Charles R Sanders

List of Publications by Year
in descending order

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Version: 2024-02-01

133 papers	7,030 citations	76294 40 h-index	66879 78 g-index
147 all docs	147 docs citations	147 times ranked	5825 citing authors

#	Article	IF	Citations
1	Compendium of causative genes and their encoded proteins for common monogenic disorders. Protein Science, 2022, 31, 75-91.	3.1	10
2	A Model for the Signal Initiation Complex Between Arrestin-3 and the Src Family Kinase Fgr. Journal of Molecular Biology, 2022, 434, 167400.	2.0	6
3	High-Content Imaging Platform to Discover Chemical Modulators of Plasma Membrane Rafts. ACS Central Science, 2022, 8, 370-378.	5.3	10
4	Verteporfin is a substrate-selective Î³-secretase inhibitor that binds the amyloid precursor protein transmembrane domain. Journal of Biological Chemistry, 2022, 298, 101792.	1.6	3
5	Predicting the functional impact of KCNQ1 variants with artificial neural networks. PLoS Computational Biology, 2022, 18, e1010038.	1.5	5
6	Investigating Structural Dynamics of KCNE3 in Different Membrane Environments Using Molecular Dynamics Simulations. Membranes, 2022, 12, 469.	1.4	3
7	Comparing the structural dynamics of the human KCNE3 in reconstituted micelle and lipid bilayered vesicle environments. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 183974.	1.4	5
8	Letter to the Editor: Distanced Inspiration from the Career of Stephen H. White. Journal of Membrane Biology, 2021, 254, 1-3.	1.0	0
9	Disease-linked supertrafficking of a potassium channel. Journal of Biological Chemistry, 2021, 296, 100423.	1.6	3
10	The C99 domain of the amyloid precursor protein resides in the disordered membrane phase. Journal of Biological Chemistry, 2021, 296, 100652.	1.6	9
11	Disruption of the integrin-linked kinase (ILK) pseudokinase domain affects kidney development in mice. Journal of Biological Chemistry, 2021, 296, 100361.	1.6	5
12	Ion mobilityâ€“mass spectrometry reveals the role of peripheral myelin protein dimers in peripheral neuropathy. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	18
13	Structural determinants of cholesterol recognition in helical integral membrane proteins. Biophysical Journal, 2021, 120, 1592-1604.	0.2	12
14	Recombinant SARS-CoV-2 envelope protein traffics to the trans-Golgi network following amphipol-mediated delivery into human cells. Journal of Biological Chemistry, 2021, 297, 100940.	1.6	4
15	The transmembrane amyloid precursor C99 protein exhibits non-specific interaction with tau. Biochemical and Biophysical Research Communications, 2021, 576, 48-52.	1.0	2
16	Glycosylation limits forward trafficking of the tetraspan membrane protein PMP22. Journal of Biological Chemistry, 2021, 296, 100719.	1.6	12
17	Genetic intolerance analysis as a tool for protein science. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183058.	1.4	6
18	Collision-Induced Unfolding Differentiates Functional Variants of the KCNQ1 Voltage Sensor Domain. Journal of the American Society for Mass Spectrometry, 2020, 31, 2348-2355.	1.2	10

