Ian D. Kerr

List of Publications by Year
in descending order

119 papers	6,073 citations	81743 39 h-index	74018 75 g-index
122 all docs	122 docs citations	122 times ranked	6942 citing authors

#	Article	IF	Citations
1	The auxin influx carrier LAX3 promotes lateral root emergence. Nature Cell Biology, 2008, 10, 946-954.	4.6	715
2	Structure-Function Analysis of the Presumptive Arabidopsis Auxin Permease AUX1 [W]. Plant Cell, 2004, 16, 3069-3083.	3.1	308
3	A novel family of phospholipase D homologues that includes phospholipid synthases and putative endonucleases: Identification of duplicated repeats and potential active site residues. Protein Science, 1996, 5, 914-922.	3.1	297
4	Repacking of the transmembrane domains of P-glycoprotein during the transport ATPase cycle. EMBO Journal, 2001, 20, 5615-5625.	3.5	265
5	ABC transporter research: going strong 40 years on. Biochemical Society Transactions, 2015, 43, 1033-1040.	1.6	231
6	Detergent-free purification of ABC (ATP-binding-cassette) transporters. Biochemical Journal, 2014, 461, 269-278.	1.7	166
7	The Concise Guide to PHARMACOLOGY 2013/14: Overview. British Journal of Pharmacology, 2013, 170, 1449-1458.	2.7	153
8	The Influenza A Virus M2 Channel: A Molecular Modeling and Simulation Study. Virology, 1997, 233, 163-173.	1.1	146
9	Unraveling the Evolution of Auxin Signaling Â Â. Plant Physiology, 2011, 155, 209-221.	2.3	140
10	Intrinsic acyl-CoA thioesterase activity of a peroxisomal ATP binding cassette transporter is required for transport and metabolism of fatty acids. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1279-1284.	3.3	134
11	Sequence analysis of twin ATP binding cassette proteins involved in translational control, antibiotic resistance, and ribonuclease L inhibition. Biochemical and Biophysical Research Communications, 2004, 315, 166-173.	1.0	129
12	Water in channel-like cavities: structure and dynamics. Biophysical Journal, 1996, 70, 693-702.	0.2	128
13	Structure and association of ATP-binding cassette transporter nucleotide-binding domains. Biochimica Et Biophysica Acta - Biomembranes, 2002, 1561, 47-64.	1.4	119
14	Purification and 3D Structural Analysis of Oligomeric Human Multidrug Transporter ABCG2. Structure, 2006, 14, 1623-1632.	1.6	117
15	Parallel helix bundles and ion channels: molecular modeling via simulated annealing and restrained molecular dynamics. Biophysical Journal, 1994, 67, 1501-1515.	0.2	115
16	An atomic detail model for the human ATP binding cassette transporter Pâ€glycoprotein derived from disulphide crossâ€linking and homology modeling. FASEB Journal, 2003, 17, 2287-2289.	0.2	112
17	Pâ€glycoprotein: So Many Ways to Turn It On. Journal of Clinical Pharmacology, 2008, 48, 365-378.	1.0	110
18	The ABCG family of membraneâ€associated transporters: you don't have to be big to be mighty. British Journal of Pharmacology, 2011, 164, 1767-1779.	2.7	109

