John E Burke

List of Publications by Year in descending order

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99 papers	9,369 citations	57752 44 h-index	48312 88 g-index
119 all docs	119 docs citations	119 times ranked	11839 citing authors

#	Article	IF	Citations
1	Accurate prediction of protein structures and interactions using a three-track neural network. Science, 2021, 373, 871-876.	12.6	2,843
2	Phospholipase A2 structure/function, mechanism, and signaling. Journal of Lipid Research, 2009, 50, S237-S242.	4.2	739
3	Recommendations for performing, interpreting and reporting hydrogen deuterium exchange mass spectrometry (HDX-MS) experiments. Nature Methods, 2019, 16, 595-602.	19.0	452
4	Phospholipase A2 Biochemistry. Cardiovascular Drugs and Therapy, 2009, 23, 49-59.	2.6	332
5	Structural Basis for Activation and Inhibition of Class I Phosphoinositide 3-Kinases. Science Signaling, 2011, 4, re2.	3.6	249
6	Oncogenic mutations mimic and enhance dynamic events in the natural activation of phosphoinositide 3-kinase p110Î± (PIK3CA). Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15259-15264.	7.1	242
7	Diversity-oriented synthesis yields novel multistage antimalarial inhibitors. Nature, 2016, 538, 344-349.	27.8	214
8	Structure and flexibility of the endosomal Vps34 complex reveals the basis of its function on membranes. Science, 2015, 350, aac7365.	12.6	208
9	Structural Basis for Regulation of Phosphoinositide Kinases and Their Involvement in Human Disease. Molecular Cell, 2018, 71, 653-673.	9.7	174
10	Synergy in activating class I PI3Ks. Trends in Biochemical Sciences, 2015, 40, 88-100.	7.5	164
11	Vesicular and non-vesicular transport feed distinct glycosylation pathways in the Golgi. Nature, 2013, 501, 116-120.	27.8	136
12	Structures of PI4KIIIÎ²2 complexes show simultaneous recruitment of Rab11 and its effectors. Science, 2014, 344, 1035-1038.	12.6	131
13	Molecular basis of Lys11-polyubiquitin specificity in the deubiquitinase Cezanne. Nature, 2016, 538, 402-405.	27.8	129
14	G Proteinâ€“Coupled Receptorâ€“Mediated Activation of p110Î²2 by GÎ²2Î³3 Is Required for Cellular Transformation and Invasiveness. Science Signaling, 2012, 5, ra89.	3.6	127
15	Molecular determinants of PI3KÎ³3-mediated activation downstream of G-proteinâ€“coupled receptors (GPCRs). Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18862-18867.	7.1	118
16	Novel roles of phosphoinositides in signaling, lipid transport, and disease. Current Opinion in Cell Biology, 2020, 63, 57-67.	5.4	115
17	An overview of hydrogen deuterium exchange mass spectrometry (HDX-MS) in drug discovery. Expert Opinion on Drug Discovery, 2017, 12, 981-994.	5.0	110
18	Conformational disruption of PI3KÎ´ regulation by immunodeficiency mutations in PIK3CD and PIK3R1. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1982-1987.	7.1	92

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19	Deconvolution of Buparlisibâ€™s mechanism of action defines specific PI3K and tubulin inhibitors for therapeutic intervention. Nature Communications, 2017, 8, 14683.	12.8	88
20	Dynamics of the Phosphoinositide 3-Kinase p110Î´ Interaction with p85Î± and Membranes Reveals Aspects of Regulation Distinct from p110Î±. Structure, 2011, 19, 1127-1137.	3.3	86
21	Potent and Selective Fluoroketone Inhibitors of Group VIA Calcium-Independent Phospholipase A₂. Journal of Medicinal Chemistry, 2010, 53, 3602-3610.	6.4	78