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19	Direct relationship between increased expression and mistrafficking of the Charcotâ€“Marieâ€“Toothâ€“associated protein PMP22. Journal of Biological Chemistry, 2020, 295, 11963-11970.	1.6	17
20	Structures Illuminate Cardiac Ion Channel Functions in Health and in Long QT Syndrome. Frontiers in Pharmacology, 2020, 11, 550.	1.6	23
21	Peripheral myelin protein 22 preferentially partitions into ordered phase membrane domains. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14168-14177.	3.3	29
22	Bicelles Rich in both Sphingolipids and Cholesterol and Their Use in Studies of Membrane Proteins. Journal of the American Chemical Society, 2020, 142, 12715-12729.	6.6	29
23	Structure and physiological function of the human KCNQ1 channel voltage sensor intermediate state. ELife, 2020, 9, .	2.8	36
24	Allosteric mechanism for KCNE1 modulation of KCNQ1 potassium channel activation. ELife, 2020, 9, .	2.8	19
25	Life During Wartime: A Personal Recollection of the Circa 1990 Prestegard Lab and Its Contributions to Membrane Biophysics. Journal of Membrane Biology, 2019, 252, 541-548.	1.0	2
26	Peripheral myelin protein 22 modulates store-operated calcium channel activity, providing insights into Charcot-Marie-Tooth disease etiology. Journal of Biological Chemistry, 2019, 294, 12054-12065.	1.6	15
27	A unified structural model of the mammalian translocator protein (TSPO). Journal of Biomolecular NMR, 2019, 73, 347-364.	1.6	12
28	The vexing complexity of the amyloidogenic pathway. Protein Science, 2019, 28, 1177-1193.	3.1	25
29	Reciprocal modulation between amyloid precursor protein and synaptic membrane cholesterol revealed by live cell imaging. Neurobiology of Disease, 2019, 127, 449-461.	2.1	18
30	Protein structure aids predicting functional perturbation of missense variants in SCN5A and KCNQ1. Computational and Structural Biotechnology Journal, 2019, 17, 206-214.	1.9	19
31	NMR resonance assignments and secondary structure of a mutant form of the human KCNE1 channel accessory protein that exhibits KCNE3-like function. Biomolecular NMR Assignments, 2019, 13, 143-147.	0.4	2
32	Folding and Misfolding of Human Membrane Proteins in Health and Disease: From Single Molecules to Cellular Proteostasis. Chemical Reviews, 2019, 119, 5537-5606.	23.0	184
33	Probing the Dynamics and Structural Topology of the Reconstituted Human KCNQ1 Voltage Sensor Domain (Q1-VSD) in Lipid Bilayers Using Electron Paramagnetic Resonance Spectroscopy. Biochemistry, 2019, 58, 965-973.	1.2	15
34	Upgraded molecular models of the human KCNQ1 potassium channel. PLoS ONE, 2019, 14, e0220415.	1.1	26
35	Bexarotene Binds to the Amyloid Precursor Protein Transmembrane Domain, Alters Its Î±-Helical Conformation, and Inhibits Î³-Secretase Nonselectively in Liposomes. ACS Chemical Neuroscience, 2018, 9, 1702-1713.	1.7	11
36	Mechanisms of KCNQ1 channel dysfunction in long QT syndrome involving voltage sensor domain mutations. Science Advances, 2018, 4, eaar2631.	4.7	64

