Michael W Pennington

List of Publications by Year
in descending order

98 papers	6,966 citations	53660 45 h-index	58464 82 g-index
103 all docs	103 docs citations	103 times ranked	4983 citing authors

#	Article	IF	Citations
1	Kv1.3 channels are a therapeutic target for T cell-mediated autoimmune diseases. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17414-17419.	3.3	470
2	K+ channels as targets for specific immunomodulation. Trends in Pharmacological Sciences, 2004, 25, 280-289.	4.0	404
3	The voltage-gated Kv1.3 K+ channel in effector memory T cells as new target for MS. Journal of Clinical Investigation, 2003, 111, 1703-1713.	3.9	368
4	Selective blockade of T lymphocyte K+ channels ameliorates experimental autoimmune encephalomyelitis, a model for multiple sclerosis. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 13942-13947.	3.3	309
5	Identification and therapeutic modulation of a pro-inflammatory subset of disease-associated-microglia in Alzheimerâ€™s disease. Molecular Neurodegeneration, 2018, 13, 24.	4.4	267
6	Targeting Effector Memory T Cells with a Selective Peptide Inhibitor of Kv1.3 Channels for Therapy of Autoimmune Diseases. Molecular Pharmacology, 2005, 67, 1369-1381.	1.0	232
7	ShK-Dap22, a Potent Kv1.3-specific Immunosuppressive Polypeptide. Journal of Biological Chemistry, 1998, 273, 32697-32707.	1.6	222
8	Peptide therapeutics from venom: Current status and potential. Bioorganic and Medicinal Chemistry, 2018, 26, 2738-2758.	1.4	205
9	Development of a sea anemone toxin as an immunomodulator for therapy of autoimmune diseases. Toxicon, 2012, 59, 529-546.	0.8	203
10	Imaging of Effector Memory T Cells during a Delayed-Type Hypersensitivity Reaction and Suppression by Kv1.3 Channel Block. Immunity, 2008, 29, 602-614.	6.6	197
11	Solution structure of ShK toxin, a novel potassium channel inhibitor from a sea anemone. Nature Structural and Molecular Biology, 1996, 3, 317-320.	3.6	184
12	Bass Hepcidin Synthesis, Solution Structure, Antimicrobial Activities and Synergism, and in Vivo Hepatic Response to Bacterial Infections. Journal of Biological Chemistry, 2005, 280, 9272-9282.	1.6	179
13	K+ Channel Expression during B Cell Differentiation: Implications for Immunomodulation and Autoimmunity. Journal of Immunology, 2004, 173, 776-786.	0.4	175
14	The Caspase-like Sites of Proteasomes, Their Substrate Specificity, New Inhibitors and Substrates, and Allosteric Interactions with the Trypsin-like Sites. Journal of Biological Chemistry, 2003, 278, 35869-35877.	1.6	167
15	Three-dimensional Structure in Solution of the Calcium Channel Blocker Ï‰-Conotoxin. Journal of Molecular Biology, 1993, 234, 405-420.	2.0	144
16	Engineering a Stable and Selective Peptide Blocker of the Kv1.3 Channel in T Lymphocytes. Molecular Pharmacology, 2009, 75, 762-773.	1.0	128
17	Structural Conservation of the Pores of Calcium-activated and Voltage-gated Potassium Channels Determined by a Sea Anemone Toxin. Journal of Biological Chemistry, 1999, 274, 21885-21892.	1.6	119
18	Durable Pharmacological Responses from the Peptide ShK-186, a Specific Kv1.3 Channel Inhibitor That Suppresses T Cell Mediators of Autoimmune Disease. Journal of Pharmacology and Experimental Therapeutics, 2012, 342, 642-653.	1.3	105

