic nerve myelin membranes: an x-ray diffraction study at 13A resolution. *Journal of Neuroscience Research*, **1981**, 6, 251-60	4.4	8
5	The effect of the repetitive propagation of action potentials on the structure of toad sciatic nerve myelin membranes: an x-ray diffraction study at 11 A resolution. *Journal of Neuroscience Research*, **1980**, 5, 611-20	4.4	7
4	A dynamic X-ray diffraction study of anaesthesia action. Changes in myelin structure and electrical activity recorded simultaneously from frog sciatic nerves treated with n-alkanes. *Biochimica Et Biophysica Acta - Biomembranes*, **1980**, 602, 221-33	3.8	10
3	A dynamic x-ray diffraction study of anesthesia action. Thickening of the myelin membrane by n-pentane. *Biochimica Et Biophysica Acta - Biomembranes*, **1979**, 552, 535-9	3.8	9
2	X-ray diffraction study of the kinetics of myelin lattice swelling. Effect of divalent cations. *Biophysical Journal*, **1979**, 28, 231-9	2.9	22
1	Small-angle x-ray scattering study of human serum low-density lipoproteins with differential reactivity for an arterial proteoglycan. *Journal of Supramolecular Structure*, **1977**, 7, 435-42		5