Alexandra C Walls

List of Publications by Year in Descending Order

79 papers	13,491 citations	42 h-index	88 g-index
88 ext. papers	20,262 ext. citations	31.9 avg, IF	7.4 L-index

#	Paper	IF	Citations
79	Structural changes in the SARS-CoV-2 spike E406W mutant escaping a clinical monoclonal antibody cocktail. **2022**,		2
78	SARS-CoV-2 breakthrough infections elicit potent, broad, and durable neutralizing antibody responses.. *Cell*, **2022**,	56.2	21
77	Antibody-mediated broad sarbecovirus neutralization through ACE2 molecular mimicry.. *Science*, **2022**, 375, eabm8143	33.3	23
76	Altered TMPRSS2 usage by SARS-CoV-2 Omicron impacts tropism and fusogenicity.. *Nature*, **2022**,	50.4	95
75	ACE2 binding is an ancestral and evolvable trait of sarbecoviruses.. *Nature*, **2022**,	50.4	19
74	Structural basis of SARS-CoV-2 Omicron immune evasion and receptor engagement.. *Science*, **2022**, 375, eabn8652	33.3	71
73	Omicron BA.1 and BA.2 neutralizing activity elicited by a comprehensive panel of human vaccines. **2022**,		3
72	Multivalent designed proteins neutralize SARS-CoV-2 variants of concern and confer protection against infection in mice.. *Science Translational Medicine*, **2022**, 14, eabn1252	17.5	3
71	Broadly neutralizing antibodies overcome SARS-CoV-2 Omicron antigenic shift.. *Nature*, **2021**,	50.4	204
70	Broadly neutralizing antibodies overcome SARS-CoV-2 Omicron antigenic shift. **2021**,		16
69	SARS-CoV-2 spike conformation determines plasma neutralizing activity. **2021**,		6
68	Molecular basis of immune evasion by the Delta and Kappa SARS-CoV-2 variants. *Science*, **2021**, eabl8506	33.3	65
67	Antibody-mediated broad sarbecovirus neutralization through ACE2 molecular mimicry **2021**,		7
66	Emergence and spread of a SARS-CoV-2 variant through Europe in the summer of 2020 **2021**,		142
65	Structural basis for broad coronavirus neutralization **2021**,		14
64	Elicitation of broadly protective sarbecovirus immunity by receptor-binding domain nanoparticle vaccines **2021**,		12
63	Sensitivity of SARS-CoV-2 B.1.1.7 to mRNA vaccine-elicited antibodies. *Nature*, **2021**, 593, 136-141	50.4	376

62	Adjuvanting a subunit COVID-19 vaccine to induce protective immunity. *Nature*, **2021**, 594, 253-258	50.4	92
61	Designed proteins assemble antibodies into modular nanocages. *Science*, **2021**, 372,	33.3	35
60	N-terminal domain antigenic mapping reveals a site of vulnerability for SARS-CoV-2. *Cell*, **2021**, 184, 2332-2347	51.2	316
59	SARS-CoV-2 immune evasion by variant B.1.427/B.1.429 **2021**,		62
58	Structural basis for broad sarbecovirus neutralization by a human monoclonal antibody **2021**,		14
57	Structural basis for broad coronavirus neutralization. *Nature Structural and Molecular Biology*, **2021**, 28, 478-486	17.6	65
56	Detection of antibodies neutralizing historical and emerging SARS-CoV-2 strains using a thermodynamically coupled de novo biosensor system **2021**,		1
55	Stabilization of the SARS-CoV-2 Spike Receptor-Binding Domain Using Deep Mutational Scanning and Structure-Based Design. *Frontiers in Immunology*, **2021**, 12, 710263	8.4	7
54	Spread of a SARS-CoV-2 variant through Europe in the summer of 2020. *Nature*, **2021**, 595, 707-712	50.4	168
53	SARS-CoV-2 immune evasion by the B.1.427/B.1.429 variant of concern. *Science*, **2021**, 373, 648-654	33.3	197
52	N-terminal domain antigenic mapping reveals a site of vulnerability for SARS-CoV-2 **2021**,		34
51	Adjuvanting a subunit SARS-CoV-2 nanoparticle vaccine to induce protective immunity in non-human primates **2021**,		7
50	Broad sarbecovirus neutralization by a human monoclonal antibody. *Nature*, **2021**, 597, 103-108	50.4	94
49	Multivalent designed proteins protect against SARS-CoV-2 variants of concern **2021**,		4
48	SARS-CoV-2 RBD antibodies that maximize breadth and resistance to escape. *Nature*, **2021**, 597, 97-102	50.4	118
47	Molecular basis of immune evasion by the delta and kappa SARS-CoV-2 variants **2021**,		31
46	Discovery and Characterization of Spike N-Terminal Domain-Binding Aptamers for Rapid SARS-CoV-2 Detection. *Angewandte Chemie*, **2021**, 133, 21381-21385	3.6	1
45	Lectins enhance SARS-CoV-2 infection and influence neutralizing antibodies. *Nature*, **2021**, 598, 342-347	50.4	63