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19	Insensitivity to pain induced by a potent selective closed-state Nav1.7 inhibitor. Scientific Reports, 2017, 7, 39662.	1.6	101
20	Structure-guided Transformation of Charybdotoxin Yields an Analog That Selectively Targets Ca2+-activated over Voltage-gated K+ Channels. Journal of Biological Chemistry, 2000, 275, 1201-1208.	1.6	94
21	Characterization of the Functional Properties of the Voltage-Gated Potassium Channel Kv1.3 in Human CD4+ T Lymphocytes. Journal of Immunology, 2007, 179, 4563-4570.	0.4	86
22	Chemical synthesis and characterization of ShK toxin: a potent potassium channel inhibitor from a sea anemone. International Journal of Peptide and Protein Research, 1995, 46, 354-358.	0.1	84
23	Analogs of the Sea Anemone Potassium Channel Blocker ShK for the Treatment of Autoimmune Diseases. Inflammation and Allergy: Drug Targets, 2011, 10, 313-321.	1.8	83
24	A Novel Fluorescent Toxin to Detect and Investigate Kv1.3 Channel Up-regulation in Chronically Activated T Lymphocytes. Journal of Biological Chemistry, 2003, 278, 9928-9937.	1.6	80
25	Kv1.3 potassium channels as a therapeutic target in multiple sclerosis. Expert Opinion on Therapeutic Targets, 2009, 13, 909-924.	1.5	79
26	Isolation, characterization, and amino acid sequence of a polypeptide neurotoxin occurring in the sea anemone Stichodactyla helianthus. Biochemistry, 1989, 28, 3483-3489.	1.2	77
27	Potassium Channel Blockade by the Sea Anemone Toxin ShK for the Treatment of Multiple Sclerosis and Other Autoimmune Diseases. Current Medicinal Chemistry, 2004, 11, 3041-3052.	1.2	77
28	An Essential Binding Surface for ShK Toxin Interaction with Rat Brain Potassium Channelsâ€. Biochemistry, 1996, 35, 16407-16411.	1.2	76
29	Kv1.3 channelâ€blocking immunomodulatory peptides from parasitic worms: implications for autoimmune diseases. FASEB Journal, 2014, 28, 3952-3964.	0.2	76
30	Potassium Channel Modulation by a Toxin Domain in Matrix Metalloprotease 23. Journal of Biological Chemistry, 2010, 285, 9124-9136.	1.6	73
31	A potent and Kv1.3-selective analogue of the scorpion toxin HsTX1 as a potential therapeutic for autoimmune diseases. Scientific Reports, 2014, 4, 4509.	1.6	73
32	Identification of Three Separate Binding Sites on SHK Toxin, a Potent Inhibitor of Voltage-Dependent Potassium Channels in Human T-Lymphocytes and Rat Brain. Biochemical and Biophysical Research Communications, 1996, 219, 696-701.	1.0	71
33	A Continuous Fluorescence-Based Assay of Human Cytomegalovirus Protease Using a Peptide Substrate. Analytical Biochemistry, 1995, 227, 148-155.	1.1	68
34	FITC-Conjugated Cyclic RGD Peptides as Fluorescent Probes for Staining Integrin Î±_vÎ²₃/Î±_vÎ²₅ in Tumor Tissues. Bioconjugate Chemistry, 2014, 25, 1925-1941.	1.8	68
35	Potassium channels in T lymphocytes: toxins to therapeutic immunosuppressants. Toxicon, 2001, 39, 1269-1276.	0.8	66
36	Mutating a Critical Lysine in ShK Toxin Alters Its Binding Configuration in the Poreâ^'Vestibule Region of the Voltage-Gated Potassium Channel, Kv1.3. Biochemistry, 2002, 41, 11963-11971.	1.2	64

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37	Blockade of Kv1.3 channels ameliorates radiation-induced brain injury. Neuro-Oncology, 2014, 16, 528-539.	0.6	59
38	A Potent and Selective Peptide Blocker of the Kv1.3 Channel: Prediction from Free-Energy Simulations and Experimental Confirmation. PLoS ONE, 2013, 8, e78712.	1.1	58