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37	Membrane properties that shape the evolution of membrane enzymes. Current Opinion in Structural Biology, 2018, 51, 80-91.	2.6	17
38	High-Throughput Functional Evaluation of KCNQ1 Decrypts Variants of Unknown Significance. Circulation Genomic and Precision Medicine, 2018, 11, e002345.	1.6	85
39	LCP1 preferentially binds clasped Î±MÎ²2 integrin and attenuates leukocyte adhesion under flow. Journal of Cell Science, 2018, 131, .	1.2	16
40	De novo designed transmembrane peptides activating the Î±5Î²1 integrin. Protein Engineering, Design and Selection, 2018, 31, 181-190.	1.0	14
41	Structural and biochemical differences between the Notch and the amyloid precursor protein transmembrane domains. Science Advances, 2017, 3, e1602794.	4.7	38
42	Dodecyl-Î²-melibioside Detergent Micelles as a Medium for Membrane Proteins. Biochemistry, 2017, 56, 5481-5484.	1.2	16
43	Predicting the Functional Impact of KCNQ1 Variants of Unknown Significance. Circulation: Cardiovascular Genetics, 2017, 10, .	5.1	40
44	Talin regulates integrin Î²1 dependent and independent cell functions in ureteric bud development. Development (Cambridge), 2017, 144, 4148-4158.	1.2	8
45	Structural Dynamics of 15-Lipoxygenase-2 via Hydrogenâ€“Deuterium Exchange. Biochemistry, 2017, 56, 5065-5074.	1.2	18
46	Peripheral myelin protein 22 alters membrane architecture. Science Advances, 2017, 3, e1700220.	4.7	49
47	Backbone Hydrogen Bond Strengths Can Vary Widely in Transmembrane Helices. Journal of the American Chemical Society, 2017, 139, 10742-10749.	6.6	36
48	Regulation of KCNQ/Kv7 family voltage-gated K + channels by lipids. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 586-597.	1.4	36
49	Structural basis for KCNE3 modulation of potassium recycling in epithelia. Science Advances, 2016, 2, e1501228.	4.7	45
50	Transthyretin Suppresses Amyloid-Î² Secretion by Interfering with Processing of the Amyloid-Î² Protein Precursor. Journal of Alzheimer's Disease, 2016, 52, 1263-1275.	1.2	18
51	Documentation of an Imperative To Improve Methods for Predicting Membrane Protein Stability. Biochemistry, 2016, 55, 5002-5009.	1.2	46
52	A pH-Mediated Topological Switch within the N-Terminal Domain of Human Caveolin-3. Biophysical Journal, 2016, 110, 2475-2485.	0.2	9
53	Structural and Molecular Determinants of Membrane Binding by the HIV-1 Matrix Protein. Journal of Molecular Biology, 2016, 428, 1637-1655.	2.0	82
54	Topologically Diverse Human Membrane Proteins Partition to Liquid-Disordered Domains in Phase-Separated Lipid Vesicles. Biochemistry, 2016, 55, 985-988.	1.2	19

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55	Implications of the differing roles of the Î²1 and Î²3 transmembrane and cytoplasmic domains for integrin function. ELife, 2016, 5, .	2.8	29
56	How Î³-secretase hits a moving target. ELife, 2016, 5, .	2.8	7
57	Perplexing new insight into the dynamics of the EmrE transporter. Journal of General Physiology, 2015, 146, 441-444.	0.9	3
58	Influence of Arrestin on the Photodecay of Bovine Rhodopsin. Angewandte Chemie - International Edition, 2015, 54, 13555-13560.	7.2	8
59	Development of electron spin echo envelope modulation spectroscopy to probe the secondary structure of recombinant membrane proteins in a lipid bilayer. Protein Science, 2015, 24, 1707-1713.	3.1	13
60	Influence of Pathogenic Mutations on the Energetics of Translocon-Mediated Bilayer Integration of Transmembrane Helices. Journal of Membrane Biology, 2015, 248, 371-381.	1.0	23
61	Notch Transmembrane Domain: Secondary Structure and Topology. Biochemistry, 2015, 54, 3565-3568.	1.2	22
62	The safety dance: biophysics of membrane protein folding and misfolding in a cellular context. Quarterly Reviews of Biophysics, 2015, 48, 1-34.	2.4	41
63	Conformational Stability and Pathogenic Misfolding of the Integral Membrane Protein PMP22. Journal of the American Chemical Society, 2015, 137, 8758-8768.	6.6	54
64	Biophysical characterization of interactions between the C-termini of peripheral nerve claudins and the PDZ1 domain of zonula occludens. Biochemical and Biophysical Research Communications, 2015, 459, 87-93.	1.0	1
65	Personalized Biochemistry and Biophysics. Biochemistry, 2015, 54, 2551-2559.	1.2	31
66	Probing Structural Dynamics and Topology of the KCNE1 Membrane Protein in Lipid Bilayers via Site-Directed Spin Labeling and Electron Paramagnetic Resonance Spectroscopy. Biochemistry, 2015, 54, 6402-6412.	1.2	26
67	Cholesterol as a coâ€solvent and a ligand for membrane proteins. Protein Science, 2014, 23, 1-22.	3.1	117
68	Impact of Bilayer Lipid Composition on the Structure and Topology of the Transmembrane Amyloid Precursor C99 Protein. Journal of the American Chemical Society, 2014, 136, 4093-4096.	6.6	51
69	The Homology Model of PMP22 Suggests Mutations Resulting in Peripheral Neuropathy Disrupt Transmembrane Helix Packing. Biochemistry, 2014, 53, 6139-6141.	1.2	21
70	Structural Investigation of the Transmembrane Domain of KCNE1 in Proteoliposomes. Biochemistry, 2014, 53, 6392-6401.	1.2	42
71	Purification and Structural Study of the Voltage-Sensor Domain of the Human KCNQ1 Potassium Ion Channel. Biochemistry, 2014, 53, 2032-2042.	1.2	34
72	Competition Between Homodimerization and Cholesterol Binding to the C99 Domain of the Amyloid Precursor Protein. Biochemistry, 2013, 52, 5051-5064.	1.2	108

