C David Weaver

List of Publications by Year
in descending order

62 papers	1,961 citations	279798 23 h-index	265206 42 g-index
64 all docs	64 docs citations	64 times ranked	2280 citing authors

#	Article	IF	Citations
1	A Thallium-Sensitive, Fluorescence-Based Assay for Detecting and Characterizing Potassium Channel Modulators in Mammalian Cells. Journal of Biomolecular Screening, 2004, 9, 671-677.	2.6	158
2	Small-molecule screen identifies inhibitors of the neuronal K-Cl cotransporter KCC2. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5383-5388.	7.1	139
3	ML297 (VU0456810), the First Potent and Selective Activator of the GIRK Potassium Channel, Displays Antiepileptic Properties in Mice. ACS Chemical Neuroscience, 2013, 4, 1278-1286.	3.5	135
4	A Novel Assay of G_{i/o}-Linked G Protein-Coupled Receptor Coupling to Potassium Channels Provides New Insights into the Pharmacology of the Group III Metabotropic Glutamate Receptors. Molecular Pharmacology, 2008, 73, 1213-1224.	2.3	99
5	Mechanisms underlying the activation of G-proteinâ€“gated inwardly rectifying K ⁺ (GIRK) channels by the novel anxiolytic drug, ML297. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10755-10760.	7.1	97
6	High-Throughput Screening Reveals a Small-Molecule Inhibitor of the Renal Outer Medullary Potassium Channel and Kir7.1. Molecular Pharmacology, 2009, 76, 1094-1103.	2.3	85
7	The Discovery and Characterization of ML218: A Novel, Centrally Active T-Type Calcium Channel Inhibitor with Robust Effects in STN Neurons and in a Rodent Model of Parkinsonâ€™s Disease. ACS Chemical Neuroscience, 2011, 2, 730-742.	3.5	80
8	Further optimization of the K-Cl cotransporter KCC2 antagonist ML077: Development of a highly selective and more potent in vitro probe. Bioorganic and Medicinal Chemistry Letters, 2012, 22, 4532-4535.	2.2	78
9	Development of a Selective Small-Molecule Inhibitor of Kir1.1, the Renal Outer Medullary Potassium Channel. Molecular Pharmacology, 2011, 79, 42-50.	2.3	72
10	Cellular manganese content is developmentally regulated in human dopaminergic neurons. Scientific Reports, 2014, 4, 6801.	3.3	70
11	Sign Inversion in Photopharmacology: Incorporation of Cyclic Azobenzenes in Photoswitchable Potassium Channel Blockers and Openers. Angewandte Chemie - International Edition, 2019, 58, 15421-15428.	13.8	66
12	Discovery and optimization of a novel, selective and brain penetrant M1 positive allosteric modulator (PAM): The development of ML169, an MLPCN probe. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 2697-2701.	2.2	63
13	Identification of Positive Allosteric Modulators VU0155094 (ML397) and VU0422288 (ML396) Reveals New Insights into the Biology of Metabotropic Glutamate Receptor 7. ACS Chemical Neuroscience, 2014, 5, 1221-1237.	3.5	53
14	GIRK Channels Modulate Opioid-Induced Motor Activity in a Cell Type- and Subunit-Dependent Manner. Journal of Neuroscience, 2015, 35, 7131-7142.	3.6	53
15	Optical control of neuronal activity using a light-operated GIRK channel opener (LOGO). Chemical Science, 2016, 7, 2347-2352.	7.4	49
16	Discovery and Characterization of a Potent and Selective Inhibitor of Aedes aegypti Inward Rectifier Potassium Channels. PLoS ONE, 2014, 9, e110772.	2.5	40
17	Discovery, Characterization, and Structure?Activity Relationships of an Inhibitor of Inward Rectifier Potassium (Kir) Channels with Preference for Kir2.3, Kir3.X, and Kir7.1. Frontiers in Pharmacology, 2011, 2, 75.	3.5	39
18	Discovery, Characterization, and Effects on Renal Fluid and Electrolyte Excretion of the Kir4.1 Potassium Channel Pore Blocker, VU0134992. Molecular Pharmacology, 2018, 94, 926-937.	2.3	39

