David N Sheppard

List of Publications by Year
in descending order

95 papers	6,129 citations	87888 38 h-index	69250 77 g-index
100 all docs	100 docs citations	100 times ranked	4944 citing authors

#	Article	IF	Citations
1	Structure and Function of the CFTR Chloride Channel. Physiological Reviews, 1999, 79, S23-S45.	28.8	863
2	Mutations in CFTR associated with mild-disease-form Cl- channels with altered pore properties. Nature, 1993, 362, 160-164.	27.8	451
3	From CFTR biology toward combinatorial pharmacotherapy: expanded classification of cystic fibrosis mutations. Molecular Biology of the Cell, 2016, 27, 424-433.	2.1	446
4	Development of synthetic membrane transporters for anions. Chemical Society Reviews, 2007, 36, 348-357.	38.1	377
5	CpG-free plasmids confer reduced inflammation and sustained pulmonary gene expression. Nature Biotechnology, 2008, 26, 549-551.	17.5	269
6	Cystic fibrosis transmembrane conductance regulator: A chloride channel with novel regulation. Neuron, 1992, 8, 821-829.	8.1	226
7	Mechanism of Glibenclamide Inhibition of Cystic Fibrosis Transmembrane Conductance Regulator Clâ^'Channels Expressed in a Murine Cell Line. Journal of Physiology, 1997, 503, 333-346.	2.9	187
8	Mouse models of cystic fibrosis: Phenotypic analysis and research applications. Journal of Cystic Fibrosis, 2011, 10, S152-S171.	0.7	185
9	Chloride Transport Across Vesicle and Cell Membranes by Steroid-Based Receptors. Angewandte Chemie - International Edition, 2003, 42, 4931-4933.	13.8	180
10	Gating of the CFTR Cl^{â^'} channel by ATPâ€driven nucleotideâ€binding domain dimerisation. Journal of Physiology, 2009, 587, 2151-2161.	2.9	150
11	Efficient, non-toxic anion transport by synthetic carriers in cells and epithelia. Nature Chemistry, 2016, 8, 24-32.	13.6	138
12	The relationship between cell proliferation, Clâ^' secretion, and renal cyst growth: A study using CFTR inhibitors. Kidney International, 2004, 66, 1926-1938.	5.2	131
13	Molecular pharmacology of the CFTR Clâ^' channel. Trends in Pharmacological Sciences, 1999, 20, 448-453.	8.7	123
14	Alteration of protein function by a silent polymorphism linked to tRNA abundance. PLoS Biology, 2017, 15, e2000779.	5.6	118
15	The amino-terminal portion of CFTR forms a regulated Clâ^' channel. Cell, 1994, 76, 1091-1098.	28.9	117
16	Transepithelial electrical measurements with the Ussing chamber. Journal of Cystic Fibrosis, 2004, 3, 123-126.	0.7	117
17	Revertant mutants G550E and 4RK rescue cystic fibrosis mutants in the first nucleotide-binding domain of CFTR by different mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17891-17896.	7.1	112
18	Understanding how cystic fibrosis mutations disrupt CFTR function: From single molecules to animal models. International Journal of Biochemistry and Cell Biology, 2014, 52, 47-57.	2.8	97