22	Ras Binder Induces a Modified Switch-II Pocket in GTP and GDP States. Cell Chemical Biology, 2017, 24, 1455-1466.e14.	5.2	78
23	Dynamic steps in receptor tyrosine kinase mediated activation of class IA phosphoinositide 3-kinases (PI3K) captured by H/D exchange (HDX-MS). Advances in Biological Regulation, 2013, 53, 97-110.	2.3	77
24	Recognition of protein-linked glycans as a determinant of peptidase activity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E679-E688.	7.1	70
25	Conformational sampling of membranes by Akt controls its activation and inactivation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3940-E3949.	7.1	69
26	Regulation of PI3K by PKC and MARCKS: Single-Molecule Analysis of a Reconstituted Signaling Pathway. Biophysical Journal, 2016, 110, 1811-1825.	0.5	68
27	Molecular Mechanisms of Human Disease Mediated by Oncogenic and Primary Immunodeficiency Mutations in Class IA Phosphoinositide 3-Kinases. Frontiers in Immunology, 2018, 9, 575.	4.8	65
28	The intrinsically disordered tails of PTEN and PTEN-L have distinct roles in regulating substrate specificity and membrane activity. Biochemical Journal, 2016, 473, 135-144.	3.7	64
29	PKCÎ² Phosphorylates PI3KÎ³ to Activate It and Release It from GPCR Control. PLoS Biology, 2013, 11, e1001587.	5.6	62
30	Novel PIK3CD mutations affecting N-terminal residues of p110Î´ cause activated PI3KÎ´ syndrome (APDS) in humans. Journal of Allergy and Clinical Immunology, 2017, 140, 1152-1156.e10.	2.9	62
31	Discovery and Preclinical Characterization of 5-[4,6-Bis({3-oxa-8-azabicyclo[3.2.1]octan-8-yl})-1,3,5-triazin-2-yl]-4-(difluoromethyl)pyridin-2-amine (PQR620), a Highly Potent and Selective mTORC1/2 Inhibitor for Cancer and Neurological Disorders. Journal of Medicinal Chemistry, 2018, 61, 10084-10105.	6.4	62
32	Class I phosphoinositide 3-kinase (PI3K) regulatory subunits and their roles in signaling and disease. Advances in Biological Regulation, 2020, 75, 100657.	2.3	62
33	Interaction of Group IA Phospholipase A₂ with Metal Ions and Phospholipid Vesicles Probed with Deuterium Exchange Mass Spectrometry. Biochemistry, 2008, 47, 6451-6459.	2.5	61
34	Localizing the Membrane Binding Region of Group VIA Ca2+-independent Phospholipase A2 Using Peptide Amide Hydrogen/Deuterium Exchange Mass Spectrometry. Journal of Biological Chemistry, 2009, 284, 23652-23661.	3.4	61
35	Expanding the Scope of Electrophiles Capable of Targeting K-Ras Oncogenes. Biochemistry, 2017, 56, 3178-3183.	2.5	60
36	Location of Inhibitors Bound to Group IVA Phospholipase A₂ Determined by Molecular Dynamics and Deuterium Exchange Mass Spectrometry. Journal of the American Chemical Society, 2009, 131, 8083-8091.	13.7	59

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37	Molecular mechanism of activation of class IA phosphoinositide 3-kinases (PI3Ks) by membrane-localized HRas. Journal of Biological Chemistry, 2017, 292, 12256-12266.	3.4	57
38	Probing the dynamic regulation of peripheral membrane proteins using hydrogen deuterium exchangeâ€“MS (HDXâ€“MS). Biochemical Society Transactions, 2015, 43, 773-786.	3.4	56
39	Using Hydrogen/Deuterium Exchange Mass Spectrometry to Define the Specific Interactions of the Phospholipase A2 Superfamily with Lipid Substrates, Inhibitors, and Membranes. Journal of Biological Chemistry, 2013, 288, 1806-1813.	3.4	52
