Flemming Cornelius

List of Publications by Year in Descending Order

90 papers	3,280 citations	31 h-index	55 g-index
93 ext. papers	3,586 ext. citations	5.4 avg, IF	5.33 L-index

#	Paper	IF	Citations
90	Displacement of Native FXYD Protein From Na/K-ATPase With Novel FXYD Peptide Derivatives: Effects on Doxorubicin Cytotoxicity.. *Frontiers in Oncology*, **2022**, 12, 859216	5.3	
89	Cryoelectron microscopy of Na,K-ATPase in the two E2P states with and without cardiotonic steroids.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2123226119	11.5	0
88	Binding of cardiotonic steroids to Na,K-ATPase in the E2P state. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	13
87	Penetration of phospholipid membranes by poly-l-lysine depends on cholesterol and phospholipid composition. *Biochimica Et Biophysica Acta - Biomembranes*, **2020**, 1862, 183128	3.8	3
86	To Image the Orientation and Spatial Distribution of Reconstituted Na+,K+-ATPase in Model Lipid Membranes **2019**, 29-46		
85	Cholesterol depletion inhibits Na,K-ATPase activity in a near-native membrane environment. *Journal of Biological Chemistry*, **2019**, 294, 5956-5969	5.4	17
84	Distinct pH dependencies of Na/K selectivity at the two faces of Na,K-ATPase. *Journal of Biological Chemistry*, **2018**, 293, 2195-2205	5.4	2
83	Interaction of N-terminal peptide analogues of the Na,K-ATPase with membranes. *Biochimica Et Biophysica Acta - Biomembranes*, **2018**, 1860, 1282-1291	3.8	22
82	The voltage-sensitive dye RH421 detects a Na,K-ATPase conformational change at the membrane surface. *Biochimica Et Biophysica Acta - Biomembranes*, **2017**, 1859, 813-823	3.8	10
81	Electrostatic Stabilization Plays a Central Role in Autoinhibitory Regulation of the Na,K-ATPase. *Biophysical Journal*, **2017**, 112, 288-299	2.9	16
80	Capturing suboptical dynamic structures in lipid bilayer patches formed from free-standing giant unilamellar vesicles. *Nature Protocols*, **2017**, 12, 1563-1575	18.8	6
79	Exploring the raft-hypothesis by probing planar bilayer patches of free-standing giant vesicles at nanoscale resolution, with and without Na,K-ATPase. *Biochimica Et Biophysica Acta - Biomembranes*, **2016**, 1858, 3041-3049	3.8	8
78	Spatial distribution and activity of Na(+)/K(+)-ATPase in lipid bilayer membranes with phase boundaries. *Biochimica Et Biophysica Acta - Biomembranes*, **2016**, 1858, 1390-9	3.8	28
77	Glutathionylation-Dependence of Na(+)-K(+)-Pump Currents Can Mimic Reduced Subsarcolemmal Na(+) Diffusion. *Biophysical Journal*, **2016**, 110, 1099-109	2.9	8
76	General and specific lipid-protein interactions in Na,K-ATPase. *Biochimica Et Biophysica Acta - Biomembranes*, **2015**, 1848, 1729-43	3.8	88
75	Sequential substitution of K(+) bound to Na(+),K(+)-ATPase visualized by X-ray crystallography. *Nature Communications*, **2015**, 6, 8004	17.4	19
74	Membrane accessibility of glutathione. *Biochimica Et Biophysica Acta - Biomembranes*, **2015**, 1848, 2430-6	3.8	8

