M K Mathew

List of Publications by Year
in descending order

70 papers	3,024 citations	159585 30 h-index	161849 54 g-index
72 all docs	72 docs citations	72 times ranked	3333 citing authors

#	Article	IF	Citations
1	Haem homeostasis is regulated by the conserved and concerted functions of HRG-1 proteins. Nature, 2008, 453, 1127-1131.	27.8	275
2	A role for hydrophobic residues in the voltage-dependent gating of Shaker K+ channels.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 2931-2935.	7.1	205
3	The role of root apoplastic transport barriers in salt tolerance of rice (Oryza sativa L.). Planta, 2009, 230, 119-134.	3.2	200
4	Root apoplastic barriers block Na+ transport to shoots in rice (Oryza sativa L.). Journal of Experimental Botany, 2011, 62, 4215-4228.	4.8	187
5	Bacteriorhodopsin photoreaction: identification of a long-lived intermediate N (P, R350) at high pH and its M-like photoproduct. Biochemistry, 1988, 27, 5855-5863.	2.5	159
6	Retinal isomer ratio in dark-adapted purple membrane and bacteriorhodopsin monomers. Biochemistry, 1989, 28, 829-834.	2.5	147
7	VDAC is a conserved element of death pathways in plant and animal systems. Biochimica Et Biophysica Acta - Molecular Cell Research, 2003, 1642, 87-96.	4.1	147
8	The Ca²⁺ Channel CNGC19 Regulates Arabidopsis Defense Against Spodoptera Herbivory. Plant Cell, 2019, 31, 1539-1562.	6.6	88
9	High-resolution separation and accurate size determination in pulsed-field gel electrophoresis of DNA. 1. DNA size standards and the effect of agarose and temperature. Biochemistry, 1988, 27, 9204-9210.	2.5	87
10	Alamethicin and related membrane channel forming polypeptides. Molecular and Cellular Biochemistry, 1983, 50, 47-64.	3.1	77
11	Functional characterization of a transition metal ion transporter, OsZIP6 from rice (Oryza sativa L.). Plant Physiology and Biochemistry, 2015, 97, 165-174.	5.8	74
12	Human potassium channel genes: Molecular cloning and functional expression. Molecular and Cellular Neurosciences, 1990, 1, 214-223.	2.2	68
13	Salt-Induced Remodeling of Spatially Restricted Clathrin-Independent Endocytic Pathways in Arabidopsis Root. Plant Cell, 2015, 27, 1297-1315.	6.6	66
14	A helix dipole model for alamethicin and related transmembrane channels. FEBS Letters, 1983, 157, 1-5.	2.8	65
15	Regulation of the uptake and distribution of Na+in shoots of rice (Oryza sativa) variety Pokkali: role of Ca2+in salt tolerance response. Physiologia Plantarum, 2005, 124, 451-464.	5.2	63
16	High-resolution separation and accurate size determination in pulsed-field gel electrophoresis of DNA. 2. Effect of pulse time and electric field strength and implications for models of the separation process. Biochemistry, 1988, 27, 9210-9216.	2.5	60
17	High-resolution separation and accurate size determination of pulsed-field gel electrophoresis of DNA. 4. Influence of DNA topology. Biochemistry, 1988, 27, 9222-9226.	2.5	57
18	A Plant Ca2+ Pump, ACA2, Relieves Salt Hypersensitivity in Yeast. Journal of Biological Chemistry, 2008, 283, 3497-3506.	3.4	57