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19	Residual function of cystic fibrosis mutants predicts response to small molecule CFTR modulators. JCI Insight, 2018, 3, .	5.0	86
20	Differential Sensitivity of the Cystic Fibrosis (CF)-associated Mutants G551D and G1349D to Potentiators of the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) Clâ€“ Channel. Journal of Biological Chemistry, 2006, 281, 1970-1977.	3.4	85
21	Preorganized Bis-Thioureas as Powerful Anion Carriers: Chloride Transport by Single Molecules in Large Unilamellar Vesicles. Journal of the American Chemical Society, 2014, 136, 12507-12512.	13.7	84
22	A primary culture model of differentiated murine tracheal epithelium. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2000, 279, L766-L778.	2.9	75
23	Solubilizing Mutations Used to Crystallize One CFTR Domain Attenuate the Trafficking and Channel Defects Caused by the Major Cystic Fibrosis Mutation. Chemistry and Biology, 2008, 15, 62-69.	6.0	74
24	Anion carriers as potential treatments for cystic fibrosis: transport in cystic fibrosis cells, and additivity to channel-targeting drugs. Chemical Science, 2019, 10, 9663-9672.	7.4	70
25	Pharmacological therapy for cystic fibrosis: From bench to bedside. Journal of Cystic Fibrosis, 2011, 10, S129-S145.	0.7	58
26	Bypassing CFTR dysfunction in cystic fibrosis with alternative pathways for anion transport. Current Opinion in Pharmacology, 2017, 34, 91-97.	3.5	58
27	Contribution of Proline Residues in the Membrane-spanning Domains of Cystic Fibrosis Transmembrane Conductance Regulator to Chloride Channel Function. Journal of Biological Chemistry, 1996, 271, 14995-15001.	3.4	56
28	Kinetics of voltage- and Ca2+ activation and Ba2+ blockade of a large-conductance K+ channel fromNecturus enterocytes. Journal of Membrane Biology, 1988, 105, 65-75.	2.1	53
29	Voltage-dependent Gating of the Cystic Fibrosis Transmembrane Conductance Regulator Clâ¯ Channel. Journal of General Physiology, 2003, 122, 605-620.	1.9	53
30	Phloxine B Interacts with the Cystic Fibrosis Transmembrane Conductance Regulator at Multiple Sites to Modulate Channel Activity. Journal of Biological Chemistry, 2002, 277, 19546-19553.	3.4	49
31	Targeted anion transporter delivery by coiled-coil driven membrane fusion. Chemical Science, 2016, 7, 1768-1772.	7.4	44
32	Inhibition of the Cystic Fibrosis Transmembrane Conductance Regulator By ATP-Sensitive K+Channel Regulators. Annals of the New York Academy of Sciences, 1993, 707, 275-284.	3.8	43
33	Function of Xenopus Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) Cl- Channels and Use of Human-Xenopus Chimeras to Investigate the Pore Properties of CFTR. Journal of Biological Chemistry, 1996, 271, 25184-25191.	3.4	43
34	Anion transport by ortho-phenylene bis-ureas across cell and vesicle membranes. Organic and Biomolecular Chemistry, 2018, 16, 1083-1087.	2.8	43
35	Murine epithelial cells: isolation and culture. Journal of Cystic Fibrosis, 2004, 3, 59-62.	0.7	41
36	Chimeric constructs endow the human CFTR Cl channel with the gating behavior of murine CFTR. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 16365-16370.	7.1	41

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37	Two Small Molecules Restore Stability to a Subpopulation of the Cystic Fibrosis Transmembrane Conductance Regulator with the Predominant Disease-causing Mutation. Journal of Biological Chemistry, 2017, 292, 3706-3719.	3.4	41
38	Targeting F508del-CFTR to develop rational new therapies for cystic fibrosis. Acta Pharmacologica Sinica, 2011, 32, 693-701.	6.1	40
39	Direct Sensing of Intracellular pH by the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) Clâ^' Channel. Journal of Biological Chemistry, 2009, 284, 35495-35506.	3.4	37
40	Therapeutic Potential of Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) Inhibitors in Polycystic Kidney Disease. BioDrugs, 2009, 23, 203-216.	4.6	36
41	Therapeutic approaches to CFTR dysfunction: From discovery to drug development. Journal of Cystic Fibrosis, 2018, 17, S14-S21.	0.7	35
42	Inhibition of Protein Kinase CK2 Closes the CFTR Cl⁻ Channel, but has no Effect on the Cystic Fibrosis Mutant Î”F508-CFTR. Cellular Physiology and Biochemistry, 2009, 24, 347-360.	1.6	32
43	Fluorinated synthetic anion carriers: experimental and computational insights into transmembrane chloride transport. Chemical Science, 2019, 10, 1976-1985.	7.4	29
44	Murine CFTR Channel and its Role in Regulatory Volume Decrease of Small Intestine Crypts. Cellular Physiology and Biochemistry, 2000, 10, 321-328.	1.6	28
45	Impact of the cystic fibrosis mutation F508del-CFTR on renal cyst formation and growth. American Journal of Physiology - Renal Physiology, 2012, 303, F1176-F1186.	2.7	28
46	CFTR Channel Pharmacology. Journal of General Physiology, 2004, 124, 109-113.	1.9	25
47	The patch-clamp and planar lipid bilayer techniques: powerful and versatile tools to investigate the CFTR Clâ^' channel. Journal of Cystic Fibrosis, 2004, 3, 101-108.	0.7	25
48	Differential thermostability and response to cystic fibrosis transmembrane conductance regulator potentiators of human and mouse F508del-CFTR. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2019, 317, L71-L86.	2.9	24
49	<scp>CFTR</scp> potentiators partially restore channel function to <scp>A</scp>561<scp>E</scp>â€CFTR, a cystic fibrosis mutant with a similar mechanism of dysfunction as <scp>F</scp>508delâ€<scp>CFTR</scp>. British Journal of Pharmacology, 2014, 171, 4490-4503.	5.4	23
50	Towards next generation therapies for cystic fibrosis: Folding, function and pharmacology of CFTR. Journal of Cystic Fibrosis, 2020, 19, S25-S32.	0.7	20
51	Revertant mutants modify, but do not rescue, the gating defect of the cystic fibrosis mutant G551Dâ€CFTR. Journal of Physiology, 2014, 592, 1931-1947.	2.9	19
52	Impact of the F508del mutation on ovine CFTR, a Cl^{â^'} channel with enhanced conductance and ATPâ€dependent gating. Journal of Physiology, 2015, 593, 2427-2446.	2.9	19
53	Understanding how cystic fibrosis mutations cause a loss of Clâ^' channel function. Trends in Molecular Medicine, 1996, 2, 290-297.	2.6	17
54	Partial rescue of F508delâ€cystic fibrosis transmembrane conductance regulator channel gating with modest improvement of protein processing, but not stability, by a dualâ€acting small molecule. British Journal of Pharmacology, 2018, 175, 1017-1038.	5.4	17

