Frederick W Alt

List of Publications by Year
in descending order

131 papers	20,316 citations	18436 62 h-index	15218 126 g-index
136 all docs	136 docs citations	136 times ranked	16128 citing authors

#	Article	IF	Citations
1	The role of chromatin loop extrusion in antibody diversification. Nature Reviews Immunology, 2022, 22, 550-566.	10.6	50
2	mRNA-encoded HIV-1 Env trimer ferritin nanoparticles induce monoclonal antibodies that neutralize heterologous HIV-1 isolates in mice. Cell Reports, 2022, 38, 110514.	2.9	23
3	Ig Enhancers Increase RNA Polymerase II Stalling at Somatic Hypermutation Target Sequences. Journal of Immunology, 2022, 208, 143-154.	0.4	13
4	Câ€terminal deletionâ€induced condensation sequesters AID from IgH targets in immunodeficiency. EMBO Journal, 2022, 41, e109324.	3.5	5
5	SHLD1 is dispensable for 53BP1-dependent V(D)J recombination but critical for productive class switch recombination. Nature Communications, 2022, 13, .	5.8	7
6	Loop extrusion mediates physiological Igh locus contraction for RAG scanning. Nature, 2021, 590, 338-343.	13.7	66
7	Physiological role of the 3â€²IgH CBEs super-anchor in antibody class switching. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	16
8	Vaccination induces maturation in a mouse model of diverse unmutated VRC01-class precursors to HIV-neutralizing antibodies with >50% breadth. Immunity, 2021, 54, 324-339.e8.	6.6	36
9	An in vivo method for diversifying the functions of therapeutic antibodies. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	3
10	Ku70 suppresses alternative end joining in G1-arrested progenitor B cells. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
11	Topoisomerase I inhibition and peripheral nerve injury induce DNA breaks and ATF3-associated axon regeneration in sensory neurons. Cell Reports, 2021, 36, 109666.	2.9	16
12	eccDNAs are apoptotic products with high innate immunostimulatory activity. Nature, 2021, 599, 308-314.	13.7	121
13	CTCF orchestrates long-range cohesin-driven V(D)J recombinational scanning. Nature, 2020, 586, 305-310.	13.7	82
14	Direct analysis of brain phenotypes via neural blastocyst complementation. Nature Protocols, 2020, 15, 3154-3181.	5.5	4
15	BCR selection and affinity maturation in Peyerâ€™s patch germinal centres. Nature, 2020, 582, 421-425.	13.7	65
16	Conditional antibody expression to avoid central B cell deletion in humanized HIV-1 vaccine mouse models. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7929-7940.	3.3	10
17	Immune checkpoint modulation enhances HIV-1 antibody induction. Nature Communications, 2020, 11, 948.	5.8	27
18	Increased Neural Progenitor Proliferation in a hiPSC Model of Autism Induces Replication Stress-Associated Genome Instability. Cell Stem Cell, 2020, 26, 221-233.e6.	5.2	61