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19	Towards understanding promiscuity in multidrug efflux pumps. Trends in Biochemical Sciences, 2014, 39, 8-16.	3.7	109
20	Multiple drugbinding sites on the R482G isoform of the ABCG2 transporter. British Journal of Pharmacology, 2006, 149, 506-515.	2.7	98
21	Molecular dynamics simulations of water within models of ion channels. Biophysical Journal, 1996, 70, 1643-1661.	0.2	97
22	Ion channels formed by HIV-1 Vpu: a modelling and simulation study. FEBS Letters, 1997, 405, 299-304.	1.3	88
23	The translocation mechanism of P-glycoprotein. FEBS Letters, 2006, 580, 1056-1063.	1.3	88
24	Influenza virus M2 protein: a molecular modelling study of the ion channel. Protein Engineering, Design and Selection, 1993, 6, 65-74.	1.0	83
25	New insight into the biochemical mechanisms regulating auxin transport in plants. Biochemical Journal, 2007, 401, 613-622.	1.7	79
26	The multidrug transporter ABCG2: still more questions than answers. Biochemical Society Transactions, 2016, 44, 824-830.	1.6	74
27	Annexins in human breast cancer: Possible predictors of pathological response to neoadjuvant chemotherapy. European Journal of Cancer, 2009, 45, 1274-1281.	1.3	72
28	The Î±-5 segment of Bacillus thuringiensis Î´-endotoxin: in vitro activity, ion channel formation and molecular modelling. Biochemical Journal, 1994, 304, 895-902.	1.7	70
29	Pediatric brain tumor cancer stem cells: cell cycle dynamics, DNA repair, and etoposide extrusion. Neuro-Oncology, 2011, 13, 70-83.	0.6	60
30	Polymorphisms of the Multidrug Pump ABCG2: A Systematic Review of Their Effect on Protein Expression, Function, and Drug Pharmacokinetics. Drug Metabolism and Disposition, 2018, 46, 1886-1899.	1.7	57
31	The Topography of Transmembrane Segment Six Is Altered during the Catalytic Cycle of P-glycoprotein. Journal of Biological Chemistry, 2004, 279, 34913-34921.	1.6	56
32	The Binding of Auxin to the Arabidopsis Auxin Influx Transporter AUX1. Plant Physiology, 2008, 148, 529-535.	2.3	56
33	Multidrug efflux pumps: The structures of prokaryotic ATPâ€binding cassette transporter efflux pumps and implications for our understanding of eukaryotic Pâ€glycoproteins and homologues. FEBS Journal, 2010, 277, 550-563.	2.2	54
34	Transbilayer pores formed by beta-barrels: molecular modeling of pore structures and properties. Biophysical Journal, 1995, 69, 1334-1343.	0.2	51
35	Overcoming multiple drug resistance mechanisms in medulloblastoma. Acta Neuropathologica Communications, 2014, 2, 57.	2.4	49
36	Is ATP binding responsible for initiating drug translocation by the multidrug transporter ABCG2?. FEBS Journal, 2008, 275, 4354-4362.	2.2	44

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37	Plasma membrane dynamics and tetrameric organisation of ABCG2 transporters in mammalian cells revealed by single particle imaging techniques. Biochimica Et Biophysica Acta - Molecular Cell Research, 2016, 1863, 19-29.	1.9	43
38	Alamethicin channels â€“ modelling via restrained molecular dynamics simulations. Biochimica Et Biophysica Acta - Biomembranes, 1997, 1325, 235-249.	1.4	41
39	Residue G346 in Transmembrane Segment Six is Involved in Inter-Domain Communication in P-Glycoprotein. Biochemistry, 2007, 46, 9899-9910.	1.2	41
40	Seven-helix bundles: molecular modeling via restrained molecular dynamics. Biophysical Journal, 1995, 68, 1295-1310.	0.2	39
41	ABC proteins and antibiotic drug resistance: is it all about transport?. Biochemical Society Transactions, 2005, 33, 1000.	1.6	39
42	Nucleotide-Dependent Conformational Changes in HisP: Molecular Dynamics Simulations of an ABC Transporter Nucleotide-Binding Domain. Biophysical Journal, 2004, 87, 3703-3715.	0.2	38
43	Alamethicin Pyromellitate: An Ion-Activated Channel-Forming Peptide. Biochemistry, 1994, 33, 6850-6858.	1.2	37
44	Ion channels formed by amphipathic helical peptides. European Biophysics Journal, 1991, 20, 229-40.	1.2	35
45	Modelling membrane proteins using structural restraints. Nature Structural Biology, 1995, 2, 624-631.	9.7	35
46	ABC proteins and antibiotic drug resistance: is it all about transport?. Biochemical Society Transactions, 2005, 33, 1000-1002.	1.6	35
47	The central cavity of <scp>ABCB</scp>1 undergoes alternating access during <scp>ATP</scp> hydrolysis. FEBS Journal, 2014, 281, 2190-2201.	2.2	35
48	The coupling mechanism ofP-glycoprotein involves residue L339 in the sixth membrane spanning segment. FEBS Letters, 2005, 579, 3984-3990.	1.3	30
49	Structure-based interpretation of the mutagenesis database for the nucleotide binding domains of P-glycoprotein. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 376-391.	1.4	29
50	Purification and structural analyses of ABCG2. Advanced Drug Delivery Reviews, 2009, 61, 57-65.	6.6	29
51	Location of contact residues in pharmacologically distinct drug binding sites on P-glycoprotein. Biochemical Pharmacology, 2017, 123, 19-28.	2.0	29
52	Improving the stability and function of purified ABCB1 and ABCA4: The influence of membrane lipids. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 134-147.	1.4	28
53	Ferrocenoyl Derivatives of Alamethicin:Â Redox-Sensitive Ion Channelsâ€. Biochemistry, 1997, 36, 1115-1122.	1.2	27
54	Transmembrane Helix 12 Modulates Progression of the ATP Catalytic Cycle in ABCB1. Biochemistry, 2009, 48, 6249-6258.	1.2	27