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73	The Backbone Dynamics of the Amyloid Precursor Protein Transmembrane Helix Provides a Rationale for the Sequential Cleavage Mechanism of Î³-Secretase. Journal of the American Chemical Society, 2013, 135, 1317-1329.	6.6	71
74	Reversible Folding of Human Peripheral Myelin Protein 22, a Tetraspan Membrane Protein. Biochemistry, 2013, 52, 3229-3241.	1.2	36
75	An Allosteric Mechanism for Drug Block of the Human Cardiac Potassium Channel KCNQ1. Molecular Pharmacology, 2013, 83, 481-489.	1.0	14
76	Î²1 Integrin NPXY Motifs Regulate Kidney Collecting-Duct Development and Maintenance by Induced-Fit Interactions with Cytosolic Proteins. Molecular and Cellular Biology, 2012, 32, 4080-4091.	1.1	11
77	Enhancing Integrin Î±1 Inserted (I) Domain Affinity to Ligand Potentiates Integrin Î±1Î²1-mediated Down-regulation of Collagen Synthesis. Journal of Biological Chemistry, 2012, 287, 35139-35152.	1.6	22
78	Bicelles at Low Concentrations. Molecular Pharmaceutics, 2012, 9, 752-761.	2.3	46
79	The Amyloid Precursor Protein Has a Flexible Transmembrane Domain and Binds Cholesterol. Science, 2012, 336, 1168-1171.	6.0	438
80	Prokaryotic Diacylglycerol Kinase and Undecaprenol Kinase. Annual Review of Biophysics, 2012, 41, 81-101.	4.5	63
81	NSAID-Based Î³-Secretase Modulators Do Not Bind to the Amyloid-Î² Polypeptide. Biochemistry, 2011, 50, 10328-10342.	1.2	21
82	Reconstitution of KCNE1 into Lipid Bilayers: Comparing the Structural, Dynamic, and Activity Differences in Micelle and Vesicle Environments. Biochemistry, 2011, 50, 10851-10859.	1.2	31
83	Tolerance to Changes in Membrane Lipid Composition as a Selected Trait of Membrane Proteins. Biochemistry, 2011, 50, 7858-7867.	1.2	75
84	Solution NMR Approaches for Establishing Specificity of Weak Heterodimerization of Membrane Proteins. Journal of the American Chemical Society, 2011, 133, 20571-20580.	6.6	23
85	Structural Basis for the Trembler-J Phenotype of Charcot-Marie-Tooth Disease. Structure, 2011, 19, 1160-1169.	1.6	41
86	Working model for the structural basis for KCNE1 modulation of the KCNQ1 potassium channel. Current Opinion in Structural Biology, 2011, 21, 283-291.	2.6	28
87	KCNQ1/KCNE1 assembly, co-translation not required. Channels, 2010, 4, 108-114.	1.5	18
88	Functional Delivery of a Membrane Protein into Oocyte Membranes Using Bicelles. Biochemistry, 2010, 49, 653-655.	1.2	36
89	Lysophospholipid Micelles Sustain the Stability and Catalytic Activity of Diacylglycerol Kinase in the Absence of Lipids. Biochemistry, 2010, 49, 7089-7099.	1.2	38
90	Direct binding of cholesterol to the amyloid precursor protein: An important interaction in lipidâ€“Alzheimer's disease relationships?. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2010, 1801, 975-982.	1.2	146

