William E Balch

List of Publications by Year in Descending Order

116 papers	13,793 citations	53 h-index	117 g-index
125 ext. papers	15,250 ext. citations	14.6 avg, IF	6.3 L-index

#	Paper	IF	Citations
116	Spatial covariance analysis reveals the residue-by-residue thermodynamic contribution of variation to the CFTR fold.. *Communications Biology*, **2022**, 5, 356	6.7	2
115	Triangulating variation in the population to define mechanisms for precision management of genetic disease. *Structure*, **2022**,	5.2	2
114	The Wolfe cycle of carbon dioxide reduction to methane revisited and the Ralph Stoner Wolfe legacy at 100 years. *Advances in Microbial Physiology*, **2021**, 79, 1-23	4.4	
113	Unbiased Profiling of the Human Proinsulin Biosynthetic Interaction Network Reveals a Role for Peroxiredoxin 4 in Proinsulin Folding. *Diabetes*, **2020**, 69, 1723-1734	0.9	6
112	Correction of Niemann-Pick type C1 trafficking and activity with the histone deacetylase inhibitor valproic acid. *Journal of Biological Chemistry*, **2020**, 295, 8017-8035	5.4	9
111	Leveraging Population Genomics for Individualized Correction of the Hallmarks of Alpha-1 Antitrypsin Deficiency. *Chronic Obstructive Pulmonary Diseases (Miami, Fla)*, **2020**, 7, 224-246	2.7	0
110	Management of Hsp90-Dependent Protein Folding by Small Molecules Targeting the Aha1 Co-Chaperone. *Cell Chemical Biology*, **2020**, 27, 292-305.e6	8.2	8
109	Individualized management of genetic diversity in Niemann-Pick C1 through modulation of the Hsp70 chaperone system. *Human Molecular Genetics*, **2020**, 29, 1-19	5.6	10
108	HDAC inhibitors rescue multiple disease-causing CFTR variants. *Human Molecular Genetics*, **2019**, 28, 1982-2000	5.6	16
107	Quantitating the epigenetic transformation contributing to cholesterol homeostasis using Gaussian process. *Nature Communications*, **2019**, 10, 5052	17.4	11
106	Metformin Targets Mitochondrial Electron Transport to Reduce Air-Pollution-Induced Thrombosis. *Cell Metabolism*, **2019**, 29, 335-347.e5	24.6	47
105	Silencing of the Hsp70-specific nucleotide-exchange factor BAG3 corrects the F508del-CFTR variant by restoring autophagy. *Journal of Biological Chemistry*, **2018**, 293, 13682-13695	5.4	15
104	Correcting the F508del-CFTR variant by modulating eukaryotic translation initiation factor 3-mediated translation initiation. *Journal of Biological Chemistry*, **2018**, 293, 13477-13495	5.4	14
103	Bridging Genomics to Phenomics at Atomic Resolution through Variation Spatial Profiling. *Cell Reports*, **2018**, 24, 2013-2028.e6	10.6	21
102	A Proteomic Variant Approach (ProVarA) for Personalized Medicine of Inherited and Somatic Disease. *Journal of Molecular Biology*, **2018**, 430, 2951-2973	6.5	16
101	Histone deacetylase inhibitors correct the cholesterol storage defect in most Niemann-Pick C1 mutant cells. *Journal of Lipid Research*, **2017**, 58, 695-708	6.3	38
100	The Intersection of Aging Biology and the Pathobiology of Lung Diseases: A Joint NHLBI/NIA Workshop. *Journals of Gerontology - Series A Biological Sciences and Medical Sciences*, **2017**, 72, 1492-1500	6.4	40