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19	Induction of recurrent break cluster genes in neural progenitor cells differentiated from embryonic stem cells in culture. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10541-10546.	3.3	13
20	Fundamental roles of chromatin loop extrusion in antibody class switching. Nature, 2019, 575, 385-389.	13.7	105
21	The fundamental role of chromatin loop extrusion in physiological V(D)J recombination. Nature, 2019, 573, 600-604.	13.7	126
22	Targeted selection of HIV-specific antibody mutations by engineering B cell maturation. Science, 2019, 366, .	6.0	118
23	Three classes of recurrent DNA break clusters in brain progenitors identified by 3D proximity-based break joining assay. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1919-1924.	3.3	36
24	DNA double-strand break response factors influence end-joining features of IgH class switch and general translocation junctions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 762-767.	3.3	58
25	Defective DNA damage repair leads to frequent catastrophic genomic events in murine and human tumors. Nature Communications, 2018, 9, 4760.	5.8	66
26	Guiding a mutator in antibody diversification. Cell Research, 2018, 28, 963-964.	5.7	0
27	RAG Chromatin Scanning During V(D)J Recombination and Chromatin Loop Extrusion are Related Processes. Advances in Immunology, 2018, 139, 93-135.	1.1	50
28	Neural blastocyst complementation enables mouse forebrain organogenesis. Nature, 2018, 563, 126-130.	13.7	38
29	Parp3 promotes long-range end joining in murine cells. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10076-10081.	3.3	11
30	CTCF-Binding Elements Mediate Accessibility of RAG Substrates During Chromatin Scanning. Cell, 2018, 174, 102-116.e14.	13.5	100
31	DNA melting initiates the RAG catalytic pathway. Nature Structural and Molecular Biology, 2018, 25, 732-742.	3.6	40
32	Kinase-dependent structural role of DNA-PKcs during immunoglobulin class switch recombination. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8615-8620.	3.3	23
33	DNA double-strand breaks as drivers of neural genomic change, function, and disease. DNA Repair, 2018, 71, 158-163.	1.3	75
34	Human Ig knockin mice to study the development and regulation of <scp>HIV</scp>â€1 broadly neutralizing antibodies. Immunological Reviews, 2017, 275, 89-107.	2.8	37
35	Phosphatidylinositol 3-kinase Î´ blockade increases genomic instability in B cells. Nature, 2017, 542, 489-493.	13.7	105
36	Synthetic lethality between murine DNA repair factors XLF and DNA-PKcs is rescued by inactivation of Ku70. DNA Repair, 2017, 57, 133-138.	1.3	21

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37	AID Recognizes Structured DNA for Class Switch Recombination. Molecular Cell, 2017, 67, 361-373.e4.	4.5	136
38	Sequence intrinsic somatic mutation mechanisms contribute to affinity maturation of VRC01-class HIV-1 broadly neutralizing antibodies. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8614-8619.	3.3	42
39	Histone methyltransferase MMSET promotes AID-mediated DNA breaks at the donor switch region during class switch recombination. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10560-E10567.	3.3	13
40	Mechanism of tandem duplication formation in BRCA1-mutant cells. Nature, 2017, 551, 590-595.	13.7	118
41	Recurrently Breaking Genes in Neural Progenitors: Potential Roles of DNA Breaks in Neuronal Function, Degeneration and Cancer. Research and Perspectives in Neurosciences, 2017, , 63-72.	0.4	7
42	Detecting DNA double-stranded breaks in mammalian genomes by linear amplificationâ€“mediated high-throughput genome-wide translocation sequencing. Nature Protocols, 2016, 11, 853-871.	5.5	213
43	PAXX and XLF DNA repair factors are functionally redundant in joining DNA breaks in a G1-arrested progenitor B-cell line. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10619-10624.	3.3	88
44	Induction of HIV Neutralizing Antibody Lineages in Mice with Diverse Precursor Repertoires. Cell, 2016, 166, 1471-1484.e18.	13.5	198
45	Orientation-specific RAG activity in chromosomal loop domains contributes to Tcrd V(D)J recombination during T cell development. Journal of Experimental Medicine, 2016, 213, 1921-1936.	4.2	38
46	An Ectopic CTCF Binding Element Inhibits Tcrd Rearrangement by Limiting Contact between VÎ´ and DÎ´ Gene Segments. Journal of Immunology, 2016, 197, 3188-3197.	0.4	20
47	Highly sensitive and unbiased approach for elucidating antibody repertoires. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7846-7851.	3.3	77
48	Transcription-associated processes cause DNA double-strand breaks and translocations in neural stem/progenitor cells. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2258-2263.	3.3	88
49	Long Neural Genes Harbor Recurrent DNA Break Clusters in Neural Stem/Progenitor Cells. Cell, 2016, 164, 644-655.	13.5	225
50	Sequential activation and distinct functions for distal and proximal modules within the IgH 3â€² regulatory region. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1618-1623.	3.3	24
51	NHEJ and Other Repair Factors in V(D)J Recombination. , 2016, , 107-114.		5
52	Related Mechanisms of Antibody Somatic Hypermutation and Class Switch Recombination. Microbiology Spectrum, 2015, 3, MDNA3-0037-2014.	1.2	73
53	Aberrant TCRÎ´ rearrangement underlies the T-cell lymphocytopenia and t(12;14) translocation associated with ATM deficiency. Blood, 2015, 125, 2665-2668.	0.6	14
54	CTCF-binding elements 1 and 2 in the Igh intergenic control region cooperatively regulate V(D)J recombination. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1815-1820.	3.3	61