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91	Distinct subdomains of the KCNQ1 S6 segment determine channel modulation by different KCNE subunits. Journal of General Physiology, 2009, 134, 207-217.	0.9	20
92	Solution Nuclear Magnetic Resonance Structure of Membrane-Integral Diacylglycerol Kinase. Science, 2009, 324, 1726-1729.	6.0	205
93	A unified hydrophobicity scale for multispan membrane proteins. Proteins: Structure, Function and Bioinformatics, 2009, 76, 13-29.	1.5	51
94	Recent advances in the application of solution NMR spectroscopy to multi-span integral membrane proteins. Progress in Nuclear Magnetic Resonance Spectroscopy, 2009, 55, 335-360.	3.9	140
95	Bolaamphiphile-Class Surfactants Can Stabilize and Support the Function of Solubilized Integral Membrane Proteins. Biochemistry, 2009, 48, 11606-11608.	1.2	25
96	Nonspecificity of Binding of Î³-Secretase Modulators to the Amyloid Precursor Protein. Biochemistry, 2009, 48, 11837-11839.	1.2	41
97	NMR based structure and enzymatic insight into diacylglycerol kinase, an alphaâ€helical membrane protein. FASEB Journal, 2009, 23, LB223.	0.2	0
98	Development and Application of Bicelles for Use in Biological NMR and Other Biophysical Studies. , 2008, , 233-239.		5
99	Cross-talk between integrins Î±1Î²1 and Î±2Î²1 in renal epithelial cells. Experimental Cell Research, 2008, 314, 3593-3604.	1.2	29
100	Structural Studies of the Transmembrane C-Terminal Domain of the Amyloid Precursor Protein (APP): Does APP Function as a Cholesterol Sensor?. Biochemistry, 2008, 47, 9428-9446.	1.2	159
101	Structure of KCNE1 and Implications for How It Modulates the KCNQ1 Potassium Channel. Biochemistry, 2008, 47, 7999-8006.	1.2	183
102	The Peripheral Neuropathy-LinkedTremblerandTrembler-JMutant Forms of Peripheral Myelin Protein 22 Are Folding-Destabilized. Biochemistry, 2008, 47, 10620-10629.	1.2	29
103	Visiting order on membrane proteins by using nanotechnology. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6502-6503.	3.3	4
104	Purification and Initiation of Structural Characterization of Human Peripheral Myelin Protein 22, an Integral Membrane Protein Linked to Peripheral Neuropathies. Biochemistry, 2007, 46, 11185-11195.	1.2	21
105	Preparation, Functional Characterization, and NMR Studies of Human KCNE1, a Voltage-Gated Potassium Channel Accessory Subunit Associated with Deafness and Long QT Syndrome[,]. Biochemistry, 2007, 46, 11459-11472.	1.2	61
106	Structural Models for the KCNQ1 Voltage-Gated Potassium Channel. Biochemistry, 2007, 46, 14141-14152.	1.2	90
107	A Structure for Little Orphan Diacylglycerol Kinase. FASEB Journal, 2007, 21, A148.	0.2	0
108	Irreversible Misfolding of Diacylglycerol Kinase Is Independent of Aggregation and Occurs Prior to Trimerization and Membrane Associationâ€. Biochemistry, 2006, 45, 10072-10084.	1.2	18