39	Blocking KV1.3 Channels Inhibits Th2 Lymphocyte Function and Treats a Rat Model of Asthma. Journal of Biological Chemistry, 2014, 289, 12623-12632.	1.6	58
40	A systems pharmacology-based approach to identify novel Kv1.3 channel-dependent mechanisms in microglial activation. Journal of Neuroinflammation, 2017, 14, 128.	3.1	58
41	Noncompetitive Inhibition of N-Methyl-D-Aspartate by Conantokin-G: Evidence for an Allosteric Interaction at Polyamine Sites. Journal of Neurochemistry, 1992, 59, 1516-1521.	2.1	56
42	Potassium channels Kv1.3 and Kv1.5 are expressed on blood-derived dendritic cells in the central nervous system. Annals of Neurology, 2006, 60, 118-127.	2.8	55
43	Development of Highly Selective Kv1.3-Blocking Peptides Based on the Sea Anemone Peptide ShK. Marine Drugs, 2015, 13, 529-542.	2.2	55
44	The D-Diastereomer of ShK Toxin Selectively Blocks Voltage-gated K+ Channels and Inhibits T Lymphocyte Proliferation. Journal of Biological Chemistry, 2008, 283, 988-997.	1.6	54
45	Prolonged immunomodulation in inflammatory arthritis using the selective Kv1.3 channel blocker HsTX1[R14A] and its PEGylated analog. Clinical Immunology, 2017, 180, 45-57.	1.4	50
46	Total Synthesis of Human Hepcidin through Regioselective Disulfideâ€Bond Formation by using the Safetyâ€Catch Cysteine Protecting Group 4,4â€²â€Dimethylsulfinylbenzhydryl. Angewandte Chemie - International Edition, 2014, 53, 2931-2934.	7.2	46
47	Rational design and synthesis of selective BACE-1 inhibitors. Bioorganic and Medicinal Chemistry Letters, 2004, 14, 601-604.	1.0	45
48	Blocking KCa3.1 Channels Increases Tumor Cell Killing by a Subpopulation of Human Natural Killer Lymphocytes. PLoS ONE, 2013, 8, e76740.	1.1	45
49	The protease and the assembly protein of Kaposi's sarcoma-associated herpesvirus (human herpesvirus) Tj ETQq1 1 0.784314 rgBT /Ov	1.5	44
50	Biophysical basis for Kv1.3 regulation of membrane potential changes induced by <scp>P2X4</scp>â€mediated calcium entry in microglia. Glia, 2020, 68, 2377-2394.	2.5	43
51	A Câ€terminally amidated analogue of ShK is a potent and selective blocker of the voltageâ€gated potassium channel Kv1.3. FEBS Letters, 2012, 586, 3996-4001.	1.3	41
52	^{99m}Tc-Galacto-RGD₂: A Novel ^{99m}Tc-Labeled Cyclic RGD Peptide Dimer Useful for Tumor Imaging. Molecular Pharmaceutics, 2013, 10, 3304-3314.	2.3	38
53	Assignment of the three disulfide bonds in ShK toxin: A potent potassium channel inhibitor from the sea anemone Stichodactyla helianthus. International Journal of Peptide Research and Therapeutics, 1995, 1, 291-297.	0.1	35
54	Role of Disulfide Bonds in the Structure and Potassium Channel Blocking Activity of ShK Toxin. Biochemistry, 1999, 38, 14549-14558.	1.2	32

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55	Ionisation behaviour and solution properties of the potassium-channel blocker ShK toxin. FEBS Journal, 1998, 251, 133-141.	0.2	31
56	A short practical synthesis of 2â€²-deoxymugineic acid. Tetrahedron Letters, 2005, 46, 1419-1421.	0.7	31
57	Pulmonary Delivery of the Kv1.3-Blocking Peptide HsTX1 [R14A] for the Treatment of Autoimmune Diseases. Journal of Pharmaceutical Sciences, 2016, 105, 650-656.	1.6	27
58	Nâ€terminally extended analogues of the K⁺ channel toxin from StichodactylaÂhelianthus as potent and selective blockers of the voltageâ€gated potassium channel Kv1.3. FEBS Journal, 2015, 282, 2247-2259.	2.2	26