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19	Initial SAR studies on apamin-displacing 2-aminothiazole blockers of calcium-activated small conductance potassium channels. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 5316-5319.	2.2	38
20	Selective Small Molecule Activators of TREK-2 Channels Stimulate Dorsal Root Ganglion c-Fiber Nociceptor Two-Pore-Domain Potassium Channel Currents and Limit Calcium Influx. ACS Chemical Neuroscience, 2017, 8, 558-568.	3.5	32
21	Development and Validation of Fluorescence-Based and Automated Patch Clampâ€“Based Functional Assays for the Inward Rectifier Potassium Channel Kir4.1. Assay and Drug Development Technologies, 2013, 11, 532-543.	1.2	28
22	Discovery of â€˜molecular switchesâ€™ within a GIRK activator scaffold that afford selective GIRK inhibitors. Bioorganic and Medicinal Chemistry Letters, 2013, 23, 4562-4566.	2.2	26
23	Optical control of GIRK channels using visible light. Organic and Biomolecular Chemistry, 2017, 15, 76-81.	2.8	24
24	Screening for AMPA receptor auxiliary subunit specific modulators. PLoS ONE, 2017, 12, e0174742.	2.5	24
25	Discovery and SAR of a novel series of GIRK1/2 and GIRK1/4 activators. Bioorganic and Medicinal Chemistry Letters, 2013, 23, 5195-5198.	2.2	22
26	Development and Validation of a Thallium Flux-Based Functional Assay for the Sodium Channel NaV1.7 and Its Utility for Lead Discovery and Compound Profiling. ACS Chemical Neuroscience, 2015, 6, 871-878.	3.5	22
27	Identification and Characterization of a Compound That Protects Cardiac Tissue from Human Ether-Ã-go-go-related Gene (hERG)-related Drug-induced Arrhythmias. Journal of Biological Chemistry, 2012, 287, 39613-39625.	3.4	21
28	VU0606170, a Selective Slack Channels Inhibitor, Decreases Calcium Oscillations in Cultured Cortical Neurons. ACS Chemical Neuroscience, 2020, 11, 3658-3671.	3.5	21
29	Discovery and Characterization of VU0529331, a Synthetic Small-Molecule Activator of Homomeric G Protein-Gated, Inwardly Rectifying, Potassium (GIRK) Channels. ACS Chemical Neuroscience, 2019, 10, 358-370.	3.5	20
30	GIRK2 splice variants and neuronal G protein-gated K+ channels: implications for channel function and behavior. Scientific Reports, 2017, 7, 1639.	3.3	18
31	Challenges of Finding Novel Drugs Targeting the Kâ€“Cl Cotransporter. ACS Chemical Neuroscience, 2016, 7, 1624-1627.	3.5	17
32	Next-generation inward rectifier potassium channel modulators: discovery and molecular pharmacology. American Journal of Physiology - Cell Physiology, 2021, 320, C1125-C1140.	4.6	17
33	Discovery of potent and selective GIRK1/2 modulators via â€˜molecular switchesâ€™ within a series of 1-(3-cyclopropyl-1-phenyl-1H-pyrazol-5-yl)ureas. Bioorganic and Medicinal Chemistry Letters, 2014, 24, 5102-5106.	2.2	15
34	Analgesic Effects of the GIRK Activator, VU0466551, Alone and in Combination with Morphine in Acute and Persistent Pain Models. ACS Chemical Neuroscience, 2019, 10, 1294-1299.	3.5	15
35	Thallium Flux Assay for Measuring the Activity of Monovalent Cation Channels and Transporters. Methods in Molecular Biology, 2018, 1684, 105-114.	0.9	14
36	Symmetrically substituted dichlorophenes inhibit N-acyl-phosphatidylethanolamine phospholipase D. Journal of Biological Chemistry, 2020, 295, 7289-7300.	3.4	14

