Zhijian Cao

List of Publications by Year
in descending order

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117 papers	3,454 citations	117453 34 h-index	182168 51 g-index
117 all docs	117 docs citations	117 times ranked	3061 citing authors

#	Article	IF	Citations
1	The genome of Mesobuthus martensii reveals a unique adaptation model of arthropods. Nature Communications, 2013, 4, 2602.	5.8	187
2	Virucidal activity of a scorpion venom peptide variant mucroporin-M1 against measles, SARS-CoV and influenza H5N1 viruses. Peptides, 2011, 32, 1518-1525.	1.2	113
3	Neurotoxin-conjugated upconversion nanoprobes for direct visualization ofÂtumors under near-infrared irradiation. Biomaterials, 2010, 31, 8724-8731.	5.7	109
4	Extreme diversity of scorpion venom peptides and proteins revealed by transcriptomic analysis: Implication for proteome evolution of scorpion venom arsenal. Journal of Proteomics, 2012, 75, 1563-1576.	1.2	96
5	Molecular diversity of toxic components from the scorpion Heterometrus petersii venom revealed by proteomic and transcriptome analysis. Proteomics, 2010, 10, 2471-2485.	1.3	89
6	Mucroporin, the First Cationic Host Defense Peptide from the Venom ofLychas mucronatus. Antimicrobial Agents and Chemotherapy, 2008, 52, 3967-3972.	1.4	84
7	Transcriptome analysis of the venom gland of the scorpion Scorpiops jendeki: implication for the evolution of the scorpion venom arsenal. BMC Genomics, 2009, 10, 290.	1.2	84
8	Imcroporin, a New Cationic Antimicrobial Peptide from the Venom of the Scorpion Isometrus maculates. Antimicrobial Agents and Chemotherapy, 2009, 53, 3472-3477.	1.4	83
9	Antibacterial Activity and Mechanism of a Scorpion Venom Peptide Derivative In Vitro and In Vivo. PLoS ONE, 2012, 7, e40135.	1.1	79
10	A new natural Î±-helical peptide from the venom of the scorpion Heterometrus petersii kills HCV. Peptides, 2011, 32, 11-19.	1.2	68
11	Synthesis of Highly Luminescent and Anion-Exchangeable Cerium-Doped Layered Yttrium Hydroxides for Sensing and Photofunctional Applications. Advanced Functional Materials, 2011, 21, 4388-4396.	7.8	65
12	Virus-induced p38 MAPK activation facilitates viral infection. Theranostics, 2020, 10, 12223-12240.	4.6	65
13	Simulation of the Interaction Between ScyTx and Small Conductance Calcium-Activated Potassium Channel by Docking and MM-PBSA. Biophysical Journal, 2004, 87, 105-112.	0.2	61
14	Molecular diversity of Chaerilidae venom peptides reveals the dynamic evolution of scorpion venom components from Buthidae to non-Buthidae. Journal of Proteomics, 2013, 89, 1-14.	1.2	59
15	Anti-HIV-1 Activity of a New Scorpion Venom Peptide Derivative Kn2-7. PLoS ONE, 2012, 7, e34947.	1.1	59
16	Ctriporin, a New Anti-Methicillin-Resistant Staphylococcus aureus Peptide from the Venom of the Scorpion Chaerilus tricostatus. Antimicrobial Agents and Chemotherapy, 2011, 55, 5220-5229.	1.4	57
17	Mucroporin-M1 Inhibits Hepatitis B Virus Replication by Activating the Mitogen-activated Protein Kinase (MAPK) Pathway and Down-regulating HNF4Î± in Vitro and in Vivo*. Journal of Biological Chemistry, 2012, 287, 30181-30190.	1.6	57
18	Molecular basis of inhibitory peptide maurotoxin recognizing Kv1.2 channel explored by ZDOCK and molecular dynamic simulations. Proteins: Structure, Function and Bioinformatics, 2008, 70, 844-854.	1.5	55