99	Quantitative Analysis of the Proteome Response to the Histone Deacetylase Inhibitor (HDACi) Vorinostat in Niemann-Pick Type C1 disease. *Molecular and Cellular Proteomics*, **2017**, 16, 1938-1957	7.6	18
98	Monocyte-derived alveolar macrophages drive lung fibrosis and persist in the lung over the life span. *Journal of Experimental Medicine*, **2017**, 214, 2387-2404	16.6	434
97	Measuring the Effect of Histone Deacetylase Inhibitors (HDACi) on the Secretion and Activity of Alpha-1 Antitrypsin. *Methods in Molecular Biology*, **2017**, 1639, 185-193	1.4	6
96	From CFTR biology toward combinatorial pharmacotherapy: expanded classification of cystic fibrosis mutations. *Molecular Biology of the Cell*, **2016**, 27, 424-33	3.5	289
95	Managing the Adaptive Proteostatic Landscape: Restoring Resilience in Alpha-1 Antitrypsin Deficiency. *Respiratory Medicine*, **2016**, 53-83	0.2	0
94	Quantitative Proteomics of Human Fibroblasts with I1061T Mutation in Niemann-Pick C1 (NPC1) Protein Provides Insights into the Disease Pathogenesis. *Molecular and Cellular Proteomics*, **2015**, 14, 1734-49	7.6	33
93	Proteostatic hotspots in amyloid fibrils protect us from neurodegeneration. *Developmental Cell*, **2015**, 32, 659-60	10.2	4
92	Hallmarks of therapeutic management of the cystic fibrosis functional landscape. *Journal of Cystic Fibrosis*, **2015**, 14, 687-99	4.1	38
91	F508 CFTR interactome remodelling promotes rescue of cystic fibrosis. *Nature*, **2015**, 528, 510-6	50.4	163
90	Blue journal conference. Aging and susceptibility to lung disease. *American Journal of Respiratory and Critical Care Medicine*, **2015**, 191, 261-9	10.2	123
89	Quantitative proteomic profiling reveals differentially regulated proteins in cystic fibrosis cells. *Journal of Proteome Research*, **2014**, 13, 4668-75	5.6	20
88	Malfolded protein structure and proteostasis in lung diseases. *American Journal of Respiratory and Critical Care Medicine*, **2014**, 189, 96-103	10.2	43
87	Modulation of the maladaptive stress response to manage diseases of protein folding. *PLoS Biology* , **2014**, 12, e1001998	9.7	70
86	Diffuse lung disease in children: summary of a scientific conference. *Pediatric Pulmonology*, **2014**, 49, 400-9	3.5	15
85	Diversity in the origins of proteostasis networks--a driver for protein function in evolution. *Nature Reviews Molecular Cell Biology*, **2013**, 14, 237-48	48.7	168
84	Expanding proteostasis by membrane trafficking networks. *Cold Spring Harbor Perspectives in Biology*, **2013**, 5,	10.2	27
83	Histone deacetylase inhibitor (HDACi) suberoylanilide hydroxamic acid (SAHA)-mediated correction of 1-antitrypsin deficiency. *Journal of Biological Chemistry*, **2012**, 287, 38265-78	5.4	59
82	FK506 binding protein 8 peptidylprolyl isomerase activity manages a late stage of cystic fibrosis transmembrane conductance regulator (CFTR) folding and stability. *Journal of Biological Chemistry*, **2012**, 287, 21914-25	5.4	28