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55	Studies of the pore-forming domain of a voltage-gated potassium channel protein. Protein Engineering, Design and Selection, 1994, 7, 255-262.	1.0	25
56	Ion channel formation by synthetic analogues of staphylococcal Î´-toxin. Biochimica Et Biophysica Acta - Biomembranes, 1995, 1236, 219-227.	1.4	25
57	Identification of residues in ABCG2 affecting protein trafficking and drug transport, using co-evolutionary analysis of ABCG sequences. Bioscience Reports, 2015, 35, .	1.1	25
58	Packing interactions of aib-containing helices: Molecular modeling of parallel dimers of simple hydrophobic helices and of alamethicin. Biopolymers, 1995, 35, 639-655.	1.2	24
59	Dimerization of ABCG2 Analysed by Bimolecular Fluorescence Complementation. PLoS ONE, 2011, 6, e25818.	1.1	24
60	Proteomic profiling of MCF-7 breast cancer cells with chemoresistance to different types of anti-cancer drugs. International Journal of Oncology, 0, , .	1.4	23
61	Molecular modelling of Staphylococcal Î´-toxin ion channels by restrained molecular dynamics. Protein Engineering, Design and Selection, 1996, 9, 161-171.	1.0	22
62	Transmembrane helixâ€ƒ12 plays a pivotal role in coupling energy provision and drug binding in ABCB1. FEBS Journal, 2010, 277, 3974-3985.	2.2	22
63	Residues contributing to drug transport by ABCG2 are localised to multiple drug-binding pockets. Biochemical Journal, 2018, 475, 1553-1567.	1.7	22
64	Cation selectivity in ion channels. Nature, 1995, 373, 112-112.	13.7	20
65	Application of fluorescence correlation spectroscopy to study substrate binding in styrene maleic acid lipid copolymer encapsulated ABCG2. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183218.	1.4	20
66	Principles of proteomics and its applications in cancer. Journal of the Royal College of Surgeons of Edinburgh, 2007, 5, 14-22.	0.8	19
67	Cellular Patterning of Arabidopsis Roots Under Low Phosphate Conditions. Frontiers in Plant Science, 2018, 9, 735.	1.7	19
68	Mammalian ABCG-transporters, sterols and lipids: To bind perchance to transport?. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2021, 1866, 158860.	1.2	19
69	The pore-lining region of shaker voltage-gated potassium channels: comparison of beta-barrel and alpha-helix bundle models. Biophysical Journal, 1997, 73, 581-602.	0.2	18
70	Cytosolic Region of TM6 in P-Glycoprotein: Topographical Analysis and Functional Perturbation by Site Directed Labeling. Biochemistry, 2008, 47, 3615-3624.	1.2	18
71	ABCB1 in children's brain tumours. Biochemical Society Transactions, 2015, 43, 1018-1022.	1.6	18
72	Ion channel stability and hydrogen bonding molecular modelling of channels formed by synthetic alamethicin analogues. Biochimica Et Biophysica Acta - Biomembranes, 1997, 1330, 103-109.	1.4	17