73	Identification of electric-field-dependent steps in the Na(+),K(+)-pump cycle. *Biophysical Journal*, **2014**, 107, 1352-63	2.9	15
72	Inhibition of K+ transport through Na+, K+-ATPase by capsazepine: role of membrane span 10 of the β subunit in the modulation of ion gating. *PLoS ONE*, **2014**, 9, e96909	3.7	8
71	New crystal structures of PII-type ATPases: excitement continues. *Current Opinion in Structural Biology*, **2013**, 23, 507-14	8.1	46
70	Crystal structure of a Na+-bound Na+,K+-ATPase preceding the E1P state. *Nature*, **2013**, 502, 201-6	50.4	202
69	A structural view on the functional importance of the sugar moiety and steroid hydroxyls of cardiotonic steroids in binding to Na,K-ATPase. *Journal of Biological Chemistry*, **2013**, 288, 6602-16	5.4	47
68	Susceptibility of β1 Na+-K+ pump subunit to glutathionylation and oxidative inhibition depends on conformational state of pump. *Journal of Biological Chemistry*, **2012**, 287, 12353-64	5.4	39
67	Intrinsic reaction-cycle time scale of Na+,K+-ATPase manifests itself in the lipid-protein interactions of nonequilibrium membranes. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 18442-6	11.5	31
66	Kinetics of K(+) occlusion by the phosphoenzyme of the Na(+),K(+)-ATPase. *Biophysical Journal*, **2011**, 100, 70-9	2.9	12
65	Rb(+) occlusion stabilized by vanadate in gastric H(+)/K(+)-ATPase at 25°C. *Biochimica Et Biophysica Acta - Biomembranes*, **2011**, 1808, 316-22	3.8	8
64	First crystal structures of Na+,K+-ATPase: new light on the oldest ion pump. *Structure*, **2011**, 19, 1732-8	5.2	82
63	Metal fluoride complexes of Na,K-ATPase: characterization of fluoride-stabilized phosphoenzyme analogues and their interaction with cardiotonic steroids. *Journal of Biological Chemistry*, **2011**, 286, 29882-92	5.4	32
62	FXYD proteins reverse inhibition of the Na+-K+ pump mediated by glutathionylation of its beta1 subunit. *Journal of Biological Chemistry*, **2011**, 286, 18562-72	5.4	64
61	Active Biomimetic Membranes **2011**, 113-135		
60	Interaction of ATP with the phosphoenzyme of the Na+,K+-ATPase. *Biochemistry*, **2010**, 49, 1248-58	3.2	15
59	Dual mechanisms of allosteric acceleration of the Na(+),K(+)-ATPase by ATP. *Biophysical Journal*, **2010**, 98, 2290-8	2.9	9
58	Investigation of the enzymatic activity of the Na+,K+-ATPase via isothermal titration microcalorimetry. *Biochimica Et Biophysica Acta - Bioenergetics*, **2010**, 1797, 1540-5	4.6	19
57	Reversible oxidative modification: a key mechanism of Na+-K+ pump regulation. *Circulation Research*, **2009**, 105, 185-93	15.7	135
56	Crystal structure of the sodium-potassium pump at 2.4 A resolution. *Nature*, **2009**, 459, 446-50	50.4	485

55	Interaction between cardiotonic steroids and Na,K-ATPase. Effects of pH and ouabain-induced changes in enzyme conformation. *Biochemistry*, **2009**, 48, 10056-65	3.2	18
54	Mechanism of Mg2+ binding in the Na+,K+-ATPase. *Biophysical Journal*, **2009**, 96, 3753-61	2.9	21
53	Crystal structure of the sodium-potassium pump (Na+,K+-ATPase) with bound potassium and ouabain. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 13742-7	11.5	256
52	Cholesterol-dependent interaction of polyunsaturated phospholipids with Na,K-ATPase. *Biochemistry*, **2008**, 47, 1652-8	3.2	38
51	ATP binding equilibria of the Na(+),K(+)-ATPase. *Biochemistry*, **2008**, 47, 13103-14	3.2	12
50	Modulation of FXYD interaction with Na,K-ATPase by anionic phospholipids and protein kinase phosphorylation. *Biochemistry*, **2007**, 46, 2371-9	3.2	13
49	Functional significance of the shark Na,K-ATPase N-terminal domain. Is the structurally variable N-Terminus involved in tissue-specific regulation by FXYD proteins?. *Biochemistry*, **2005**, 44, 13051-62	3.2	18
48	Interaction of FXYD10 (PLMS) with Na,K-ATPase from shark rectal glands. Close proximity of Cys74 of FXYD10 to Cys254 in the a domain of the alpha-subunit revealed by intermolecular thiol cross-linking. *Journal of Biological Chemistry*, **2005**, 280, 27776-82	5.4	19
47	Functional modulation of the sodium pump: the regulatory proteins "Fixit". *Physiology*, **2003**, 18, 119-24	9.8	34
46	Kinetic investigations of the mechanism of the rate-determining step of the Na+,K+-ATPase pump cycle. *Annals of the New York Academy of Sciences*, **2003**, 986, 159-62	6.5	5
45	Protein kinase C phosphorylation directed at novel C-terminal sites in Na,K-ATPase. *Annals of the New York Academy of Sciences*, **2003**, 986, 541-2	6.5	4
44	PKA and PKC phosphorylation of gastric H,K-ATPase. *Annals of the New York Academy of Sciences*, **2003**, 986, 548-9	6.5	1
43	Themes in ion pump regulation. *Annals of the New York Academy of Sciences*, **2003**, 986, 579-86	6.5	10
42	Modulation of Na,K-ATPase by phospholipids and cholesterol. II. Steady-state and presteady-state kinetics. *Biochemistry*, **2003**, 42, 8541-9	3.2	64
41	Direct activation of gastric H,K-ATPase by N-terminal protein kinase C phosphorylation. Comparison of the acute regulation mechanisms of H,K-ATPase and Na,K-ATPase. *Biophysical Journal*, **2003**, 84, 1690-700	2.9	15
40	Regulation of Na,K-ATPase by PLMS, the phospholemman-like protein from shark: molecular cloning, sequence, expression, cellular distribution, and functional effects of PLMS. *Journal of Biological Chemistry*, **2003**, 278, 37427-38	5.4	59
39	Mechanism of the rate-determining step of the Na(+),K(+)-ATPase pump cycle. *Biochemistry*, **2002**, 41, 9496-507	3.2	33
38	Protein kinase C phosphorylation of purified Na,K-ATPase: C-terminal phosphorylation sites at the alpha- and gamma-subunits close to the inner face of the plasma membrane. *Biophysical Journal*, **2002**, 82, 1907-19	2.9	33

