

Flemming Cornelius

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90
papers

3,280
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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	Crystal structure of the sodium-potassium pump at 2.4 Å resolution. <i>Nature</i> , 2009 , 459, 446-50	50.4	485
89	Crystal structure of the sodium-potassium pump (Na ⁺ ,K ⁺ -ATPase) with bound potassium and ouabain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 13742-7	11.5	256
88	Crystal structure of a Na ⁺ -bound Na ⁺ ,K ⁺ -ATPase preceding the E1P state. <i>Nature</i> , 2013 , 502, 201-6	50.4	202
87	Modulation of Na,K-ATPase and Na-ATPase activity by phospholipids and cholesterol. I. Steady-state kinetics. <i>Biochemistry</i> , 2001 , 40, 8842-51	3.2	151
86	Reversible oxidative modification: a key mechanism of Na ⁺ -K ⁺ pump regulation. <i>Circulation Research</i> , 2009 , 105, 185-93	15.7	135
85	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 FXDY family. <i>Journal of Biological Chemistry</i> , 2000 , 275, 35969-77	5.4	103
84	Functional reconstitution of the sodium pump. Kinetics of exchange reactions performed by reconstituted Na/K-ATPase. <i>BBA - Biomembranes</i> , 1991 , 1071, 19-66		103
83	Reconstitution of (Na ⁺ + K ⁺)-ATPase into phospholipid vesicles with full recovery of its specific activity. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1984 , 772, 357-73	3.8	95
82	General and specific lipid-protein interactions in Na,K-ATPase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015 , 1848, 1729-43	3.8	88
81	First crystal structures of Na ⁺ ,K ⁺ -ATPase: new light on the oldest ion pump. <i>Structure</i> , 2011 , 19, 1732-8	5.2	82
80	FXDY proteins reverse inhibition of the Na ⁺ -K ⁺ pump mediated by glutathionylation of its beta1 subunit. <i>Journal of Biological Chemistry</i> , 2011 , 286, 18562-72	5.4	64
79	Modulation of Na,K-ATPase by phospholipids and cholesterol. II. Steady-state and presteady-state kinetics. <i>Biochemistry</i> , 2003 , 42, 8541-9	3.2	64
78	Na ⁺ -Na ⁺ exchange mediated by (Na ⁺ + K ⁺)-ATPase reconstituted into liposomes. Evaluation of pump stoichiometry and response to ATP and ADP. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1985 , 818, 211-21	3.8	60
77	Regulation of Na,K-ATPase by PLMS, the phospholemman-like protein from shark: molecular cloning, sequence, expression, cellular distribution, and functional effects of PLMS. <i>Journal of Biological Chemistry</i> , 2003 , 278, 37427-38	5.4	59
76	Rate limitation of the Na(+),K(+)-ATPase pump cycle. <i>Biophysical Journal</i> , 2001 , 81, 2069-81	2.9	53
75	A structural view on the functional importance of the sugar moiety and steroid hydroxyls of cardiotonic steroids in binding to Na,K-ATPase. <i>Journal of Biological Chemistry</i> , 2013 , 288, 6602-16	5.4	47
74	New crystal structures of P1I-type ATPases: excitement continues. <i>Current Opinion in Structural Biology</i> , 2013 , 23, 507-14	8.1	46