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19	BmKCT toxin inhibits glioma proliferation and tumor metastasis. Cancer Letters, 2010, 291, 158-166.	3.2	55
20	StCT2, a new antibacterial peptide characterized from the venom of the scorpion Scorpiops tibetanus. Peptides, 2012, 36, 213-220.	1.2	54
21	Interaction Simulation of hERG K+Channel with Its Specific BeKm-1 Peptide:Â Insights into the Selectivity of Molecular Recognition. Journal of Proteome Research, 2007, 6, 611-620.	1.8	53
22	SdPI, The First Functionally Characterized Kunitz-Type Trypsin Inhibitor from Scorpion Venom. PLoS ONE, 2011, 6, e27548.	1.1	53
23	Inhibitory activity and mechanism of two scorpion venom peptides against herpes simplex virus type 1. Antiviral Research, 2014, 102, 1-10.	1.9	53
24	Counter-regulatory â€˜Renin-Angiotensinâ€™ System-based Candidate Drugs to Treat COVID-19 Diseases in SARS-CoV-2-infected Patients. Infectious Disorders - Drug Targets, 2020, 20, 407-408.	0.4	49
25	The Pathophysiology of Long COVID throughout the Renin-Angiotensin System. Molecules, 2022, 27, 2903.	1.7	44
26	Proteomic analysis of the venom from the scorpion Mesobuthus martensii. Journal of Proteomics, 2014, 106, 162-180.	1.2	43
27	Scorpion Potassium Channel-blocking Defensin Highlights a Functional Link with Neurotoxin. Journal of Biological Chemistry, 2016, 291, 7097-7106.	1.6	42
28	The Renin-Angiotensin System: A Key Role in SARS-CoV-2-Induced COVID-19. Molecules, 2021, 26, 6945.	1.7	41
29	Treating autoimmune disorders with venom-derived peptides. Expert Opinion on Biological Therapy, 2017, 17, 1065-1075.	1.4	40
30	Angiotensin II Type I Receptor (AT1R): The Gate towards COVID-19-Associated Diseases. Molecules, 2022, 27, 2048.	1.7	38
31	A Tat-conjugated Peptide Nucleic Acid Tat-PNA-DR Inhibits Hepatitis B Virus Replication In Vitro and In Vivo by Targeting LTR Direct Repeats of HBV RNA. Molecular Therapy - Nucleic Acids, 2016, 5, e295.	2.3	37
32	Cloning and functional characterization of a new antimicrobial peptide gene StCT1 from the venom of the scorpion Scorpiops tibetanus. Peptides, 2010, 31, 22-26.	1.2	36
33	Design of histidine-rich peptides with enhanced bioavailability and inhibitory activity against hepatitis C virus. Biomaterials, 2013, 34, 3511-3522.	5.7	36
34	SjAPI, the First Functionally Characterized Ascaris-Type Protease Inhibitor from Animal Venoms. PLoS ONE, 2013, 8, e57529.	1.1	35
35	Endogenous animal toxin-like human Î²-defensin 2 inhibits own K+ channels through interaction with channel extracellular pore region. Cellular and Molecular Life Sciences, 2015, 72, 845-853.	2.4	34
36	Therapeutic Potential of a Scorpion Venom-Derived Antimicrobial Peptide and Its Homologs Against Antibiotic-Resistant Gram-Positive Bacteria. Frontiers in Microbiology, 2018, 9, 1159.	1.5	34

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37	Point of view: Should COVID-19 patients be supplemented with vitamin D?. Maturitas, 2020, 140, 24-26.	1.0	33
38	Expression, purification and functional characterization of a recombinant scorpion venom peptide BmTXKÎ². Peptides, 2003, 24, 187-192.	1.2	32
39	Proteinâ^'Protein Recognition Control by Modulating Electrostatic Interactions. Journal of Proteome Research, 2010, 9, 3118-3125.	1.8	32
40	Unusual binding mode of scorpion toxin BmKTX onto potassium channels relies on its distribution of acidic residues. Biochemical and Biophysical Research Communications, 2014, 447, 70-76.	1.0	32
41	BF9, the First Functionally Characterized Snake Toxin Peptide with Kunitz-Type Protease and Potassium Channel Inhibiting Properties. Journal of Biochemical and Molecular Toxicology, 2014, 28, 76-83.	1.4	32
42	Overview of Scorpion Species from China and Their Toxins. Toxins, 2014, 6, 796-815.	1.5	31
43	A scorpion venom peptide Ev37 restricts viral late entry by alkalizing acidic organelles. Journal of Biological Chemistry, 2019, 294, 182-194.	1.6	31
44	SARS-CoV-2 & Covid-19: Key-Roles of the â€˜Renin-Angiotensinâ€™ System / Vitamin D Impacting Drug and Vaccine Developments. Infectious Disorders - Drug Targets, 2020, 20, 348-349.	0.4	31
45	Capivasertib restricts SARS-CoV-2 cellular entry: a potential clinical application for COVID-19. International Journal of Biological Sciences, 2021, 17, 2348-2355.	2.6	31
46	Histidine-rich Modification of a Scorpion-derived Peptide Improves Bioavailability and Inhibitory Activity against HSV-1. Theranostics, 2018, 8, 199-211.	4.6	30
47	Highly biocompatible and recyclable biomimetic nanoparticles for antibiotic-resistant bacteria infection. Biomaterials Science, 2021, 9, 826-834.	2.6	28
48	Plectasin, First Animal Toxin-Like Fungal Defensin Blocking Potassium Channels through Recognizing Channel Pore Region. Toxins, 2015, 7, 34-42.	1.5	27
49	Hp1404, a New Antimicrobial Peptide from the Scorpion Heterometrus petersii. PLoS ONE, 2014, 9, e97539.	1.1	27
50	Cloning and characterization of BmK86, a novel K+-channel blocker from scorpion venom. Biochemical and Biophysical Research Communications, 2007, 360, 728-734.	1.0	26
51	Two Conserved Arginine Residues from the SK3 Potassium Channel Outer Vestibule Control Selectivity of Recognition by Scorpion Toxins. Journal of Biological Chemistry, 2013, 288, 12544-12553.	1.6	26
52	Toxin acidic residue evolutionary function-guided design of de novo peptide drugs for the immunotherapeutic target, the Kv1.3 channel. Scientific Reports, 2015, 5, 9881.	1.6	26
53	ImKTx1, a new Kv1.3 channel blocker with a unique primary structure. Journal of Biochemical and Molecular Toxicology, 2011, 25, 244-251.	1.4	25
54	Genome-wide analysis of homeobox genes from Mesobuthus martensii reveals Hox gene duplication in scorpions. Insect Biochemistry and Molecular Biology, 2015, 61, 25-33.	1.2	25