40	Characterization of Atg38 and NRBF2, a fifth subunit of the autophagic Vps34/PIK3C3 complex. Autophagy, 2016, 12, 2129-2144.	9.1	52
41	Design and Structural Characterization of Potent and Selective Inhibitors of Phosphatidylinositol 4 Kinase IIIÎ². Journal of Medicinal Chemistry, 2016, 59, 1830-1839.	6.4	52
42	A Phospholipid Substrate Molecule Residing in the Membrane Surface Mediates Opening of the Lid Region in Group IVA Cytosolic Phospholipase A2. Journal of Biological Chemistry, 2008, 283, 31227-31236.	3.4	49
43	Molecular Basis for Recognition of the Cancer Glycobiomarker, LacdiNAc (GalNAc[Î²1â†'4]GlcNAc), by Wisteria floribunda Agglutinin. Journal of Biological Chemistry, 2016, 291, 24085-24095.	3.4	49
44	Using Hydrogenâ€“Deuterium Exchange Mass Spectrometry to Examine Proteinâ€–Membrane Interactions. Methods in Enzymology, 2017, 583, 143-172.	1.0	49
45	The function of phosphatidylinositol 5-phosphate 4-kinase Î³ (PI5P4KÎ³) explored using a specific inhibitor that targets the PI5P-binding site. Biochemical Journal, 2015, 466, 359-367.	3.7	47
46	Novel K-Ras G12C Switch-II Covalent Binders Destabilize Ras and Accelerate Nucleotide Exchange. Journal of Chemical Information and Modeling, 2018, 58, 464-471.	5.4	45
47	(S)-4-(Difluoromethyl)-5-(4-(3-methylmorpholino)-6-morpholino-1,3,5-triazin-2-yl)pyridin-2-amine (PQR530), a Potent, Orally Bioavailable, and Brain-Penetrable Dual Inhibitor of Class I PI3K and mTOR Kinase. Journal of Medicinal Chemistry, 2019, 62, 6241-6261.	6.4	45
48	The Molecular Basis of Aichi Virus 3A Protein Activation of Phosphatidylinositol 4 Kinase IIIÎ², PI4KB, through ACBD3. Structure, 2017, 25, 121-131.	3.3	42
49	Endo-fucoidan hydrolases from glycoside hydrolase family 107 (GH107) display structural and mechanistic similarities to Î±-l-fucosidases from GH29. Journal of Biological Chemistry, 2018, 293, 18296-18308.	3.4	42
50	Calcium Binding Rigidifies the C2 Domain and the Intradomain Interaction of GIVA Phospholipase A2 as Revealed by Hydrogen/Deuterium Exchange Mass Spectrometry. Journal of Biological Chemistry, 2008, 283, 9820-9827.	3.4	40
51	UCT943, a Next-Generation Plasmodium falciparum PI4K Inhibitor Preclinical Candidate for the Treatment of Malaria. Antimicrobial Agents and Chemotherapy, 2018, 62, .	3.2	40
52	Using hydrogen deuterium exchange mass spectrometry to engineer optimized constructs for crystallization of protein complexes: Case study of PI4KIIIÎ² with Rab11. Protein Science, 2016, 25, 826-839.	7.6	39
53	Type III phosphatidylinositol 4 kinases: structure, function, regulation, signalling and involvement in disease. Biochemical Society Transactions, 2016, 44, 260-266.	3.4	37
54	pH Biosensing by PI4P Regulates Cargo Sorting at the TGN. Developmental Cell, 2020, 52, 461-476.e4.	7.0	34

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55	Structure of autoinhibited Akt1 reveals mechanism of PIP₃-mediated activation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	33
56	Escherichia coli and Sf9 Contaminant Databases to Increase Efficiency of Tandem Mass Spectrometry Peptide Identification in Structural Mass Spectrometry Experiments. Journal of the American Society for Mass Spectrometry, 2020, 31, 2202-2209.	2.8	30