73	Cholesterol modulation of molecular activity of reconstituted shark Na ⁺ ,K ⁽⁺⁾ -ATPase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1995 , 1235, 205-12	3.8	45
72	Tonic contraction and the control of relaxation in a chemically skinned molluscan smooth muscle. <i>Journal of General Physiology</i> , 1982 , 79, 821-34	3.4	42
71	Susceptibility of Na ⁺ -K ⁺ pump subunit to glutathionylation and oxidative inhibition depends on conformational state of pump. <i>Journal of Biological Chemistry</i> , 2012 , 287, 12353-64	5.4	39
70	Cholesterol-dependent interaction of polyunsaturated phospholipids with Na,K-ATPase. <i>Biochemistry</i> , 2008 , 47, 1652-8	3.2	38
69	E2P phosphoforms of Na,K-ATPase. I. Comparison of phosphointermediates formed from ATP and Pi by their reactivity toward hydroxylamine and vanadate. <i>Biochemistry</i> , 1998 , 37, 13634-42	3.2	38
68	Functional regulation of reconstituted Na,K-ATPase by protein kinase A phosphorylation. <i>FEBS Letters</i> , 1996 , 380, 277-80	3.8	37
67	Functional modulation of the sodium pump: the regulatory proteins "Fixit". <i>Physiology</i> , 2003 , 18, 119-24	9.8	34
66	Fluorescent styryl dyes as probes for Na,K-ATPase reaction mechanism: significance of the charge of the hydrophilic moiety of RH dyes. <i>Biochemistry</i> , 1995 , 34, 16806-14	3.2	34
65	Mechanism of the rate-determining step of the Na ⁽⁺⁾ ,K ⁽⁺⁾ -ATPase pump cycle. <i>Biochemistry</i> , 2002 , 41, 9496-507	3.2	33
64	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. <i>Biophysical Journal</i> , 2002 , 82, 1907-19	2.9	33
63	Metal fluoride complexes of Na,K-ATPase: characterization of fluoride-stabilized phosphoenzyme analogues and their interaction with cardiotonic steroids. <i>Journal of Biological Chemistry</i> , 2011 , 286, 29882-92	5.4	32
62	E2P phosphoforms of Na,K-ATPase. II. Interaction of substrate and cation-binding sites in Pi phosphorylation of Na,K-ATPase. <i>Biochemistry</i> , 1998 , 37, 16686-96	3.2	32
61	Intrinsic reaction-cycle time scale of Na ⁺ ,K ⁺ -ATPase manifests itself in the lipid-protein interactions of nonequilibrium membranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 18442-6	11.5	31
60	The regulation of tension in a chemically skinned molluscan smooth muscle: effect of Mg ²⁺ on the Ca ²⁺ -activated tension generation. <i>Journal of General Physiology</i> , 1980 , 75, 709-25	3.4	31
59	Spatial distribution and activity of Na ⁽⁺⁾ /K ⁽⁺⁾ -ATPase in lipid bilayer membranes with phase boundaries. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2016 , 1858, 1390-9	3.8	28
58	Uncoupled Na ⁺ -efflux on reconstituted shark Na,K-ATPase is electrogenic. <i>Biochemical and Biophysical Research Communications</i> , 1989 , 160, 801-7	3.4	28
57	Modulation of Na,K-ATPase by associated small transmembrane regulatory proteins and by lipids. <i>Journal of Bioenergetics and Biomembranes</i> , 2001 , 33, 415-23	3.7	27
56	Incorporation of C12E8-solubilized Na ⁺ ,K ⁺ -ATPase into liposomes: determination of sidedness and orientation. <i>Methods in Enzymology</i> , 1988 , 156, 156-67	1.7	27