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73	Molecular dynamics simulations of isolated transmembrane helices of potassium channels. , 1996, 39, 503.		17
74	Hydrophilic surface maps of channel-forming peptides: analysis of amphipathic helices. European Biophysics Journal, 1993, 22, 269-77.	1.2	15
75	Molecular dynamics simulations of isolated transmembrane helices of potassium channels. Biopolymers, 1998, 39, 503-515.	1.2	15
76	ABCG2: does resolving its structure elucidate the mechanism?. Biochemical Society Transactions, 2018, 46, 1485-1494.	1.6	15
77	Picky ABCG5/G8 and promiscuous ABCG2 â€•a tale of fatty diets and drug toxicity. FEBS Letters, 2020, 594, 4035-4058.	1.3	15
78	A selective biotinylated probe for V1a vasopressin receptors. Molecular and Cellular Endocrinology, 1991, 77, 123-131.	1.6	13
79	Overcoming ABCG2-mediated drug resistance with imidazo-[1,2-b]-pyridazine-based Pim1 kinase inhibitors. Cancer Chemotherapy and Pharmacology, 2015, 76, 853-864.	1.1	13
80	A role for ABCB1 in prognosis, invasion and drug resistance in ependymoma. Scientific Reports, 2019, 9, 10290.	1.6	13
81	Proteinâ€“waterâ€“ion interactions in a model of the pore domain of a potassium channel: a simulation study. Biochimica Et Biophysica Acta - Biomembranes, 1998, 1370, 1-7.	1.4	12
82	Definition of the domain boundaries is critical to the expression of the nucleotide-binding domains of P-glycoprotein. European Biophysics Journal, 2003, 32, 644-654.	1.2	12
83	Communication between the Nucleotide Binding Domains of P-Glycoprotein Occurs via Conformational Changes that Involve Residue 508â€. Biochemistry, 2003, 42, 7780-7789.	1.2	12
84	The nucleotide-binding domains of P-glycoprotein. Functional symmetry in the isolated domain demonstrated by N-ethylmaleimide labelling. FEBS Journal, 2003, 270, 1483-1492.	0.2	11
85	Induction of a stress response in <i>Lactococcusâ€ƒlactis</i> is associated with a resistance to ribosomally active antibiotics. FEBS Journal, 2011, 278, 4015-4024.	2.2	11
86	Ion channels of biological membranes: prediction of single channel conductance. Theoretical Chemistry Accounts, 1999, 101, 97-102.	0.5	9
87	8.8 Molecular Aspects of the Translocation Process by ABC Proteins. , 2012, , 145-173.		9
88	Modelling the packing of transmembrane helices: application to aquaporin-1. Biochemical Society Transactions, 1998, 26, 509-515.	1.6	8
89	Cross-linking, DEER-spectroscopy and molecular dynamics confirm the inward facing state of P-glycoprotein in a lipid membrane. Journal of Structural Biology, 2020, 211, 107513.	1.3	7
90	Molecular dynamics simulations of isolated transmembrane helices of potassium channels. Biopolymers, 1996, 39, 503-15.	1.2	7