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55	CFTR: New insights into structure and function and implications for modulation by small molecules. Journal of Cystic Fibrosis, 2020, 19, S19-S24.	0.7	16
56	Preferred Formation of Heteromeric Channels between Coexpressed SK1 and IKCa Channel Subunits Provides a Unique Pharmacological Profile of Ca²⁺-Activated Potassium Channels. Molecular Pharmacology, 2019, 96, 115-126.	2.3	14
57	Correlating genotype with phenotype using CFTRâ€mediated wholeâ€cell Cl^{â^'} currents in human nasal epithelial cells. Journal of Physiology, 2022, 600, 1515-1531.	2.9	14
58	Potentiation of the cystic fibrosis transmembrane conductance regulator Cl^{â^'}channel by ivacaftor is temperature independent. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2018, 315, L846-L857.	2.9	13
59	A topological switch in CFTR modulates channel activity and sensitivity to unfolding. Nature Chemical Biology, 2021, 17, 989-997.	8.0	13
60	Application of High-Resolution Single-Channel Recording to Functional Studies of Cystic Fibrosis Mutants. Methods in Molecular Biology, 2011, 741, 419-441.	0.9	13
61	Protein Kinase CK2, Cystic Fibrosis Transmembrane Conductance Regulator, and the Î”F508 Mutation. Journal of Biological Chemistry, 2007, 282, 10804-10813.	3.4	12
62	Cystic Fibrosis: CFTR Correctors to the Rescue. Chemistry and Biology, 2011, 18, 145-147.	6.0	12
63	Exploiting species differences to understand the CFTR Clâ^' channel. Biochemical Society Transactions, 2015, 43, 975-982.	3.4	12
64	Strategies to investigate the mechanism of action of CFTR modulators. Journal of Cystic Fibrosis, 2004, 3, 141-147.	0.7	11
65	Altering intracellular pH reveals the kinetic basis of intraburst gating in the CFTR Cl^{â^'} channel. Journal of Physiology, 2017, 595, 1059-1076.	2.9	11
66	Acute inhibition of the cystic fibrosis transmembrane conductance regulator (CFTR) Cl^{â^'}channel by thyroid hormones involves multiple mechanisms. American Journal of Physiology - Cell Physiology, 2013, 305, C817-C828.	4.6	10
67	Alterations of mucosa-attached microbiome and epithelial cell numbers in the cystic fibrosis small intestine with implications for intestinal disease. Scientific Reports, 2022, 12, 6593.	3.3	10
68	Chronic ivacaftor treatment: Getting F508del-CFTR into more trouble?. Journal of Cystic Fibrosis, 2014, 13, 605-607.	0.7	8
69	The European cystic fibrosis patient registry: The power of sharing data. Journal of Cystic Fibrosis, 2010, 9, S1-S2.	0.7	7
70	N1303K: Leaving no stone unturned in the search for transformational therapeutics. Journal of Cystic Fibrosis, 2018, 17, 555-557.	0.7	7
71	Pore-forming small molecules offer a promising way to tackle cystic fibrosis. Nature, 2019, 567, 315-317.	27.8	7
72	A small molecule CFTR potentiator restores ATPâ€dependent channel gating to the cystic fibrosis mutant G551Dâ€CFTR. British Journal of Pharmacology, 2022, 179, 1319-1337.	5.4	7