55	K ⁺ -dependence of electrogenic transport by the NaK-ATPase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1998 , 1368, 184-200	3.8	26
54	Rate determination in phosphorylation of shark rectal Na,K-ATPase by ATP: temperature sensitivity and effects of ADP. <i>Biophysical Journal</i> , 1999 , 77, 934-42	2.9	25
53	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. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1988 , 944, 223-32	3.8	25
52	Electrogenic pump current of sarcoplasmic reticulum Ca(2 ⁺)-ATPase reconstituted at high lipid/protein ratio. <i>FEBS Letters</i> , 1991 , 284, 46-50	3.8	23
51	Interaction of N-terminal peptide analogues of the Na,K-ATPase with membranes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2018 , 1860, 1282-1291	3.8	22
50	Mechanism of Mg ²⁺ binding in the Na ⁺ ,K ⁺ -ATPase. <i>Biophysical Journal</i> , 2009 , 96, 3753-61	2.9	21
49	Phosphorylation/dephosphorylation of reconstituted shark Na ⁺ ,K(+) -ATPase: one phosphorylation site per alpha beta protomer. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1995 , 1235, 197-204	3.8	21
48	Tension-length behaviour of a molluscan smooth muscle related to filament organisation. <i>Acta Physiologica Scandinavica</i> , 1978 , 102, 167-80		20
47	Sequential substitution of K(+) bound to Na(+),K(+)-ATPase visualized by X-ray crystallography. <i>Nature Communications</i> , 2015 , 6, 8004	17.4	19
46	Investigation of the enzymatic activity of the Na ⁺ ,K ⁺ -ATPase via isothermal titration microcalorimetry. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010 , 1797, 1540-5	4.6	19
45	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. <i>Journal of Biological Chemistry</i> , 2005 , 280, 27776-82	5.4	19
44	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. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1987 , 904, 353-64	3.8	19
43	Interaction between cardiotonic steroids and Na,K-ATPase. Effects of pH and ouabain-induced changes in enzyme conformation. <i>Biochemistry</i> , 2009 , 48, 10056-65	3.2	18
42	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?. <i>Biochemistry</i> , 2005 , 44, 13051-62	3.2	18
41	Cholesterol depletion inhibits Na,K-ATPase activity in a near-native membrane environment. <i>Journal of Biological Chemistry</i> , 2019 , 294, 5956-5969	5.4	17
40	Electrostatic Stabilization Plays a Central Role in Autoinhibitory Regulation of the Na,K-ATPase. <i>Biophysical Journal</i> , 2017 , 112, 288-299	2.9	16
39	Identification of electric-field-dependent steps in the Na(+),K(+)-pump cycle. <i>Biophysical Journal</i> , 2014 , 107, 1352-63	2.9	15
38	Interaction of ATP with the phosphoenzyme of the Na ⁺ ,K ⁺ -ATPase. <i>Biochemistry</i> , 2010 , 49, 1248-58	3.2	15

37	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. <i>Biophysical Journal</i> , 2003 , 84, 1690-700	2.9	15
36	Variable stoichiometry in reconstituted shark Na,K-ATPase engaged in uncoupled efflux. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1990 , 1026, 147-52	3.8	14
35	Modulation of FX1D interaction with Na,K-ATPase by anionic phospholipids and protein kinase phosphorylation. <i>Biochemistry</i> , 2007 , 46, 2371-9	3.2	13
34	Binding of cardiotonic steroids to Na,K-ATPase in the E2P state. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	13
33	Kinetics of K(+) occlusion by the phosphoenzyme of the Na(+),K(+)-ATPase. <i>Biophysical Journal</i> , 2011 , 100, 70-9	2.9	12
32	ATP binding equilibria of the Na(+),K(+)-ATPase. <i>Biochemistry</i> , 2008 , 47, 13103-14	3.2	12
31	The voltage-sensitive dye RH421 detects a Na,K-ATPase conformational change at the membrane surface. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2017 , 1859, 813-823	3.8	10
30	Themes in ion pump regulation. <i>Annals of the New York Academy of Sciences</i> , 2003 , 986, 579-86	6.5	10
29	Dual mechanisms of allosteric acceleration of the Na(+),K(+)-ATPase by ATP. <i>Biophysical Journal</i> , 2010 , 98, 2290-8	2.9	9
28	Hydrophobic ion interaction on Na ⁺ activation and dephosphorylation of reconstituted Na ⁺ ,K ⁺ -ATPase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1995 , 1235, 183-96	3.8	9
27	The effect of cytoplasmic K ⁺ on the activity of the Na ⁺ /K ⁺ -ATPase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1991 , 1067, 227-34	3.8	9
26	Inorganic phosphate in Ehrlich ascites tumor cells and its distribution across the cell membrane. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1978 , 511, 213-23	3.8	9
25	Membrane accessibility of glutathione. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015 , 1848, 2430-6	3.8	8
24	Exploring the raft-hypothesis by probing planar bilayer patches of free-standing giant vesicles at nanoscale resolution, with and without Na,K-ATPase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2016 , 1858, 3041-3049	3.8	8
23	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. <i>PLoS ONE</i> , 2014 , 9, e96909	3.7	8
22	Rb(+) occlusion stabilized by vanadate in gastric H(+)/K(+)-ATPase at 25°C. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2011 , 1808, 316-22	3.8	8
21	Glutathionylation-Dependence of Na(+)-K(+)-Pump Currents Can Mimic Reduced Subsarcolemmal Na(+) Diffusion. <i>Biophysical Journal</i> , 2016 , 110, 1099-109	2.9	8
20	Capturing suboptical dynamic structures in lipid bilayer patches formed from free-standing giant unilamellar vesicles. <i>Nature Protocols</i> , 2017 , 12, 1563-1575	18.8	6

