Eduardo Perozo

List of Publications by Citations

91 papers	7,813 citations	44 h-index	88 g-index
121 ext. papers	8,668 ext. citations	11.9 avg, IF	5.9 L-index

#	Paper	IF	Citations
91	Physical principles underlying the transduction of bilayer deformation forces during mechanosensitive channel gating. *Nature Structural Biology*, **2002**, 9, 696-703		531
90	Open channel structure of MscL and the gating mechanism of mechanosensitive channels. *Nature*, **2002**, 418, 942-8	50.4	501
89	Structural mechanism of C-type inactivation in K(+) channels. *Nature*, **2010**, 466, 203-8	50.4	370
88	Molecular determinants of gating at the potassium-channel selectivity filter. *Nature Structural and Molecular Biology*, **2006**, 13, 311-8	17.6	355
87	Gating currents from a nonconducting mutant reveal open-closed conformations in Shaker K+ channels. *Neuron*, **1993**, 11, 353-8	13.9	274
86	Three-dimensional architecture and gating mechanism of a K+ channel studied by EPR spectroscopy. *Nature Structural Biology*, **1998**, 5, 459-69		263
85	Asymmetry in the structure of the ABC transporter-binding protein complex BtuCD-BtuF. *Science*, **2007**, 317, 1387-90	33.3	239
84	Structural basis for the coupling between activation and inactivation gates in K(+) channels. *Nature*, **2010**, 466, 272-5	50.4	227
83	pH-dependent gating in the Streptomyces lividans K+ channel. *Biochemistry*, **1998**, 37, 3229-36	3.2	225
82	Molecular architecture of full-length KcsA: role of cytoplasmic domains in ion permeation and activation gating. *Journal of General Physiology*, **2001**, 117, 165-80	3.4	219
81	Molecular architecture of the KvAP voltage-dependent K+ channel in a lipid bilayer. *Science*, **2004**, 306, 491-5	33.3	202
80	Crystal structure of full-length KcsA in its closed conformation. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 6644-9	11.5	191
79	Molecular driving forces determining potassium channel slow inactivation. *Nature Structural and Molecular Biology*, **2007**, 14, 1062-9	17.6	190
78	Structure of the KcsA channel intracellular gate in the open state. *Nature Structural Biology*, **2001**, 8, 883-7		175
77	Structural mechanism of voltage-dependent gating in an isolated voltage-sensing domain. *Nature Structural and Molecular Biology*, **2014**, 21, 244-52	17.6	173
76	Structure and mechanism in prokaryotic mechanosensitive channels. *Current Opinion in Structural Biology*, **2003**, 13, 432-42	8.1	144
75	A structural mechanism for MscS gating in lipid bilayers. *Science*, **2008**, 321, 1210-4	33.3	143

74	Instantaneous ion configurations in the K+ ion channel selectivity filter revealed by 2D IR spectroscopy. *Science*, **2016**, 353, 1040-1044	33.3	142
73	An emerging consensus on voltage-dependent gating from computational modeling and molecular dynamics simulations. *Journal of General Physiology*, **2012**, 140, 587-94	3.4	141
72	Recovery from slow inactivation in K+ channels is controlled by water molecules. *Nature*, **2013**, 501, 121-4	40.4	138
71	Structural dynamics of the Streptomyces lividans K+ channel (SKC1): oligomeric stoichiometry and stability. *Biochemistry*, **1997**, 36, 10343-52	3.2	131
70	Voltage-dependent gating at the KcsA selectivity filter. *Nature Structural and Molecular Biology*, **2006**, 13, 319-22	17.6	117
69	Ion conduction through MscS as determined by electrophysiology and simulation. *Biophysical Journal*, **2007**, 92, 886-902	2.9	105
68	Explicit treatment of spin labels in modeling of distance constraints from dipolar EPR and DEER. *Journal of the American Chemical Society*, **2005**, 127, 9334-5	16.4	102
67	Gating prokaryotic mechanosensitive channels. *Nature Reviews Molecular Cell Biology*, **2006**, 7, 109-19	48.7	102
66	A quantitative description of KcsA gating I: macroscopic currents. *Journal of General Physiology*, **2007**, 130, 465-78	3.4	89
65	Site-directed spin-labeling analysis of reconstituted Mscl in the closed state. *Journal of General Physiology*, **2001**, 118, 193-206	3.4	89
64	Phosphorylation affects voltage gating of the delayed rectifier K+ channel by electrostatic interactions. *Neuron*, **1990**, 5, 685-90	13.9	89
63	Cryo-EM Structures of the Magnesium Channel CorA Reveal Symmetry Break upon Gating. *Cell*, **2016**, 164, 747-56	56.2	87
62	Detection of the opening of the bundle crossing in KcsA with fluorescence lifetime spectroscopy reveals the existence of two gates for ion conduction. *Journal of General Physiology*, **2006**, 128, 569-81	3.4	87
61	A multipoint hydrogen-bond network underlying KcsA C-type inactivation. *Biophysical Journal*, **2011** , 100, 2387-93	2.9	81
60	Structural dynamics of an isolated voltage-sensor domain in a lipid bilayer. *Structure*, **2008**, 16, 398-409	5.2	80
59	A quantitative description of KcsA gating II: single-channel currents. *Journal of General Physiology*, **2007**, 130, 479-96	3.4	80
58	Protein conformational dynamics in the mechanism of HIV-1 protease catalysis. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 20982-7	11.5	77
57	Three-dimensional architecture of membrane-embedded MscS in the closed conformation. *Journal of Molecular Biology*, **2008**, 378, 55-70	6.5	71