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55	A Scorpion Defensin BmKDfsin4 Inhibits Hepatitis B Virus Replication in Vitro. Toxins, 2016, 8, 124.	1.5	25
56	Tick peptides evoke itch by activating MrgprC11/MRGPRX1 to sensitize TRPV1 in pruriceptors. Journal of Allergy and Clinical Immunology, 2021, 147, 2236-2248.e16.	1.5	25
57	Molecular Information of Charybdotoxin Blockade in the Large Conductance Calcium-activated Potassium Channel. Journal of Chemical Information and Modeling, 2009, 49, 1831-1838.	2.5	24
58	ImKTx88, a novel selective Kv1.3 channel blocker derived from the scorpion Isometrus maculates. Toxicon, 2011, 57, 348-355.	0.8	24
59	The Scorpion Venom Peptide Smp76 Inhibits Viral Infection by Regulating Type-I Interferon Response. Virologica Sinica, 2018, 33, 545-556.	1.2	24
60	ML-SA1, a selective TRPML agonist, inhibits DENV2 and ZIKV by promoting lysosomal acidification and protease activity. Antiviral Research, 2020, 182, 104922.	1.9	24
61	Human Î±â€defensins are immuneâ€related Kv1.3 channel inhibitors: new support for their roles in adaptive immunity. FASEB Journal, 2015, 29, 4324-4333.	0.2	23
62	Identification of two novel Chlorotoxin derivatives CA4 and CTX-23 with chemotherapeutic and anti-angiogenic potential. Scientific Reports, 2016, 6, 19799.	1.6	22
63	Diverse Structural Features of Potassium Channels Characterized by Scorpion Toxins as Molecular Probes. Molecules, 2019, 24, 2045.	1.7	22
64	Inhibitory Activity of a Scorpion Defensin BmKDfsin3 against Hepatitis C Virus. Antibiotics, 2020, 9, 33.	1.5	22
65	The Scorpion Toxin Analogue BmKTX-D33H as a Potential Kv1.3 Channel-Selective Immunomodulator for Autoimmune Diseases. Toxins, 2016, 8, 115.	1.5	20
66	Molecular cloning and electrophysiological studies on the first K+ channel toxin (LmKTx8) derived from scorpion Lychas mucronatus. Peptides, 2007, 28, 2306-2312.	1.2	18
67	Expression and characterization of a novel scorpine-like peptide Ev37, from the scorpion Euscorpiops validus. Protein Expression and Purification, 2013, 88, 127-133.	0.6	18
68	Molecular cloning and functional identification of a new K+ channel blocker, LmKTx10, from the scorpion Lychas mucronatus. Peptides, 2009, 30, 675-680.	1.2	17
69	Cloning and characterization of a novel Kunitz-type inhibitor from scorpion with unique cysteine framework. Toxicon, 2013, 72, 5-10.	0.8	17
70	Expression of recombinant Î±-toxin BmKM9 from scorpion Buthus martensii Karsch and its functional characterization on sodium channels. Peptides, 2018, 99, 153-160.	1.2	16
71	Kv Channel S1-S2 Linker Working as a Binding Site of Human Î²-Defensin 2 for Channel Activation Modulation. Journal of Biological Chemistry, 2015, 290, 15487-15495.	1.6	15
72	Recombinant expression, purification, and characterization of scorpion toxin BmÎ±TX14. Protein Expression and Purification, 2012, 82, 325-331.	0.6	14