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91	The ATP-Binding Cassette Proteins of the Deep-Branching Protozoan Parasite Trichomonas vaginalis. PLoS Neglected Tropical Diseases, 2012, 6, e1693.	1.3	6
92	<scp>3D</scp> hydrogels reveal medulloblastoma subgroup differences and identify extracellular matrix subtypes that predict patient outcome. Journal of Pathology, 2021, 253, 326-338.	2.1	6
93	ABC Transporters and Isothiocyanates. Letters in Drug Design and Discovery, 2006, 3, 607-621.	0.4	5
94	Modelling the restoration of wild-type dynamic behaviour in Î”F508-CFTR NBD1 by 8-cyclopentyl-1,3-dipropylxanthine. Journal of Molecular Graphics and Modelling, 2007, 26, 691-699.	1.3	5
95	Analysis of Sequence Divergence in Mammalian ABCGs Predicts a Structural Network of Residues That Underlies Functional Divergence. International Journal of Molecular Sciences, 2021, 22, 3012.	1.8	5
96	BLBP Is Both a Marker for Poor Prognosis and a Potential Therapeutic Target in Paediatric Ependymoma. Cancers, 2021, 13, 2100.	1.7	5
97	STRUCTURE OF ABC TRANSPORTERS. , 2003, , 65-80.		4
98	Heterologous Expression of a Membrane-Spanning Auxin Importer: Implications for Functional Analyses of Auxin Transporters. International Journal of Plant Genomics, 2009, 2009, 1-8.	2.2	4
99	Localisation of a family of complexâ€forming Î²â€barrels in the <i>T. vaginalis</i> hydrogenosomal membrane. FEBS Letters, 2012, 586, 4038-4045.	1.3	4
100	Disruption of the Unique ABCG-Family NBD:NBD Interface Impacts Both Drug Transport and ATP Hydrolysis. International Journal of Molecular Sciences, 2020, 21, 759.	1.8	4
101	Y-Box Binding Protein-1: A Neglected Target in Pediatric Brain Tumors?. Molecular Cancer Research, 2021, 19, 375-387.	1.5	4
102	Simplified Models of the Pore Domain of the Nicotinic Acetylcholine Receptor. Biochemical Society Transactions, 1994, 22, 158S-158S.	1.6	3
103	Principles of membrane protein structure. Biomembranes: A Multi-Volume Treatise, 1995, 1, 29-78.	0.1	3
104	Hormone Transport. Plant Cell Monographs, 2011, , 379-397.	0.4	3
105	Vinca alkaloid binding to P-glycoprotein occurs in a processive manner. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 184005.	1.4	3
106	Secondary structure of an isolated P-region from the voltage-gated sodium channel: a molecular modelling/dynamics study. Biophysical Chemistry, 1997, 69, 221-232.	1.5	2
107	Analysis of the Sam50 translocase of Excavate organisms supports evolution of divergent organelles from a common endosymbiotic event. Bioscience Reports, 2013, 33, .	1.1	2
108	ABCB1 inhibition provides a novel therapeutic target to block TWIST1-induced migration in medulloblastoma. Neuro-Oncology Advances, 2021, 3, vdab030.	0.4	2

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109	Hydrophilic Surface Maps of Channel-Forming Peptides. Biochemical Society Transactions, 1992, 20, 323S-323S.	1.6	1
110	Hydrophilic and Hydrophobic Surface Map Analysis of Bacteriorhodopsin. Biochemical Society Transactions, 1993, 21, 78S-78S.	1.6	1
111	Water Dynamics in Model Transbilayer Pores. Biochemical Society Transactions, 1996, 24, 139S-139S.	1.6	1
112	Molecular modelling of the pore of potassium channels by restraints-directed distance geometry. Biochemical Society Transactions, 1996, 24, 297S-297S.	1.6	1
113	Simulation studies on bacteriorhodopsin bundle of transmembrane Î± segments. European Biophysics Journal, 2000, 28, 663-673.	1.2	1
114	Long-term exposure to irinotecan reduces cell migration in glioma cells. Journal of Neuro-Oncology, 2016, 127, 455-462.	1.4	1
115	Sequence Analysis and Molecular Dynamics Studies of Potassium Channel Transmembrane Helices. Biochemical Society Transactions, 1995, 23, 415S-415S.	1.6	0
116	Molecular dynamics of ion/channel interactions [1]. Biochemical Society Transactions, 1998, 26, S301-S301.	1.6	0
117	The voltage-gated potassium channel: Sequence analysis and molecular modelling of the pore domain. Journal of Computer - Aided Molecular Design, 1999, 15/16, 187-214.	1.0	0
118	Single Molecule or Ensemble Fluorescence Microscopy Investigations of ABC Transporter Oligomerisation and Dynamics. , 2016, , 85-102.		0
119	MBRS-39. TWIST1 PLAYS A REGULATORY ROLE IN MEDULLOBLASTOMA METASTASIS. Neuro-Oncology, 2018, 20, i136-i137.	0.6	0