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73	Potentiation of cystic fibrosis transmembrane conductance regulator (CFTR) Clâ^'currents by the chemical solvent tetrahydrofuran. Molecular Membrane Biology, 2008, 25, 528-538.	2.0	6
74	Folding and Rescue of a Cystic Fibrosis Transmembrane Conductance Regulator Trafficking Mutant Identified Using Human-Murine Chimeric Proteins. Journal of Biological Chemistry, 2010, 285, 27033-27044.	3.4	6
75	CFTR channel pharmacology: insight from a flock of clones. Focus on â€œDivergent CFTR orthologs respond differently to the channel inhibitors CFTR_{inh}-172, glibenclamide, and GlyH-101â€. American Journal of Physiology - Cell Physiology, 2012, 302, C24-C26.	4.6	6
76	The Physiology and Pharmacology of the CFTR Clâ^' Channel. Advances in Molecular and Cell Biology, 2006, 38, 109-143.	0.1	5
77	Parathyroid hormone increases CFTR expression and function in Caco-2 intestinal epithelial cells. Biochemical and Biophysical Research Communications, 2020, 523, 816-821.	2.1	4
78	Can two wrongs make a right? F508del-CFTR ion channel rescue by second-site mutations in its transmembrane domains. Journal of Biological Chemistry, 2022, 298, 101615.	3.4	4
79	Chapter 7 The CFTR Chloride Channel. Current Topics in Membranes, 1994, 42, 153-171.	0.9	3
80	Loop diuretics are openâ€channel blockers of the cystic fibrosis transmembrane conductance regulator with distinct kinetics. British Journal of Pharmacology, 2014, 171, 265-278.	5.4	3
81	Carbon monoxide-releasing molecules inhibit the cystic fibrosis transmembrane conductance regulator Cl^{â^'}channel. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2020, 319, L997-L1009.	2.9	3
82	Extracellular phosphate enhances the function of F508del-CFTR rescued by CFTR correctors. Journal of Cystic Fibrosis, 2021, 20, 843-850.	0.7	3
83	CFTR bearing variant p.Phe312del exhibits function inconsistent with phenotype and negligible response to ivacaftor. JCI Insight, 2022, 7, .	5.0	3
84	The small airways accordion: concurrent or alternating fluid absorption and secretion?. Journal of Physiology, 2012, 590, 3409-3410.	2.9	2
85	The physiology of anion transport: tales of the bizarre and unexpected. Experimental Physiology, 2006, 91, 121-122.	2.0	1
86	EuroCareCF: Working together to improve patient care and therapy development. Journal of Cystic Fibrosis, 2011, 10, S1-S4.	0.7	1
87	Chloride Transport Across Planar Lipid Bilayers and Cell Membranes by Steriod-Based Synthetic Anion Transporters. Biophysical Journal, 2014, 106, 188a-189a.	0.5	1
88	Editorial overview: Respiratory: Transformational therapies for cystic fibrosis. Current Opinion in Pharmacology, 2017, 34, viii-xi.	3.5	1
89	Suppressing â€˜nonsenseâ€™ in cystic fibrosis. Journal of Physiology, 2020, 598, 429-430.	2.9	1
90	Molecular Physiology and Pharmacology of the Cystic Fibrosis Transmembrane Conductance Regulator. Physiology in Health and Disease, 2020, , 605-670.	0.3	1

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91	Function of CFTR Protein: Ion Transport. , 2005, 34, 38-44.		0
92	Unravelling the complexity of Cl^{â^'} channels: how long is a piece of string?. Journal of Physiology, 2009, 587, 2113-2114.	2.9	0
93	New Developments in the Structural and Functional Investigation of Primary Cilia using AFM and Confocal Microscopy. Biophysical Journal, 2009, 96, 396a.	0.5	0
94	Combining Scanning Probe and Confocal Microscopy to Investigate the Biophysical Properties of the Primary Cilium. Biophysical Journal, 2011, 100, 281a.	0.5	0
95	Rate Constants for Anion Transport by Steroid-Based Synthetic Anion Transporters. Biophysical Journal, 2012, 102, 521a.	0.5	0