37	Modulation of Na,K-ATPase by associated small transmembrane regulatory proteins and by lipids. *Journal of Bioenergetics and Biomembranes*, **2001**, 33, 415-23	3.7	27
36	Rate limitation of the Na(+),K(+)-ATPase pump cycle. *Biophysical Journal*, **2001**, 81, 2069-81	2.9	53
35	Modulation of Na,K-ATPase and Na-ATPase activity by phospholipids and cholesterol. I. Steady-state kinetics. *Biochemistry*, **2001**, 40, 8842-51	3.2	151
34	Species-specific peculiarities of functional reactions of the sodium pump to phosphorylation by protein kinase A. *Journal of Evolutionary Biochemistry and Physiology*, **2000**, 36, 11-16	0.5	
33	Identification of a phospholemman-like protein from shark rectal glands. Evidence for indirect regulation of Na,K-ATPase by protein kinase c via a novel member of the FXYDY family. *Journal of Biological Chemistry*, **2000**, 275, 35969-77	5.4	103
32	Rate determination in phosphorylation of shark rectal Na,K-ATPase by ATP: temperature sensitivity and effects of ADP. *Biophysical Journal*, **1999**, 77, 934-42	2.9	25
31	K+-dependence of electrogenic transport by the NaK-ATPase. *Biochimica Et Biophysica Acta - Biomembranes*, **1998**, 1368, 184-200	3.8	26
30	E2P phosphoforms of Na,K-ATPase. I. Comparison of phosphointermediates formed from ATP and Pi by their reactivity toward hydroxylamine and vanadate. *Biochemistry*, **1998**, 37, 13634-42	3.2	38
29	E2P phosphoforms of Na,K-ATPase. II. Interaction of substrate and cation-binding sites in Pi phosphorylation of Na,K-ATPase. *Biochemistry*, **1998**, 37, 16686-96	3.2	32
28	Diversity of the E2P phosphoforms of Na,K-ATPase. *Annals of the New York Academy of Sciences*, **1997**, 834, 386-9	6.5	1
27	Interaction between substrate site and cation binding sites in Pi phosphorylation of Na,K-ATPase. *Annals of the New York Academy of Sciences*, **1997**, 834, 390-3	6.5	2
26	Fluorescent styryl dyes as probes for Na,K-ATPase reaction. Enzyme source and fluorescence response. *Annals of the New York Academy of Sciences*, **1997**, 834, 394-6	6.5	4
25	Functional regulation of reconstituted Na,K-ATPase by protein kinase A phosphorylation. *FEBS Letters*, **1996**, 380, 277-80	3.8	37
24	The sodium PUMP. *Biomembranes: A Multi-Volume Treatise*, **1996**, 5, 133-184		
23	Hydrophobic ion interaction on Na+ activation and dephosphorylation of reconstituted Na+,K(+)-ATPase. *Biochimica Et Biophysica Acta - Biomembranes*, **1995**, 1235, 183-96	3.8	9
22	Phosphorylation/dephosphorylation of reconstituted shark Na+,K(+)-ATPase: one phosphorylation site per alpha beta protomer. *Biochimica Et Biophysica Acta - Biomembranes*, **1995**, 1235, 197-204	3.8	21
21	Cholesterol modulation of molecular activity of reconstituted shark Na+,K(+)-ATPase. *Biochimica Et Biophysica Acta - Biomembranes*, **1995**, 1235, 205-12	3.8	45
20	Fluorescent styryl dyes as probes for Na,K-ATPase reaction mechanism: significance of the charge of the hydrophilic moiety of RH dyes. *Biochemistry*, **1995**, 34, 16806-14	3.2	34