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37	High-throughput Screening for Small-molecule Modulators of Inward Rectifier Potassium Channels. Journal of Visualized Experiments, 2013, , .	0.3	13
38	Discovery and Characterization of 1H-Pyrazol-5-yl-2-phenylacetamides as Novel, Non-Urea-Containing GIRK1/2 Potassium Channel Activators. ACS Chemical Neuroscience, 2017, 8, 1873-1879.	3.5	13
39	Highly Selective Y₄ Receptor Antagonist Binds in an Allosteric Binding Pocket. Journal of Medicinal Chemistry, 2021, 64, 2801-2814.	6.4	13
40	A Duplexed High-Throughput Screen to Identify Allosteric Modulators of the Glucagon-Like Peptide 1 and Glucagon Receptors. Journal of Biomolecular Screening, 2014, 19, 847-858.	2.6	12
41	Direct activation of G-protein-gated inward rectifying K+ channels promotes nonrapid eye movement sleep. Sleep, 2019, 42, .	1.1	12
42	Identification and Characterization of the First Selective Y₄ Receptor Positive Allosteric Modulator. Journal of Medicinal Chemistry, 2017, 60, 7605-7612.	6.4	11
43	Discovery of a Novel Series of Orally Bioavailable and CNS Penetrant Glucagon-like Peptide-1 Receptor (GLP-1R) Noncompetitive Antagonists Based on a 1,3-Disubstituted-7-aryl-5,5-bis(trifluoromethyl)-5,8-dihydropyrimido[4,5-d]pyrimidine-2,4(1H,3H)-dione Core. Journal of Medicinal Chemistry, 2017, 60, 1611-1616.	6.4	10
44	Label-Free Whole Cell Biosensing for High-Throughput Discovery of Activators and Inhibitors Targeting G Protein-Activated Inwardly Rectifying Potassium Channels. ACS Omega, 2018, 3, 14814-14823.	3.5	10
45	Rhodol-based thallium sensors for cellular imaging of potassium channel activity. Organic and Biomolecular Chemistry, 2018, 16, 5575-5579.	2.8	10
46	Use of chemical probes to explore the toxicological potential of the K+/Clâ^' cotransporter (KCC) as a novel insecticide target to control the primary vector of dengue and Zika virus, Aedes aegypti. Pesticide Biochemistry and Physiology, 2018, 151, 10-17.	3.6	9
47	VU6036720: The First Potent and Selective In Vitro Inhibitor of Heteromeric Kir4.1/5.1 Inward Rectifier Potassium Channels. Molecular Pharmacology, 2022, 101, 357-370.	2.3	7
48	Discovery, synthesis and characterization of a series of (1-alkyl-3-methyl-1H-pyrazol-5-yl)-2-(5-aryl-2H-tetrazol-2-yl)acetamides as novel GIRK1/2 potassium channel activators. Bioorganic and Medicinal Chemistry Letters, 2019, 29, 791-796.	2.2	6
49	Preliminary SAR studies on non-apamin-displacing 4-(aminomethylaryl)pyrrazolopyrimidine KCa channel blockers. Bioorganic and Medicinal Chemistry Letters, 2008, 18, 5694-5697.	2.2	5
50	An anthrone-based Kv7.2/7.3 channel blocker with improved properties for the investigation of psychiatric and neurodegenerative disorders. Bioorganic and Medicinal Chemistry Letters, 2019, 29, 126681.	2.2	5
51	Selective Activation of N,Nâ€²â€²Diacyl Rhodamine Proâ€fluorophores Paired with Releasing Enzyme, Porcine Liver Esterase (PLE). Chemistry - A European Journal, 2018, 24, 8985-8988.	3.3	4
52	Functional Coupling of K+â€“Clâ€“ Cotransporter (KCC) to GABA-Gated Clâ€“ Channels in the Central Nervous System of Drosophila melanogaster Leads to Altered Drug Sensitivities. ACS Chemical Neuroscience, 2019, 10, 2765-2776.	3.5	4
53	Identification of a selective manganese ionophore that enables nonlethal quantification of cellular manganese. Journal of Biological Chemistry, 2020, 295, 3875-3890.	3.4	3
54	A High-Throughput Screening Assay to Identify Drugs that Can Treat Long QT Syndrome Caused by Trafficking-Deficient K_V11.1 (hERG) Variants. Molecular Pharmacology, 2022, 101, 236-245.	2.3	3

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55	Discovery of Small Molecule KCC2 Potentiators Which Attenuate In Vitro Seizure-Like Activity in Cultured Neurons. Frontiers in Cell and Developmental Biology, 0, 10, .	3.7	3
56	Tripleâ€Addition Assay Protocols for Detecting and Characterizing Modulators of Sevenâ€Transmembrane Receptors. Current Protocols in Chemical Biology, 2011, 3, 119-140.	1.7	2
57	Characterization of VU0468554, a new selective inhibitor of cardiac GIRK channels. Molecular Pharmacology, 2021, 100, MOLPHARM-AR-2021-000311.	2.3	1
58	Discovery, synthesis and biological characterization of a series of N-(1-(1,1-dioxidotetrahydrothiophen-3-yl)-3-methyl-1H-pyrazol-5-yl)acetamide ethers as novel GIRK1/2 potassium channel activators. RSC Medicinal Chemistry, 2021, 12, 1366-1373.	3.9	0
59	Ten-Year Retrospective of the Vanderbilt Institute of Chemical Biology Chemical Synthesis Core. ACS Chemical Biology, 2021, 16, 787-793.	3.4	0
60	Discovery of smallâ€molecule inhibitors of ROMK: one step closer to a potassiumâ€sparing loop diuretic?. FASEB Journal, 2009, 23, 602.10.	0.5	0
61	Discovery and Characterization of a Novel Subtypeâ€Selective M1 Allosteric Agonist for the Treatment of Alzheimer's Disease. FASEB Journal, 2009, 23, 756.12.	0.5	0
62	Discovery of an inward rectifying potassium channel inhibitor with preference for Kir2.3, Kir3.X and Kir7.1. FASEB Journal, 2012, 26, 695.14.	0.5	0