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73	Fusion expression and purification of four disulfide-rich peptides reveals enterokinase secondary cleavage sites in animal toxins. Peptides, 2013, 39, 145-151.	1.2	14
74	Functional characterization of a new non-Kunitz serine protease inhibitor from the scorpion Lychas mucronatus. International Journal of Biological Macromolecules, 2015, 72, 158-162.	3.6	14
75	Identification of a new specific Kv1.3 channel blocker, Ctri9577, from the scorpion Chaerilus tricostatus. Peptides, 2012, 36, 94-99.	1.2	13
76	A new Kunitz-type plasmin inhibitor from scorpion venom. Toxicon, 2015, 106, 7-13.	0.8	13
77	Topology, Antiviral Functional Residues and Mechanism of IFITM1. Viruses, 2020, 12, 295.	1.5	12
78	The scorpions of Yunnan (China): updated identification key, new record, and distributions (Arachnida: Scorpiones). ZooKeys, 2011, 82, 1-33.	0.5	11
79	Kv1.3 potassium channel-blocking toxin Ctri9577, novel gating modifier of Kv4.3 potassium channel from the scorpion toxin family. Biochemical and Biophysical Research Communications, 2014, 444, 406-410.	1.0	11
80	SjAPI-2 is the first member of a new neurotoxin family with Ascaris-type fold and KCNQ1 inhibitory activity. International Journal of Biological Macromolecules, 2015, 79, 504-510.	3.6	11
81	K1K8: an Hp1404-derived antibacterial peptide. Applied Microbiology and Biotechnology, 2016, 100, 5069-5077.	1.7	11
82	Defensins, a novel type of animal toxin-like potassium channel inhibitor. Toxicon, 2019, 157, 101-105.	0.8	11
83	Notes on the scorpions (Arachnida, Scorpiones) from Xizang with the redescription of Scorpiops jendeki KovaÅ™Ãk, 2000 (Scorpiones, Euscorpiidae) fromÂYunnanÂ(China). ZooKeys, 2013, 301, 51-99.	0.5	10
84	Sj7170, a Unique Dual-function Peptide with a Specific Î±-Chymotrypsin Inhibitory Activity and a Potent Tumor-activating Effect from Scorpion Venom. Journal of Biological Chemistry, 2014, 289, 11667-11680.	1.6	10
85	St20, a new venomous animal derived natural peptide with immunosuppressive and anti-inflammatory activities. Toxicon, 2017, 127, 37-43.	0.8	10
86	Thermostable potassium channel-inhibiting neurotoxins in processed scorpion medicinal material revealed by proteomic analysis: Implications of its pharmaceutical basis in traditional Chinese medicine. Journal of Proteomics, 2019, 206, 103435.	1.2	10
87	Engineering a peptide inhibitor towards the KCNQ1/KCNE1 potassium channel (IKs). Peptides, 2015, 71, 77-83.	1.2	9
88	Human beta-defensin 1, a new animal toxin-like blocker of potassium channel. Toxicon, 2016, 113, 1-6.	0.8	9
89	Neurological, Cognitive, and Behavioral Disorders during <scp>COVID</scp>â€19: The Nitric Oxide Track. Journal of the American Geriatrics Society, 2020, 68, 1922-1923.	1.3	9
90	Counter-Regulatory Renin-Angiotensin System: An Important Line of Research to Understand and Limit the Severity of COVID-19. Infectious Disorders - Drug Targets, 2021, 21, .	0.4	9