59	Buccal mucosal delivery of a potent peptide leads to therapeutically-relevant plasma concentrations for the treatment of autoimmune diseases. Journal of Controlled Release, 2015, 199, 37-44.	4.8	26
60	Commercial manufacturing of current good manufacturing practice peptides spanning the gamut from neoantigen to commercial large-scale products. Medicine in Drug Discovery, 2021, 9, 100071.	2.3	26
61	Auto-inactivation by cleavage within the dimer interface of kaposiâ€™s sarcoma-associated herpesvirus protease. Journal of Molecular Biology, 1999, 289, 197-203.	2.0	25
62	Expression and isotopic labelling of the potassium channel blocker ShK toxin as a thioredoxin fusion protein in bacteria. Toxicon, 2012, 60, 840-850.	0.8	23
63	KCa1.1 channels regulate Î²₁â€integrin function and cell adhesion in rheumatoid arthritis fibroblastâ€like synoviocytes. FASEB Journal, 2017, 31, 3309-3320.	0.2	22
64	Targeting KCa1.1 Channels with a Scorpion Venom Peptide for the Therapy of Rat Models of Rheumatoid Arthritis. Journal of Pharmacology and Experimental Therapeutics, 2018, 365, 227-236.	1.3	20
65	Structure, folding and stability of a minimal homologue from Anemonia sulcata of the sea anemone potassium channel blocker ShK. Peptides, 2018, 99, 169-178.	1.2	20
66	Designed Peptide Analogues of the Potassium Channel Blocker ShK Toxin. Biochemistry, 2001, 40, 15528-15537.	1.2	19
67	Efficient Asymmetric Synthesis of (S)- and (R)-N-Fmoc-S-Trityl-Î±-methylcysteine Using Camphorsultam as a Chiral Auxiliary. Journal of Organic Chemistry, 2004, 69, 4551-4554.	1.7	19
68	Synthesis, folding, structure and activity of a predicted peptide from the sea anemone Oulactis sp. with an ShKT fold. Toxicon, 2018, 150, 50-59.	0.8	19
69	KCa1.1 and Kv1.3 channels regulate the interactions between fibroblast-like synoviocytes and T lymphocytes during rheumatoid arthritis. Arthritis Research and Therapy, 2019, 21, 6.	1.6	19
70	Efficient synthesis of protected l-phosphonophenylalanine (Ppa) derivatives suitable for solid phase peptide synthesis. Tetrahedron Letters, 2007, 48, 4051-4054.	0.7	18
71	Chemical synthesis of a neurotoxic polypeptide from the sea anemone Stichodactyla helianthus⁺. International Journal of Peptide and Protein Research, 1990, 36, 335-343.	0.1	18
72	Modulation of Lymphocyte Potassium Channel K_V1.3 by Membrane-Penetrating, Joint-Targeting Immunomodulatory Plant Defensin. ACS Pharmacology and Translational Science, 2020, 3, 720-736.	2.5	18

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73	Enabling Noninvasive Systemic Delivery of the Kv1.3-Blocking Peptide HsTX1[R14A] via the Buccal Mucosa. Journal of Pharmaceutical Sciences, 2016, 105, 2173-2179.	1.6	17
74	Comprehensive engineering of the tarantula venom peptide huwentoxin-IV to inhibit the human voltage-gated sodium channel hNav1.7. Journal of Biological Chemistry, 2020, 295, 1315-1327.	1.6	17
75	Sea anemone toxins as templates for the design of immunosuppressant drugs. Journal of Computer - Aided Molecular Design, 1999, 15/16, 111-129.	1.0	16
76	Distribution and kinetics of the Kv1.3-blocking peptide HsTX1[R14A] in experimental rats. Scientific Reports, 2017, 7, 3756.	1.6	15
77	Identification, chemical synthesis, structure, and function of a new K_V1 channel blocking peptide from Oulactis sp.. Peptide Science, 2018, 110, e24073.	1.0	15