81	A chaperone trap contributes to the onset of cystic fibrosis. *PLoS ONE*, **2012**, 7, e37682	3.7	44
80	Small-molecule proteostasis regulators for protein conformational diseases. *Nature Chemical Biology*, **2011**, 8, 185-96	11.7	173
79	Proteostasis: a new therapeutic paradigm for pulmonary disease. *Proceedings of the American Thoracic Society*, **2011**, 8, 189-95		29
78	Modeling general proteostasis: proteome balance in health and disease. *Current Opinion in Cell Biology*, **2011**, 23, 126-34	9	84
77	Potential Agents for Treating Cystic Fibrosis: Cyclic Tetrapeptides that Restore Trafficking and Activity of ΔF508-CFTR. *ACS Medicinal Chemistry Letters*, **2011**, 2, 703-707	4.3	23
76	Emergent properties of proteostasis in managing cystic fibrosis. *Cold Spring Harbor Perspectives in Biology*, **2011**, 3,	10.2	63
75	Di-acidic motifs in the membrane-distal C termini modulate the transport of angiotensin II receptors from the endoplasmic reticulum to the cell surface. *Journal of Biological Chemistry*, **2011**, 286, 20525-35	5.4	35
74	Introduction to section II: omics in the biology of cystic fibrosis. *Methods in Molecular Biology*, **2011**, 742, 189-91	1.4	2
73	Application of mass spectrometry to study proteomics and interactomics in cystic fibrosis. *Methods in Molecular Biology*, **2011**, 742, 227-47	1.4	12
72	CFTR Folding Consortium: methods available for studies of CFTR folding and correction. *Methods in Molecular Biology*, **2011**, 742, 335-53	1.4	26
71	Reduced histone deacetylase 7 activity restores function to misfolded CFTR in cystic fibrosis. *Nature Chemical Biology*, **2010**, 6, 25-33	11.7	204
70	Proteostasis strategies for restoring alpha1-antitrypsin deficiency. *Proceedings of the American Thoracic Society*, **2010**, 7, 415-22		16
69	Emergent properties of proteostasis-COPII coupled systems in human health and disease. *Molecular Membrane Biology*, **2010**, 27, 385-97	3.4	27
68	Cell Biology. The proteome in balance. *Science*, **2010**, 329, 766-7	33.3	40
67	Biological and structural basis for Aha1 regulation of Hsp90 ATPase activity in maintaining proteostasis in the human disease cystic fibrosis. *Molecular Biology of the Cell*, **2010**, 21, 871-84	3.5	137
66	Folding Biology of Cystic Fibrosis: A Consortium-Based Approach to Disease **2010**, 425-452		1
65	The proteostasis boundary in misfolding diseases of membrane traffic. *FEBS Letters*, **2009**, 583, 2639-46	3.8	70
64	Structural and functional analysis of the globular head domain of p115 provides insight into membrane tethering. *Journal of Molecular Biology*, **2009**, 391, 26-41	6.5	31

63	Biological and chemical approaches to diseases of proteostasis deficiency. *Annual Review of Biochemistry*, **2009**, 78, 959-91	29.1	854
62	Structural basis for cargo regulation of COPII coat assembly. *Cell*, **2008**, 134, 474-84	56.2	209
61	Chemical and biological approaches synergize to ameliorate protein-folding diseases. *Cell*, **2008**, 134, 769-81	56.2	290
60	Adapting proteostasis for disease intervention. *Science*, **2008**, 319, 916-9	33.3	1715
59	The lysophospholipid acyltransferase antagonist CI-976 inhibits a late step in COPII vesicle budding. *Traffic*, **2008**, 9, 786-97	5.7	34
58	Chemical and biological folding contribute to temperature-sensitive DeltaF508 CFTR trafficking. *Traffic*, **2008**, 9, 1878-93	5.7	69
57	Protein energetics in maturation of the early secretory pathway. *Current Opinion in Cell Biology*, **2007**, 19, 359-67	9	25
56	Structural design of cage and coat scaffolds that direct membrane traffic. *Current Opinion in Structural Biology*, **2007**, 17, 221-8	8.1	67
55	An evolutionary perspective on eukaryotic membrane trafficking. *Advances in Experimental Medicine and Biology*, **2007**, 607, 73-83	3.6	39
54	Functional amyloid--from bacteria to humans. *Trends in Biochemical Sciences*, **2007**, 32, 217-24	10.3	808
53	An adaptable standard for protein export from the endoplasmic reticulum. *Cell*, **2007**, 131, 809-21	56.2	135
52	Domain interdependence in the biosynthetic assembly of CFTR. *Journal of Molecular Biology*, **2007**, 365, 981-94	6.5	175
51	The Hsp90 chaperone complex regulates GDI-dependent Rab recycling. *Molecular Biology of the Cell*, **2006**, 17, 3494-507	3.5	46
50	Hsp90 cochaperone Aha1 downregulation rescues misfolding of CFTR in cystic fibrosis. *Cell*, **2006**, 127, 803-15	56.2	498
49	The COPII cage: unifying principles of vesicle coat assembly. *Nature Reviews Molecular Cell Biology*, **2006**, 7, 727-38	48.7	174
48	Structure of the Sec13/31 COPII coat cage. *Nature*, **2006**, 439, 234-8	50.4	251
47	Recombinant production in baculovirus-infected insect cells and purification of the mammalian Sec13/Sec31 complex. *Methods in Enzymology*, **2005**, 404, 58-66	1.7	4
46	The biological and chemical basis for tissue-selective amyloid disease. *Cell*, **2005**, 121, 73-85	56.2	366