19	Kinetic investigations of the mechanism of the rate-determining step of the Na ⁺ ,K ⁺ -ATPase pump cycle. <i>Annals of the New York Academy of Sciences</i> , 2003 , 986, 159-62	6.5	5
18	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. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1992 , 1108, 190-200	3.8	5
17	A voltage-activated cation transport pathway associated with the sodium pump. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1991 , 1070, 497-500	3.8	5
16	Fluorescent styryl dyes as probes for Na,K-ATPase reaction. Enzyme source and fluorescence response. <i>Annals of the New York Academy of Sciences</i> , 1997 , 834, 394-6	6.5	4
15	Protein kinase C phosphorylation directed at novel C-terminal sites in Na,K-ATPase. <i>Annals of the New York Academy of Sciences</i> , 2003 , 986, 541-2	6.5	4
14	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. <i>Protocol Exchange</i> ,		4
13	Penetration of phospholipid membranes by poly-l-lysine depends on cholesterol and phospholipid composition. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2020 , 1862, 183128	3.8	3
12	Distinct pH dependencies of Na/K selectivity at the two faces of Na,K-ATPase. <i>Journal of Biological Chemistry</i> , 2018 , 293, 2195-2205	5.4	2
11	Interaction between substrate site and cation binding sites in Pi phosphorylation of Na,K-ATPase. <i>Annals of the New York Academy of Sciences</i> , 1997 , 834, 390-3	6.5	2
10	Diversity of the E2P phosphoforms of Na,K-ATPase. <i>Annals of the New York Academy of Sciences</i> , 1997 , 834, 386-9	6.5	1
9	PKA and PKC phosphorylation of gastric H,K-ATPase. <i>Annals of the New York Academy of Sciences</i> , 2003 , 986, 548-9	6.5	1
8	Liposomes in Reconstitution of Ion-Pumps. Electrogenic Properties of the Na ⁺ ,K ⁺ -Atpase and the Sarcoplasmic Ca ²⁺ -Atpase. <i>Journal of Liposome Research</i> , 1995 , 5, 399-412	6.1	1
7	Electrogenicity and Countertransport Properties of Reconstituted Sarcoplasmic Reticulum Ca ²⁺ -ATPase 1994 , 143-146		1
6	Cryoelectron microscopy of Na,K-ATPase in the two E2P states with and without cardiotonic steroids.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2123226119	11.5	0
5	To Image the Orientation and Spatial Distribution of Reconstituted Na ⁺ ,K ⁺ -ATPase in Model Lipid Membranes 2019 , 29-46		
4	Species-specific peculiarities of functional reactions of the sodium pump to phosphorylation by protein kinase A. <i>Journal of Evolutionary Biochemistry and Physiology</i> , 2000 , 36, 11-16	0.5	
3	The sodium PUMP. <i>Biomembranes: A Multi-Volume Treatise</i> , 1996 , 5, 133-184		
2	Active Biomimetic Membranes 2011 , 113-135		

- 1 Displacement of Native FXYD Protein From Na/K-ATPase With Novel FXYD Peptide Derivatives: Effects on Doxorubicin Cytotoxicity.. *Frontiers in Oncology*, **2022**, 12, 859216 53