56	Mechanism of activation gating in the full-length KcsA K+ channel. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 11896-9	11.5	60
55	Biomolecular DNP-Supported NMR Spectroscopy using Site-Directed Spin Labeling. *Chemistry - A European Journal*, **2015**, 21, 12971-7	4.8	59
54	On the structural basis of modal gating behavior in K(+) channels. *Nature Structural and Molecular Biology*, **2011**, 18, 67-74	17.6	57
53	The gating cycle of a K channel at atomic resolution. *ELife*, **2017**, 6,	8.9	57
52	A designer ligand specific for Kv1.3 channels from a scorpion neurotoxin-based library. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 22211-6	11.5	55
51	The role of MscL amphipathic N terminus indicates a blueprint for bilayer-mediated gating of mechanosensitive channels. *Nature Communications*, **2016**, 7, 11984	17.4	54
50	Resting state of the human proton channel dimer in a lipid bilayer. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E5926-35	11.5	51
49	Structural basis of lipid-driven conformational transitions in the KvAP voltage-sensing domain. *Nature Structural and Molecular Biology*, **2014**, 21, 160-6	17.6	47
48	Thermodynamic coupling between activation and inactivation gating in potassium channels revealed by free energy molecular dynamics simulations. *Journal of General Physiology*, **2011**, 138, 571-80	3.4	47
47	Dynamics transitions at the outer vestibule of the KcsA potassium channel during gating. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 1831-6	11.5	44
46	Importance of lipid-pore loop interface for potassium channel structure and function. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 13008-13	11.5	42
45	A molecular mechanism for proton-dependent gating in KcsA. *FEBS Letters*, **2010**, 584, 1126-32	3.8	42
44	The activated state of a sodium channel voltage sensor in a membrane environment. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 5435-40	11.5	41
43	Rapid constriction of the selectivity filter underlies C-type inactivation in the KcsA potassium channel. *Journal of General Physiology*, **2018**, 150, 1408-1420	3.4	40
42	Molecular basis of force-from-lipids gating in the mechanosensitive channel MscS. *ELife*, **2019**, 8,	8.9	40
41	Molecular mechanism of Mg2+-dependent gating in CorA. *Nature Communications*, **2014**, 5, 3590	17.4	39
40	Structural dynamics of the Streptomyces lividans K+ channel (SKC1): secondary structure characterization from FTIR spectroscopy. *FEBS Letters*, **1998**, 423, 205-12	3.8	39
39	xMDFF: molecular dynamics flexible fitting of low-resolution X-ray structures. *Acta Crystallographica Section D: Biological Crystallography*, **2014**, 70, 2344-55		38