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19	Development of the Structural Core and of Conformational Heterogeneity during the Conversion of Oligomers of the Mouse Prion Protein to Worm-like Amyloid Fibrils. Journal of Molecular Biology, 2012, 423, 217-231.	4.2	54
20	Limiting cytosolic Na+confers salt tolerance to rice cells in culture: a two-photon microscopy study of SBFI-loaded cells. Physiologia Plantarum, 2007, 129, 607-621.	5.2	51
21	Vesicular trafficking and salinity responses in plants. IUBMB Life, 2015, 67, 677-686.	3.4	50
22	Rice cultivars with differing salt tolerance contain similar cation channels in their root cells. Journal of Experimental Botany, 2012, 63, 3289-3296.	4.8	45
23	Functional Properties of the Drosophila melanogaster Inositol 1,4,5-Trisphosphate Receptor Mutants. Biophysical Journal, 2004, 86, 3634-3646.	0.5	43
24	Mitochondrial VDAC and hexokinase together modulate plant programmed cell death. Protoplasma, 2013, 250, 875-884.	2.1	41
25	Mechanism of aggregation and membrane interactions of mammalian prion protein. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 1927-1935.	2.6	37
26	Resting membrane potential as a marker of apoptosis: studies on Xenopus oocytes microinjected with cytochromeâ€‰c. Cell Death and Differentiation, 2001, 8, 63-69.	11.2	35
27	Genotypic Variability in Differential Expression of lea2 and lea3 Genes and Proteins in Response to Salinity Stress in Fingermillet (Eleusine coracanaGaertn) and Rice (Oryza sativaL.) Seedlings. Annals of Botany, 1998, 82, 513-522.	2.9	34
28	Alamethicin and synthetic peptide fragments as uncouplers of mitochondrial oxidative phosphorylation. Effect of chain length and change. Biochemical and Biophysical Research Communications, 1981, 98, 548-555.	2.1	33
29	Fluorescent probe and NMR studies of the aggregation of bile salts in aqueous solution. Chemistry and Physics of Lipids, 1979, 25, 345-356.	3.2	32
30	A Stress-Responsive Gene from Groundnut, Gdi-15, Is Homologous to Flavonol 3-O-Glucosyltransferase Involved in Anthocyanin Biosynthesis. Biochemical and Biophysical Research Communications, 2001, 284, 574-579.	2.1	30
31	Membrane channel-forming polypeptides. Aqueous phase aggregation and membrane-modifying activity of synthetic fluorescent alamethicin fragments.. Journal of Biological Chemistry, 1982, 257, 2170-2176.	3.4	30
32	Fluorescence-polarization studies on binding of 4-methylumbelliferyl Î²-d-galactopyranoside to Ricinus communis (castor-bean) agglutinin. Biochemical Journal, 1980, 191, 395-400.	3.7	26
33	Cation translocating effects of alamethicin and its synthetic fragments in lipid membranes. FEBS Letters, 1980, 121, 365-368.	2.8	25
34	Membrane channel-forming polypeptides. Aqueous phase aggregation and membrane-modifying activity of synthetic fluorescent alamethicin fragments. Journal of Biological Chemistry, 1982, 257, 2170-6.	3.4	25
35	A reinvestigation of chlortetracycline fluorescence: effect of pH, metal ions, and environment. Journal of Inorganic Biochemistry, 1980, 13, 339-346.	3.5	24
36	Repression of the glucose-inducible outer-membrane protein OprB during utilization of aromatic compounds and organic acids in Pseudomonas putida CSV86. Microbiology (United Kingdom), 2011, 157, 1531-1540.	1.8	24