19	Liposomes in Reconstitution of Ion-Pumps. Electrogenic Properties of the Na+,K+-Atpase and the Sarcoplasmic Ca2+-Atpase. *Journal of Liposome Research*, **1995**, 5, 399-412	6.1	1
18	Electrogenicity and Countertransport Properties of Reconstituted Sarcoplasmic Reticulum Ca2+-ATPase **1994**, 143-146		1
17	Cis-allosteric effects of cytoplasmic Na+/K+ discrimination at varying pH. Low-affinity multisite inhibition of cytoplasmic K+ in reconstituted Na+/K(+)-ATPase engaged in uncoupled Na(+)-efflux. *Biochimica Et Biophysica Acta - Biomembranes*, **1992**, 1108, 190-200	3.8	5
16	Functional reconstitution of the sodium pump. Kinetics of exchange reactions performed by reconstituted Na/K-ATPase. *BBA - Biomembranes*, **1991**, 1071, 19-66		103
15	The effect of cytoplasmic K+ on the activity of the Na+/K(+)-ATPase. *Biochimica Et Biophysica Acta - Biomembranes*, **1991**, 1067, 227-34	3.8	9
14	A voltage-activated cation transport pathway associated with the sodium pump. *Biochimica Et Biophysica Acta - Biomembranes*, **1991**, 1070, 497-500	3.8	5
13	Electrogenic pump current of sarcoplasmic reticulum Ca(2+)-ATPase reconstituted at high lipid/protein ratio. *FEBS Letters*, **1991**, 284, 46-50	3.8	23
12	Variable stoichiometry in reconstituted shark Na,K-ATPase engaged in uncoupled efflux. *Biochimica Et Biophysica Acta - Biomembranes*, **1990**, 1026, 147-52	3.8	14
11	Uncoupled Na+-efflux on reconstituted shark Na,K-ATPase is electrogenic. *Biochemical and Biophysical Research Communications*, **1989**, 160, 801-7	3.4	28
10	The sided action of Na+ on reconstituted shark Na+/K+-ATPase engaged in Na+-Na+ exchange accompanied by ATP hydrolysis. II. Transmembrane allosteric effects on Na+ affinity. *Biochimica Et Biophysica Acta - Biomembranes*, **1988**, 944, 223-32	3.8	25
9	Incorporation of C12E8-solubilized Na+,K+-ATPase into liposomes: determination of sidedness and orientation. *Methods in Enzymology*, **1988**, 156, 156-67	1.7	27
8	The sided action of Na+ and of K+ on reconstituted shark (Na+ + K+)-ATPase engaged in Na+-Na+ exchange accompanied by ATP hydrolysis. I. The ATP activation curve. *Biochimica Et Biophysica Acta - Biomembranes*, **1987**, 904, 353-64	3.8	19
7	Na+-Na+ exchange mediated by (Na+ + K+)-ATPase reconstituted into liposomes. Evaluation of pump stoichiometry and response to ATP and ADP. *Biochimica Et Biophysica Acta - Biomembranes*, **1985**, 818, 211-21	3.8	60
6	Reconstitution of (Na+ + K+)-ATPase into phospholipid vesicles with full recovery of its specific activity. *Biochimica Et Biophysica Acta - Biomembranes*, **1984**, 772, 357-73	3.8	95
5	Tonic contraction and the control of relaxation in a chemically skinned molluscan smooth muscle. *Journal of General Physiology*, **1982**, 79, 821-34	3.4	42
4	The regulation of tension in a chemically skinned molluscan smooth muscle: effect of Mg2+ on the Ca2+-activated tension generation. *Journal of General Physiology*, **1980**, 75, 709-25	3.4	31
3	Tension-length behaviour of a molluscan smooth muscle related to filament organisation. *Acta Physiologica Scandinavica*, **1978**, 102, 167-80		20
2	Inorganic phosphate in Ehrlich ascites tumor cells and its distribution across the cell membrane. *Biochimica Et Biophysica Acta - Biomembranes*, **1978**, 511, 213-23	3.8	9

List of Publications

1	Reconstitution of transmembrane protein Na+,K+-ATPase in giant unilamellar vesicles of lipid mixtures involving PSM, DOPC, DPPC and cholesterol at physiological buffer and temperature conditions. *Protocol Exchange*,	4