38	An optimized purification and reconstitution method for the MscS channel: strategies for spectroscopical analysis. *Biochemistry*, **2007**, 46, 6766-73	3.2	38
37	Towards a Structural View of Drug Binding to hERG K Channels. *Trends in Pharmacological Sciences*, **2017**, 38, 899-907	13.2	37
36	Conformational Chaperones for Structural Studies of Membrane Proteins Using Antibody Phage Display with Nanodiscs. *Structure*, **2016**, 24, 300-9	5.2	35
35	Dynamics of "flap" structures in three HIV-1 protease/inhibitor complexes probed by total chemical synthesis and pulse-EPR spectroscopy. *Journal of the American Chemical Society*, **2009**, 131, 884-5	16.4	34
34	Distinct gate conformations of the ABC transporter BtuCD revealed by electron spin resonance spectroscopy and chemical cross-linking. *FEBS Letters*, **2009**, 583, 266-70	3.8	32
33	Symmetry-constrained analysis of pulsed double electron-electron resonance (DEER) spectroscopy reveals the dynamic nature of the KcsA activation gate. *Journal of the American Chemical Society*, **2012**, 134, 16360-9	16.4	30
32	The voltage sensor and the gate in ion channels. *Advances in Protein Chemistry*, **2003**, 63, 211-41		29
31	Structural dynamics of the magnesium-bound conformation of CorA in a lipid bilayer. *Structure*, **2010**, 18, 868-78	5.2	26
30	New structural perspectives on K(+) channel gating. *Structure*, **2002**, 10, 1027-9	5.2	26
29	Multi-ion free energy landscapes underscore the microscopic mechanism of ion selectivity in the KcsA channel. *Biochimica Et Biophysica Acta - Biomembranes*, **2016**, 1858, 1722-32	3.8	25
28	Probing the Effects of Gating on the Ion Occupancy of the K Channel Selectivity Filter Using Two-Dimensional Infrared Spectroscopy. *Journal of the American Chemical Society*, **2017**, 139, 8837-8845	16.4	24
27	Role of human Hv1 channels in sperm capacitation and white blood cell respiratory burst established by a designed peptide inhibitor. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E11847-E11856	11.5	24
26	Chemical substitutions in the selectivity filter of potassium channels do not rule out constricted-like conformations for C-type inactivation. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 11145-11150	11.5	23
25	Structural biology. Force and voltage sensors in one structure. *Science*, **2002**, 298, 1562-3	33.3	23
24	Mechanism of Cd2+ coordination during slow inactivation in potassium channels. *Structure*, **2012**, 20, 1332-42	5.2	22
23	Reactions of cysteines substituted in the amphipathic N-terminal tail of a bacterial potassium channel with hydrophilic and hydrophobic maleimides. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 11605-10	11.5	22
22	From Nanodiscs to Isotropic Bicelles: A Procedure for Solution Nuclear Magnetic Resonance Studies of Detergent-Sensitive Integral Membrane Proteins. *Structure*, **2016**, 24, 1830-1841	5.2	21
21	Structural refinement of membrane proteins by restrained molecular dynamics and solvent accessibility data. *Biophysical Journal*, **2008**, 95, 5349-61	2.9	21

20	Electromechanical coupling in the hyperpolarization-activated K channel KAT1. *Nature*, **2020**, 583, 145-149	50.4	20
19	A repulsion mechanism explains magnesium permeation and selectivity in CorA. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 3002-7	11.5	20
18	Design and characterization of a constitutively open KcsA. *FEBS Letters*, **2010**, 584, 1133-8	3.8	20
17	Calculation of rigid-body conformational changes using restraint-driven Cartesian transformations. *Biophysical Journal*, **2001**, 81, 2530-46	2.9	20
16	Toward a structural blueprint for bilayer-mediated channel mechanosensitivity. *Channels*, **2017**, 11, 91-93	3	18
15	Never at rest: insights into the conformational dynamics of ion channels from cryo-electron microscopy. *Journal of Physiology*, **2018**, 596, 1107-1119	3.9	18
14	Conformational dynamics at the inner gate of KcsA during activation. *Biochemistry*, **2014**, 53, 2557-9	3.2	16
13	Phosphorylation of K+ channels in the squid giant axon. A mechanistic analysis. *Journal of Bioenergetics and Biomembranes*, **1991**, 23, 599-613	3.7	16
12	Binding of the CYK-4 subunit of the centralspindlin complex induces a large scale conformational change in the kinesin subunit. *Journal of Biological Chemistry*, **2013**, 288, 19785-95	5.4	11
11	Molecular coupling in the human ether-a-go-go-related gene-1 (hERG1) K+ channel inactivation pathway. *Journal of Biological Chemistry*, **2011**, 286, 39091-9	5.4	11
10	Structural Dynamics of the MscL C-terminal Domain. *Scientific Reports*, **2017**, 7, 17229	4.9	9
9	Real time dynamics of Gating-Related conformational changes in CorA. *ELife*, **2019**, 8,	8.9	8
8	Mechanism of C-type inactivation in the hERG potassium channel. *Science Advances*, **2021**, 7,	14.3	8
7	Direct activation of the proton channel by albumin leads to human sperm capacitation and sustained release of inflammatory mediators by neutrophils. *Nature Communications*, **2021**, 12, 3855	17.4	6
6	Structure and packing orientation of transmembrane segments in voltage-dependent channels. Lessons from perturbation analysis. *Journal of General Physiology*, **2000**, 115, 29-32	3.4	5
5	Chemical modification of squid axon K+ channel -SH groups with the organic mercurial compound p-hydroxymercuriphenylsulfonic acid (PHMPS). *Pflugers Archiv European Journal of Physiology*, **1994**, 428, 315-22	4.6	5
4	Computational study of non-conductive selectivity filter conformations and C-type inactivation in a voltage-dependent potassium channel. *Journal of General Physiology*, **2021**, 153,	3.4	5
3	Up a hydrophobic creek with a short paddle. *Cell*, **2010**, 142, 515-6	56.2	3

2	The conformational cycle of prestin underlies outer-hair cell electromotility. *Nature*, **2021**,	50.4	3
1	Shedding light on voltage-dependent gating. *Journal of General Physiology*, **1998**, 112, 373-6	3.4	1