44	Discovery and Characterization of Spike N-Terminal Domain-Binding Aptamers for Rapid SARS-CoV-2 Detection. *Angewandte Chemie - International Edition*, **2021**, 60, 21211-21215	16.4	9
43	Elicitation of broadly protective sarbecovirus immunity by receptor-binding domain nanoparticle vaccines. *Cell*, **2021**, 184, 5432-5447.e16	56.2	34
42	Broad betacoronavirus neutralization by a stem helix-specific human antibody. *Science*, **2021**, 373, 1109-1116	33.5	80
41	SARS-CoV-2 B.1.1.7 sensitivity to mRNA vaccine-elicited, convalescent and monoclonal antibodies **2021**,		69
40	Delta breakthrough infections elicit potent, broad and durable neutralizing antibody responses. **2021**,		3
39	Cross-neutralization of SARS-CoV-2 by a human monoclonal SARS-CoV antibody. *Nature*, **2020**, 583, 290-295	50.4	1028
38	Structure, Function, and Antigenicity of the SARS-CoV-2 Spike Glycoprotein. *Cell*, **2020**, 181, 281-292.e6	56.2	4571
37	Structural and functional analysis of a potent sarbecovirus neutralizing antibody **2020**,		42
36	Serological identification of SARS-CoV-2 infections among children visiting a hospital during the initial Seattle outbreak **2020**,		9
35	Single-dose replicating RNA vaccine induces neutralizing antibodies against SARS-CoV-2 in nonhuman primates **2020**,		17
34	Closing coronavirus spike glycoproteins by structure-guided design **2020**,		7
33	Deep mutational scanning of SARS-CoV-2 receptor binding domain reveals constraints on folding and ACE2 binding **2020**,		33
32	Elicitation of potent neutralizing antibody responses by designed protein nanoparticle vaccines for SARS-CoV-2 **2020**,		10
31	Designed proteins assemble antibodies into modular nanocages **2020**,		5
30	Mapping Neutralizing and Immunodominant Sites on the SARS-CoV-2 Spike Receptor-Binding Domain by Structure-Guided High-Resolution Serology. *Cell*, **2020**, 183, 1024-1042.e21	56.2	601
29	An -derived replicon RNA vaccine induces SARS-CoV-2 neutralizing antibody and T cell responses in mice and nonhuman primates. *Science Translational Medicine*, **2020**, 12,	17.5	96
28	Structure-guided covalent stabilization of coronavirus spike glycoprotein trimers in the closed conformation. *Nature Structural and Molecular Biology*, **2020**, 27, 942-949	17.6	89
27	Deep Mutational Scanning of SARS-CoV-2 Receptor Binding Domain Reveals Constraints on Folding and ACE2 Binding. *Cell*, **2020**, 182, 1295-1310.e20	56.2	935