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91	p38 activation and viral infection. Expert Reviews in Molecular Medicine, 2022, 24, e4.	1.6	9
92	Adaptive Evolution after Gene Duplication in Î±-KTâ€ŠÃ—â€Š14 Subfamily from Buthus martensii Karsch. IUBMB Life, 2005, 57, 513-521.	1.5	8
93	Functional characterization of two novel scorpion sodium channel toxins from Lychas mucronatus. Toxicon, 2014, 90, 318-325.	0.8	7
94	ML-SA1 and SN-2 inhibit endocytosed viruses through regulating TRPML channel expression and activity. Antiviral Research, 2021, 195, 105193.	1.9	7
95	A naturally occurring non-coding fusion transcript derived from scorpion venom gland: implication for the regulation of scorpion toxin gene expression. FEBS Letters, 2001, 508, 241-244.	1.3	6
96	Discovery of three toxin peptides with Kv1.3 channel and IL-2 cytokine-inhibiting activities from Non-Buthidae scorpions, Chaerilus tricostatus and Chaerilus tryznai. Peptides, 2017, 91, 13-19.	1.2	6
97	Molecular characterization and expression analysis of CSÎ±Î² defensin genes from the scorpion Mesobuthus martensii. Bioscience Reports, 2017, 37, .	1.1	6
98	Pharmacological characterization of human beta-defensins 3 and 4 on potassium channels: Evidence of diversity in beta-defensin-potassium channel interactions. Peptides, 2018, 108, 14-18.	1.2	6
99	Ion channel modulation by scorpion hemolymph and its defensin ingredients highlights origin of neurotoxins in telson formed in Paleozoic scorpions. International Journal of Biological Macromolecules, 2020, 148, 351-363.	3.6	6
100	Does MMLV-RT lacking RNase H activity have the capability of switching templates during reverse transcription?. FEBS Letters, 2002, 520, 185-185.	1.3	5
101	A p7 Ion Channel-derived Peptide Inhibits Hepatitis C Virus Infection in Vitro. Journal of Biological Chemistry, 2015, 290, 23254-23263.	1.6	5
102	Molecular basis for the toxin insensitivity of scorpion voltage-gated potassium channel MmKv1. Biochemical Journal, 2016, 473, 1257-1266.	1.7	5
103	Mouse Î²-Defensin 3, A Defensin Inhibitor of Both Its Endogenous and Exogenous Potassium Channels. Molecules, 2018, 23, 1489.	1.7	5
104	Triintsin, a human pathogenic fungus-derived defensin with broad-spectrum antimicrobial activity. Peptides, 2018, 107, 61-67.	1.2	5
105	Purlisin, a toxinâ€like defensin derived from clinical pathogenic fungus Purpureocillium lilacinum with both antimicrobial and potassium channel inhibitory activities. FASEB Journal, 2020, 34, 15093-15107.	0.2	5
106	Identification of an arthropod molecular target for plant-derived natural repellents. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2118152119.	3.3	5
107	BmK86-P1, a New Degradation Peptide with Desirable Thermostability and Kv1.2 Channel-Specific Activity from Traditional Chinese Scorpion Medicinal Material. Toxins, 2021, 13, 610.	1.5	4
108	Pharmacological Effects of a Novel Bradykinin-Related Peptide (RR-18) from the Skin Secretion of the Hejiang Frog (Ordorrana hejiangensis) on Smooth Muscle. Biomedicines, 2020, 8, 225.	1.4	3

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109	Different pharmacological properties between scorpion toxin BmKcug2 and its degraded analogs highlight the diversity of K+ channel blockers from thermally processed scorpions. International Journal of Biological Macromolecules, 2021, 178, 143-153.	3.6	3
110	Molecular Cloning and Functional Identification of the Antimicrobial Peptide Gene Ctri9594 from the Venom of the Scorpion Chaerilus tricostatus. Antibiotics, 2021, 10, 896.	1.5	3
111	The rapid development of the first instar telson with venom secretion highlights the remarkable survival ability of scorpions. Toxicon, 2021, 200, 198-202.	0.8	2
112	A single conserved basic residue in the potassium channel filter region controls KCNQ1 insensitivity toward scorpion toxins. Biochemistry and Biophysics Reports, 2015, 3, 62-67.	0.7	1
113	Neurotoxin-directed synthesis and in vitro evaluation of Au nanoclusters. RSC Advances, 2015, 5, 29647-29652.	1.7	1
114	ImKTx96, a peptide blocker of the Kv1.2 ion channel from the venom of the scorpion Isometrus maculates. Peptides, 2020, 123, 170172.	1.2	1
115	Scorpion Toxin-potassium Channel Interaction Law and its Applications. Venoms and Toxins, 2021, 1, 15-26.	0.3	1
116	Editorial: Venoms, Animal and Microbial Toxins. Frontiers in Pharmacology, 2021, 12, 706573.	1.6	0
117	The Kv1.3 ion channel acts as a host factor restricting viral entry. FASEB Journal, 2021, 35, e20995.	0.2	0