57	Structural determinants of Rab11 activation by the guanine nucleotide exchange factor SH3BP5. Nature Communications, 2018, 9, 3772.	12.8	29
58	An intrinsic lipid-binding interface controls sphingosine kinase 1 function. Journal of Lipid Research, 2018, 59, 462-474.	4.2	28
59	Disease-related mutations in PI3KÎ³ disrupt regulatory C-terminal dynamics and reveal a path to selective inhibitors. ELife, 2021, 10, .	6.0	28
60	Structural and mechanistic insights into the function of the unconventional class XIV myosin MyoA from Toxoplasma gondii. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E10548-E10555.	7.1	27
61	Crystal structure of a lipin/Pah phosphatidic acid phosphatase. Nature Communications, 2020, 11, 1309.	12.8	27
62	Covalent Proximity Scanning of a Distal Cysteine to Target PI3KÎ±. Journal of the American Chemical Society, 2022, 144, 6326-6342.	13.7	27
63	Probing the Architecture, Dynamics, and Inhibition of the PI4KIIIÎ±/TTC7/FAM126 Complex. Journal of Molecular Biology, 2018, 430, 3129-3142.	4.2	25
64	Structure of the phosphoinositide 3-kinase (PI3K) p110Î³-p101 complex reveals molecular mechanism of GPCR activation. Science Advances, 2021, 7, .	10.3	25
65	Group IVA cytosolic phospholipase A2 (cPLA2Î±) and integrin Î±IIbÎ²3 reinforce each other's functions during Î±IIbÎ²3 signaling in platelets. Blood, 2009, 113, 447-457.	1.4	23
66	Activation of Phospholipase C Î² by GÎ²Î³ and GÎ±q Involves C-Terminal Rearrangement to Release Autoinhibition. Structure, 2020, 28, 810-819.e5.	3.3	23
67	Crystal structure of an archaeal CorB magnesium transporter. Nature Communications, 2021, 12, 4028.	12.8	23
68	Integrated Structural Modeling of Full-Length LRH-1 Reveals Inter-domain Interactions Contribute to Receptor Structure and Function. Structure, 2020, 28, 830-846.e9.	3.3	22
69	Activation of the essential kinase PDK1 by phosphoinositide-driven trans-autophosphorylation. Nature Communications, 2022, 13, 1874.	12.8	22
70	Characterization of the c10orf76â€PI4KB complex and its necessity for Golgi PI4P levels and enterovirus replication. EMBO Reports, 2020, 21, e48441.	4.5	21
71	Probing Proteinâ€“Membrane Interactions and Dynamics Using Hydrogenâ€“Deuterium Exchange Mass Spectrometry (HDX-MS). Methods in Molecular Biology, 2021, 2263, 465-485.	0.9	21
72	Dissecting the molecular assembly of the Toxoplasma gondii MyoA motility complex. Journal of Biological Chemistry, 2017, 292, 19469-19477.	3.4	20

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73	Palmitoylation targets the calcineurin phosphatase to the phosphatidylinositol 4-kinase complex at the plasma membrane. Nature Communications, 2021, 12, 6064.	12.8	18
74	Defining How Oncogenic and Developmental Mutations of PIK3R1 Alter the Regulation of Class IA Phosphoinositide 3-Kinases. Structure, 2020, 28, 145-156.e5.	3.3	16
75	Drugging the Phosphoinositide 3-Kinase (PI3K) and Phosphatidylinositol 4-Kinase (PI4K) Family of Enzymes for Treatment of Cancer, Immune Disorders, and Viral/Parasitic Infections. Advances in Experimental Medicine and Biology, 2020, 1274, 203-222.	1.6	16
76	The substrate specificity of the human TRAPPII complexâ€™s Rab-guanine nucleotide exchange factor activity. Communications Biology, 2020, 3, 735.	4.4	16
77	Molecular mechanisms of <scp>PI4K</scp> regulation and their involvement in viral replication. Traffic, 2023, 24, 131-145.	2.7	16