26	Elicitation of Potent Neutralizing Antibody Responses by Designed Protein Nanoparticle Vaccines for SARS-CoV-2. *Cell*, **2020**, 183, 1367-1382.e17	56.2	217
25	Serological identification of SARS-CoV-2 infections among children visiting a hospital during the initial Seattle outbreak. *Nature Communications*, **2020**, 11, 4378	17.4	45
24	De novo design of picomolar SARS-CoV-2 miniprotein inhibitors. *Science*, **2020**, 370, 426-431	33.3	219
23	Unexpected Receptor Functional Mimicry Elucidates Activation of Coronavirus Fusion. *Cell*, **2019**, 176, 1026-1039.e15	56.2	416
22	Structural basis for human coronavirus attachment to sialic acid receptors. *Nature Structural and Molecular Biology*, **2019**, 26, 481-489	17.6	341
21	Structural Studies of Coronavirus Fusion Proteins. *Microscopy and Microanalysis*, **2019**, 25, 1300-1301	0.5	3
20	Structures of MERS-CoV spike glycoprotein in complex with sialoside attachment receptors. *Nature Structural and Molecular Biology*, **2019**, 26, 1151-1157	17.6	161
19	Automatically Fixing Errors in Glycoprotein Structures with Rosetta. *Structure*, **2019**, 27, 134-139.e3	5.2	59
18	Glycan Shield and Fusion Activation of a Deltacoronavirus Spike Glycoprotein Fine-Tuned for Enteric Infections. *Journal of Virology*, **2018**, 92,	6.6	92
17	Vitrification after multiple rounds of sample application and blotting improves particle density on cryo-electron microscopy grids. *Journal of Structural Biology*, **2017**, 198, 38-42	3.4	43
16	RosettaES: a sampling strategy enabling automated interpretation of difficult cryo-EM maps. *Nature Methods*, **2017**, 14, 797-800	21.6	84
15	Tectonic conformational changes of a coronavirus spike glycoprotein promote membrane fusion. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 11157-11162	11.5	351
14	Crucial steps in the structure determination of a coronavirus spike glycoprotein using cryo-electron microscopy. *Protein Science*, **2017**, 26, 113-121	6.3	28
13	Glycan shield and epitope masking of a coronavirus spike protein observed by cryo-electron microscopy. *Nature Structural and Molecular Biology*, **2016**, 23, 899-905	17.6	252
12	Secreted Effectors Encoded within and outside of the Francisella Pathogenicity Island Promote Intramacrophage Growth. *Cell Host and Microbe*, **2016**, 20, 573-583	23.4	45
11	Subunit connectivity, assembly determinants and architecture of the yeast exocyst complex. *Nature Structural and Molecular Biology*, **2016**, 23, 59-66	17.6	76
10	Cryo-electron microscopy structure of a coronavirus spike glycoprotein trimer. *Nature*, **2016**, 531, 114-117	50.4	354
9	Broadly neutralizing antibodies overcome SARS-CoV-2 Omicron antigenic shift. *Nature*,	50.4	44

8	SARS-CoV-2 Omicron spike mediated immune escape and tropism shift	23
7	Structure, receptor recognition and antigenicity of the human coronavirus CCoV-HuPn-2018 spike glycoprotein	12
6	Structure, function and antigenicity of the SARS-CoV-2 spike glycoprotein	126
5	Membrane lectins enhance SARS-CoV-2 infection and influence the neutralizing activity of different classes of antibodies	18
4	A human antibody that broadly neutralizes betacoronaviruses protects against SARS-CoV-2 by blocking the fusion machinery	13
3	ACE2 binding is an ancestral and evolvable trait of sarbecoviruses	10
2	ACE2 engagement exposes the fusion peptide to pan-coronavirus neutralizing antibodies	3
1	Imprinted antibody responses against SARS-CoV-2 Omicron sublineages	5