78	A helical capping motif in ShK toxin and its role in helix stabilization. Biopolymers, 2001, 58, 422-436.	1.2	11
79	Synthesis and characterization of a disulfide bond isomer of omega-conotoxin GVIA. Toxicon, 1992, 30, 755-764.	0.8	10
80	Comprehensive engineering of the tarantula venom peptide huwentoxin-IV to inhibit the human voltage-gated sodium channel hNav1.7. Journal of Biological Chemistry, 2020, 295, 1315-1327.	1.6	10
81	Synthesis and structural characterisation of analogues of the potassium channel blocker charybdotoxin. BBA - Proteins and Proteomics, 1996, 1292, 31-38.	2.1	7
82	CHAPTER 10. Case Study 2: Transforming a Toxin into a Therapeutic: theÂSea Anemone Potassium Channel Blocker ShK Toxin for Treatment of Autoimmune Diseases. RSC Drug Discovery Series, 2015, , 255-274.	0.2	7
83	Reinvestigation of the biological activity of d-allo-ShK protein. Journal of Biological Chemistry, 2017, 292, 12599-12605.	1.6	7
84	An efficient asymmetric synthesis of Fmoc-l-cyclopentylglycine via diastereoselective alkylation of glycine enolate equivalent. Tetrahedron Letters, 2003, 44, 2683-2685.	0.7	6
85	A facile method to prepare C-terminal fluorescently labelled peptides by an Fmoc strategy. International Journal of Peptide Research and Therapeutics, 1994, 1, 143-148.	0.1	5
86	Synthesis of the cardiac inotropic polypeptide anthopleurinâ€A. International Journal of Peptide and Protein Research, 1994, 43, 463-470.	0.1	5
87	The Single Disulfide-Directed Î²-Hairpin Fold. Dynamics, Stability, and Engineering. Biochemistry, 2017, 56, 2455-2466.	1.2	5
88	HIV protease, chromogenic substrate and inhibitor. , 1991, , 787-789.		5
89	Sea Anemone Polypeptide Toxins Affecting Sodium Channels. ACS Symposium Series, 1990, , 279-289.	0.5	4
90	Mass spectral analysis of peptides containing nitrobenzyl moieties. International Journal of Peptide Research and Therapeutics, 1996, 2, 301-305.	0.1	4

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91	Secondary structure of ShK toxin, a potassium-channel-blocking peptide. International Journal of Peptide Research and Therapeutics, 1996, 3, 69-72.	0.1	3
92	Addition ofo-aminobenzoic acid during Fmoc solid phase synthesis of a fluorogenic substrate containing 3-nitrotyrosine. International Journal of Peptide Research and Therapeutics, 2002, 9, 221-225.	0.1	3
93	K V 1.3 channels are novel determinants of macrophageâ€dependent endothelial dysfunction in angiotensin IIâ€induced hypertension in mice. British Journal of Pharmacology, 2021, 178, 1836-1854.	2.7	3
94	Kv1.3 Channel Up-Regulation in Peripheral Blood T Lymphocytes of Patients With Multiple Sclerosis. Frontiers in Pharmacology, 2021, 12, 714841.	1.6	3
95	Efficient Synthesis of Protected L-Phosphonophenylalanine (Ppa) Derivatives Suitable for Solid Phase Synthesis. Advances in Experimental Medicine and Biology, 2009, 611, 191-192.	0.8	2
96	Targeted tyrosine iodination in a multiâ€tyrosine vasopressin analog. Journal of Peptide Science, 2007, 13, 756-761.	0.8	0
97	Enantioselective synthesis of Fmoc- -3-(2-benzothienyl)alanine (2-BtAla) via diastereoselective alkylation of a glycine equivalent. Tetrahedron Letters, 2017, 58, 4388-4390.	0.7	0
98	Role of disulfide bonds in the structure and activity of ShK toxin. , 2002, , 760-761.		0