45	Large-scale profiling of Rab GTPase trafficking networks: the membrome. *Molecular Biology of the Cell*, **2005**, 16, 3847-64	3.5	106
44	Metalloendoprotease cleavage triggers gelsolin amyloidogenesis. *EMBO Journal*, **2005**, 24, 4124-32	13	53
43	The role of ARF1 and rab GTPases in polarization of the Golgi stack. *Traffic*, **2005**, 6, 803-19	5.7	26
42	Purification and properties of mammalian Sec23/24 from insect cells. *Methods in Enzymology*, **2005**, 404, 66-74	1.7	1
41	COPII-dependent export of cystic fibrosis transmembrane conductance regulator from the ER uses a di-acidic exit code. *Journal of Cell Biology*, **2004**, 167, 65-74	7.3	174
40	Vesicle traffic in vitro. *Cell*, **2004**, 116, S17-9, 2 p following S19	56.2	7
39	Molecular evolution of the Rab-escort-protein/guanine-nucleotide-dissociation-inhibitor superfamily. *Molecular Biology of the Cell*, **2003**, 14, 3857-67	3.5	24
38	Molecular Evolution of the Rab-Escort-Protein/Guanine-Nucleotide-Dissociation-Inhibitor Superfamily. *Molecular Biology of the Cell*, **2003**, 14, 3857-3867	3.5	35
37	Geranylgeranyl switching regulates GDI-Rab GTPase recycling. *Structure*, **2003**, 11, 347-57	5.2	42
36	Molecular and Structural Organization of Rab GTPase Trafficking Networks **2003**, 689-693		1
35	Rab-alphaGDI activity is regulated by a Hsp90 chaperone complex. *EMBO Journal*, **2002**, 21, 6125-35	13	95
34	The mammalian guanine nucleotide exchange factor mSec12 is essential for activation of the Sar1 GTPase directing endoplasmic reticulum export. *Traffic*, **2001**, 2, 465-75	5.7	79
33	Organization of the Rab-GDI/CHM superfamily: the functional basis for choroideremia disease. *Traffic*, **2001**, 2, 532-43	5.7	85
32	Crystal structure of Sar1-GDP at 1.7 A resolution and the role of the NH2 terminus in ER export. *Journal of Cell Biology*, **2001**, 155, 937-48	7.3	133
31	The Sar1 GTPase coordinates biosynthetic cargo selection with endoplasmic reticulum export site assembly. *Journal of Cell Biology*, **2001**, 152, 213-29	7.3	210
30	A new frontier in pharmacology: the endoplasmic reticulum as a regulated export pathway in health and disease. *Expert Opinion on Therapeutic Targets*, **2001**, 5, 165-76		6
29	A new functional domain of guanine nucleotide dissociation inhibitor (alpha-GDI) involved in Rab recycling. *Traffic*, **2000**, 1, 270-81	5.7	33
28	Traffic pattern of cystic fibrosis transmembrane regulator through the early exocytic pathway. *Traffic*, **2000**, 1, 852-70	5.7	51