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109	Post-integration Misassembly of Membrane Proteins and Disease. , 2006, , 81-94.		0
110	Solution NMR of membrane proteins: practice and challenges. Magnetic Resonance in Chemistry, 2006, 44, S24-S40.	1.1	210
111	Phenotology of disease-linked proteins. Human Mutation, 2005, 25, 90-97.	1.1	11
112	Disease-Related Misassembly of Membrane Proteins. Annual Review of Biophysics and Biomolecular Structure, 2004, 33, 25-51.	18.3	228
113	French Swimwear for Membrane Proteins. ChemBioChem, 2004, 5, 423-426.	1.3	77
114	Destabilizing Mutations Promote Membrane Protein Misfoldingâ€. Biochemistry, 2004, 43, 19-25.	1.2	45
115	A Critical Residue in the Folding Pathway of an Integral Membrane Proteinâ€. Biochemistry, 2002, 41, 9021-9025.	1.2	18
116	Amphipols Can Support the Activity of a Membrane Enzyme. Journal of the American Chemical Society, 2002, 124, 11594-11595.	6.6	69
117	Kinetic Study of Folding and Misfolding of Diacylglycerol Kinase in Model Membranes. Biochemistry, 2001, 40, 8971-8980.	1.2	57
118	Use of amphipathic polymers to deliver a membrane protein to lipid bilayers. FEBS Letters, 2001, 501, 115-120.	1.3	62
119	Mutations of Peripheral Myelin Protein 22 Result in Defective Trafficking through Mechanisms Which May Be Common to Diseases Involving Tetraspan Membrane Proteinsâ€. Biochemistry, 2001, 40, 9453-9459.	1.2	67
120	Conformationally Specific Misfolding of an Integral Membrane Proteinâ€. Biochemistry, 2001, 40, 5111-5118.	1.2	24
121	Functionality of a Membrane Protein in Bicelles. Analytical Biochemistry, 2000, 284, 327-333.	1.1	94
122	Misfolding of membrane proteins in health and disease: the lady or the tiger?. Current Opinion in Structural Biology, 2000, 10, 438-442.	2.6	96
123	Thiol modification of diacylglycerol kinase: dependence upon site membrane disposition and reagent hydrophobicity. FEBS Letters, 2000, 472, 225-229.	1.3	13
124	Reconstitutive Refolding of Diacylglycerol Kinase, an Integral Membrane Proteinâ€. Biochemistry, 1999, 38, 16373-16382.	1.2	82
125	On choosing a detergent for solution NMR studies of membrane proteins. Journal of Biomolecular NMR, 1998, 11, 381-386.	1.6	107
126	Bicelles: a model membrane system for all seasons?. Structure, 1998, 6, 1227-1234.	1.6	324

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127	Reconstitution of Membrane Proteins into Lipid-Rich Bilayered Mixed Micelles for NMR Studies. Biochemistry, 1995, 34, 4030-4040.	1.2	332
128	Magnetically-oriented phospholipid micelles as a tool for the study of membrane-associated molecules. Progress in Nuclear Magnetic Resonance Spectroscopy, 1994, 26, 421-444.	3.9	383
129	Characterization of magnetically orientable bilayers in mixtures of dihexanoylphosphatidylcholine and dimyristoylphosphatidylcholine by solid-state NMR. Biochemistry, 1992, 31, 8898-8905.	1.2	466
130	Headgroup orientations of alkyl glycosides at a lipid bilayer interface. Journal of the American Chemical Society, 1992, 114, 7096-7107.	6.6	31
131	Orientation and dynamics of .beta.-dodecyl glucopyranoside in phospholipid bilayers by oriented sample NMR and order matrix analysis. Journal of the American Chemical Society, 1991, 113, 1987-1996.	6.6	53
132	Mechanism of adenylate kinase. Is there a relationship between local substrate dynamics, and local binding energy, and the catalytic mechanism?. Biochemistry, 1989, 28, 9028-9043.	1.2	42
133	Mechanism of adenylate kinase. 3. Use of deuterium NMR to show lack of correlation between local substrate dynamics and local binding energy. Journal of the American Chemical Society, 1988, 110, 3323-3324.	6.6	5