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37	BTK-2, a new inhibitor of the Kv1.1 potassium channel purified from Indian scorpion Buthus tamulus. FEBS Letters, 2003, 539, 7-13.	2.8	22
38	The mitochondrial phase of the glucocorticoid-induced apoptotic response in thymocytes comprises sequential activation of adenine nucleotide transporter (ANT)-independent and ANT-dependent events. European Journal of Immunology, 2004, 34, 119-125.	2.9	22
39	Regulation of VDAC trafficking modulates cell death. Cell Death Discovery, 2016, 2, 16085.	4.7	20
40	Potassium channel regulator KCNRG regulates surface expression of Shaker-type potassium channels. Biochemical and Biophysical Research Communications, 2010, 391, 1301-1305.	2.1	19
41	Functional reconstitution of bacterially expressed human potassium channels in proteoliposomes: membrane potential measurements with JC-1 to assay ion channel activity. Biochimica Et Biophysica Acta - Biomembranes, 1999, 1416, 92-100.	2.6	18
42	Bacterial Expression, Purification and Characterization of a Rice Voltage-Dependent, Anion-Selective Channel Isoform, OsVDAC4. Journal of Membrane Biology, 2011, 244, 67-80.	2.1	18
43	Fluid flow modulates electrical activity in cardiac hERG potassium channels. Journal of Biological Chemistry, 2018, 293, 4289-4303.	3.4	15
44	Functional assay ofÂSalmonellaÂtyphi OmpC using reconstituted large unilamellar vesicles: aÂgeneral method forÂcharacterization ofÂouter membrane proteins. Biochimie, 2006, 88, 1419-1424.	2.6	13
45	Coupling between the bacteriorhodopsin photocycle and the protonmotive force in Halobacterium halobium cell envelope vesicles. III. Time-resolved increase in the transmembrane electric potential and modeling of the associated ion fluxes. Biophysical Journal, 1985, 48, 709-719.	0.5	12
46	Solution structure of BTK-2, a novel hKv1.1 inhibiting scorpion toxin, from the eastern Indian scorpion Mesobuthus tamulus. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2011, 1814, 459-469.	2.3	11
47	Ionophore-mediated transmembrane movement of divalent cations in small unilamellar liposomes: An evaluation of the chlortetracycline fluorescence technique and correlations with black lipid membrane studies. Journal of Membrane Biology, 1982, 65, 13-17.	2.1	10
48	Transplanting the N-terminus from Kv1.4 to Kv1.1 generates an inwardly rectifying K+ channel. NeuroReport, 1999, 10, 237-241.	1.2	10
49	Inhibition of TMV multiplication by siRNA constructs against TOM1 and TOM3 genes of Capsicum annuum. Journal of Virological Methods, 2012, 186, 78-85.	2.1	10
50	A fluorescent peptide model for the thioredoxin active site. FEBS Letters, 1983, 159, 221-224.	2.8	9
51	Potassium channel opening: a subtle twoâ€step. Journal of Physiology, 2009, 587, 3851-3868.	2.9	9
52	Unmasking of tyrosyl fluorescence in serum albumins on bilirubin binding. FEBS Letters, 1980, 115, 91-94.	2.8	8
53	Modeling of ion permeation in calcium and sodium channel selectivity filters. , 2000, 38, 384-392.		8
54	Fluorescent alamethicin fragments A study of membrane activity and aqueous phase aggregation. Biochimica Et Biophysica Acta - Biomembranes, 1981, 649, 336-342.	2.6	7

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55	Exploring the Architecture of Potassium Channels Using ChimÃ¦ras to Reveal Signal Transduction. Bioscience Reports, 1999, 19, 301-306.	2.4	7
56	Modulation of voltage sensitivity by N-terminal cytoplasmic residues in human Kv1.2 channels. European Biophysics Journal, 2002, 31, 365-372.	2.2	7
57	Cytoplasmic residues influence the voltage-dependence of the gating of human K+ channels. NeuroReport, 2000, 11, 2913-2917.	1.2	5
58	Inward and outward potassium currents through the same chimeric human Kv channel. European Biophysics Journal, 2003, 32, 113-121.	2.2	5
59	A tale of two tails: cytosolic termini and K+ channel function. Progress in Biophysics and Molecular Biology, 2003, 83, 153-170.	2.9	5
60	Arranging the elements of the potassium channel: the T1 domain occludes the cytoplasmic face of the channel. European Biophysics Journal, 2004, 33, 370-6.	2.2	5
61	N type rapid inactivation in human Kv1.4 channels: functional role of a putative C-terminal helix. Molecular Membrane Biology, 2005, 22, 389-400.	2.0	5
62	Role of Arabidopsis RAB5 GEF vps9a in maintaining potassium levels under sodium chloride stress. Plant Direct, 2020, 4, e00273.	1.9	4
63	Characterization of a 22-residue peptide derived from a designed ion channel. Biochimica Et Biophysica Acta - Biomembranes, 1997, 1328, 177-184.	2.6	3
64	Disulfide luminescence. Emission characteristics of cyclic tetrapeptide disulfides. Biochemical and Biophysical Research Communications, 1981, 103, 498-504.	2.1	2
65	Dynamics of Membrane Proteins. Springer Series in Biophysics, 2017, , 219-241.	0.4	2
66	Inhibition of virus infection by transient expression of short hairpin RNA targeting the methyltransferase domain of Tobacco mosaic virus replicase. Phytoparasitica, 2013, 41, 9-15.	1.2	1
67	Expression and Purification of OsVDAC4. Methods in Enzymology, 2015, 556, 51-75.	1.0	1
68	Fluorescence polarization as a tool to study lectin-sugar interaction. Journal of Biosciences, 1983, 5, 31-39.	1.1	0
69	Fast inactivation in potassium channels: An interplay of cytoplasmic domains. Biochemical and Biophysical Research Communications, 2009, 388, 490-495.	2.1	0
70	Measurements of Cytosolic Ion Concentrations in Live Cells. , 2013, 953, 233-241.		0