27	Kinase signaling initiates coat complex II (COPII) recruitment and export from the mammalian endoplasmic reticulum. *Journal of Biological Chemistry*, **2000**, 275, 35673-6	5.4	99
26	Molecular basis for Rab prenylation. *Journal of Cell Biology*, **2000**, 150, 89-103	7.3	260
25	Perspectives: drug delivery. Regulating export of ER cargo. *Science*, **2000**, 287, 816-7	33.3	10
24	Rab1 recruitment of p115 into a cis-SNARE complex: programming budding COPII vesicles for fusion. *Science*, **2000**, 289, 444-8	33.3	399
23	A di-acidic (DXE) code directs concentration of cargo during export from the endoplasmic reticulum. *Journal of Biological Chemistry*, **1999**, 274, 15937-46	5.4	130
22	Molecular dissection of guanine nucleotide dissociation inhibitor function in vivo. Rab-independent binding to membranes and role of Rab recycling factors. *Journal of Biological Chemistry*, **1999**, 274, 14806-17	5.4	49
21	Cargo can modulate COPII vesicle formation from the endoplasmic reticulum. *Journal of Biological Chemistry*, **1999**, 274, 4389-99	5.4	86
20	Mutations in GDI1 are responsible for X-linked non-specific mental retardation. *Nature Genetics*, **1998**, 19, 134-9	36.3	277
19	Selective transport of cargo between the endoplasmic reticulum and Golgi compartments. *Histochemistry and Cell Biology*, **1998**, 109, 463-75	2.4	31
18	Molecular role for the Rab binding platform of guanine nucleotide dissociation inhibitor in endoplasmic reticulum to Golgi transport. *Journal of Biological Chemistry*, **1998**, 273, 26931-8	5.4	29
17	Cargo selection by the COPII budding machinery during export from the ER. *Journal of Cell Biology*, **1998**, 141, 61-70	7.3	249
16	Membrane dynamics at the endoplasmic reticulum-Golgi interface. *Journal of Cell Biology*, **1997**, 138, 1-4	7.3	222
15	A di-acidic signal required for selective export from the endoplasmic reticulum. *Science*, **1997**, 277, 556-8	33.3	419
14	GTPASES: MOLECULAR SENSORS REGULATING BI-DIRECTIONAL TRANSPORT BETWEEN THE ENDOPLASMIC RETICULUM AND THE GOLGI. *Biochemical Society Transactions*, **1996**, 24, 585S-585S	5.1	
13	Principles of selective transport: coat complexes hold the key. *Trends in Cell Biology*, **1996**, 6, 315-20	18.3	80
12	Structure and mutational analysis of Rab GDP-dissociation inhibitor. *Nature*, **1996**, 381, 42-8	50.4	153
11	Rab2 is essential for the maturation of pre-Golgi intermediates. *Journal of Biological Chemistry*, **1996**, 271, 29372-9	5.4	107
10	Expression and purification of mammalian Sarl. *Methods in Enzymology*, **1995**, 257, 49-53	1.7	30

9	Vesicular stomatitis virus glycoprotein is sorted and concentrated during export from the endoplasmic reticulum. *Cell*, **1994**, 76, 841-52	56.2	350
8	Exocytotic fusion is activated by Rab3a peptides. *Nature*, **1992**, 360, 270-3	50.4	168
7	Vesicular transport between the endoplasmic reticulum and the Golgi stack requires the NEM-sensitive fusion protein. *Nature*, **1989**, 339, 397-8	50.4	270
6	Characterization of protein transport between successive compartments of the Golgi apparatus: asymmetric properties of donor and acceptor activities in a cell-free system. *Archives of Biochemistry and Biophysics*, **1985**, 240, 413-25	4.1	283
5	The glycoprotein that is transported between successive compartments of the Golgi in a cell-free system resides in stacks of cisternae. *Cell*, **1984**, 39, 511-24	56.2	69
4	An ancient divergence among the bacteria. *Journal of Molecular Evolution*, **1977**, 9, 305-11	3.1	104
3	Proteostasis and Energetics as Proteome Hallmarks of Aging and Influenza Challenge in Pulmonary Disease		1
2	HDAC Inhibitors Rescue Multiple Disease-Causing CFTR Variants		2
1	Correction of Niemann-Pick type C1 disease with the histone deacetylase inhibitor valproic acid		2