78	Regulation of a Coupled MARCKSâ€“PI3K Lipid Kinase Circuit by Calmodulin: Single-Molecule Analysis of a Membrane-Bound Signaling Module. Biochemistry, 2016, 55, 6395-6405.	2.5	15
79	The juxtamembrane linker in neutral sphingomyelinase-2 functions as an intramolecular allosteric switch that activates the enzyme. Journal of Biological Chemistry, 2019, 294, 7488-7502.	3.4	15
80	Structural Basis for Inhibitor Potency and Selectivity of Plasmodium falciparum Phosphatidylinositol 4-Kinase Inhibitors. ACS Infectious Diseases, 2020, 6, 3048-3063.	3.8	14
81	Neolymphostin A Is a Covalent Phosphoinositide 3-Kinase (PI3K)/Mammalian Target of Rapamycin (mTOR) Dual Inhibitor That Employs an Unusual Electrophilic Vinylogous Ester. Journal of Medicinal Chemistry, 2018, 61, 10463-10472.	6.4	13
82	Structure and inhibition of Cryptococcus neoformans sterylglucosidase to develop antifungal agents. Nature Communications, 2021, 12, 5885.	12.8	13
83	InÂvitro reconstitution of Sgk3 activation by phosphatidylinositol 3-phosphate. Journal of Biological Chemistry, 2021, 297, 100919.	3.4	11
84	The middle lipin domain adopts a membrane-binding dimeric protein fold. Nature Communications, 2021, 12, 4718.	12.8	11
85	Precision Targeting of Mutant PI3KÎ± in Cancer by Selective Degradation. Cancer Discovery, 2022, 12, 20-22.	9.4	11
86	Dynamic structural biology at the protein membrane interface. Journal of Biological Chemistry, 2019, 294, 3872-3880.	3.4	10
87	HDX-MS-optimized approach to characterize nanobodies as tools for biochemical and structural studies of class IB phosphoinositide 3-kinases. Structure, 2021, 29, 1371-1381.e6.	3.3	10
88	Biochemical Insight into Novel Rab-GEF Activity of the Mammalian TRAPPIII Complex. Journal of Molecular Biology, 2021, 433, 167145.	4.2	10
89	A single discrete Rab5-binding site in phosphoinositide 3-kinase Î² is required for tumor cell invasion. Journal of Biological Chemistry, 2019, 294, 4621-4633.	3.4	9
90	Allosteric activation of PI3KÎ± by oncogenic mutations. Oncotarget, 2013, 4, 180-181.	1.8	6

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91	Dynamics of allosteric regulation of the phospholipase C-Î³ isozymes upon recruitment to membranes. ELife, 0, 11, .	6.0	4
92	Methods in the Study of PTEN Structure: X-Ray Crystallography and Hydrogen Deuterium Exchange Mass Spectrometry. Methods in Molecular Biology, 2016, 1388, 215-230.	0.9	3
93	Connecting with an Old Partner in a New Way. Cancer Cell, 2013, 23, 559-561.	16.8	1
94	O16.6â€…Basic science aids syphilis vaccine development: bloodstream spreading by the syphilis spirochetetreponema pallidum. , 2019, , .		0
95	Molecular insight into the autoinhibition of a master regulator of lipid signalling in human disease. EBioMedicine, 2020, 52, 102634.	6.1	0
96	Deciphering the dynamic regulation of phosphoinositide 3â€kinases downstream of Gâ€protein coupled receptors and receptor tyrosine kinases (1008.1). FASEB Journal, 2014, 28, 1008.1.	0.5	0
97	Hydrogenâ€Deuterium exchange reveals distinct activation states of PLCÎ²2 by Gâ€proteins. FASEB Journal, 2018, 32, 686.2.	0.5	0
98	Palmitoylation Targets the Calcineurin Phosphatase to the Phosphatidylinositol 4â€kinase Complex at the Plasma Membrane. FASEB Journal, 2022, 36, .	0.5	0
99	Structure and Dynamics of Human Perilipin 3 Membrane Association. FASEB Journal, 2022, 36, .	0.5	0