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55	A Rapid Embryonic Stem Cellâ€“Based Mouse Model for B-cell Lymphomas Driven by Epsteinâ€“Barr Virus Protein LMP1. Cancer Immunology Research, 2015, 3, 641-649.	1.6	3
56	An Oncogenic Role for Alternative NF-ÎºB Signaling in DLBCL Revealed upon Deregulated BCL6 Expression. Cell Reports, 2015, 11, 715-726.	2.9	66
57	Chromosomal Loop Domains Direct the Recombination of Antigen Receptor Genes. Cell, 2015, 163, 947-959.	13.5	140
58	Orientation-specific joining of AID-initiated DNA breaks promotes antibody class switching. Nature, 2015, 525, 134-139.	13.7	93
59	Sequence-Intrinsic Mechanisms that Target AID Mutational Outcomes on Antibody Genes. Cell, 2015, 163, 1124-1137.	13.5	136
60	Genome-wide detection of DNA double-stranded breaks induced by engineered nucleases. Nature Biotechnology, 2015, 33, 179-186.	9.4	590
61	PI3Kdelta Inhibitors Increase Genomic Instability By Upregulating Aid Expression. Blood, 2015, 126, 164-164.	0.6	1
62	Developmental propagation of V(D)J recombination-associated DNA breaks and translocations in mature B cells via dicentric chromosomes. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10269-10274.	3.3	32
63	Convergent Transcription at Intragenic Super-Enhancers Targets AID-Initiated Genomic Instability. Cell, 2014, 159, 1538-1548.	13.5	221
64	Functional overlaps between XLF and the ATM-dependent DNA double strand break response. DNA Repair, 2014, 16, 11-22.	1.3	56
65	A systematic analysis of recombination activity andÂgenotype-phenotype correlation in human recombination-activating gene 1 deficiency. Journal of Allergy and Clinical Immunology, 2014, 133, 1099-1108.e12.	1.5	132
66	Mechanisms That Can Promote Peripheral B-cell Lymphoma in ATM-Deficient Mice. Cancer Immunology Research, 2014, 2, 857-866.	1.6	17
67	Reprint of â€œFunctional overlaps between XLF and the ATM-dependent DNA double strand break responseâ€. DNA Repair, 2014, 17, 52-63.	1.3	3
68	Flexible Long-Range Loops in the VH Gene Region of the Igh Locus Facilitate the Generation of a Diverse Antibody Repertoire. Immunity, 2013, 39, 229-244.	6.6	130
69	SIRT7 Represses Myc Activity to Suppress ER Stress and Prevent Fatty Liver Disease. Cell Reports, 2013, 5, 654-665.	2.9	241
70	Mechanisms of Programmed DNA Lesions and Genomic Instability in the Immune System. Cell, 2013, 152, 417-429.	13.5	407
71	Robust chromosomal DNA repair via alternative end-joining in the absence of X-ray repair cross-complementing protein 1 (XRCC1). Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2473-2478.	3.3	106
72	CTCF-binding elements mediate control of V(D)J recombination. Nature, 2011, 477, 424-430.	13.7	251

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73	Genome-wide Translocation Sequencing Reveals Mechanisms of Chromosome Breaks and Rearrangements in B Cells. Cell, 2011, 147, 107-119.	13.5	411
74	Alternative end-joining catalyzes robust IgH locus deletions and translocations in the combined absence of ligase 4 and Ku70. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 3034-3039.	3.3	168
75	Alternative end-joining catalyzes class switch recombination in the absence of both Ku70 and DNA ligase 4. Journal of Experimental Medicine, 2010, 207, 417-427.	4.2	161
76	Downstream class switching leads to IgE antibody production by B lymphocytes lacking IgM switch regions. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 3040-3045.	3.3	30
77	The BCL11B Tumor Suppressor Is Mutated In Human T-Cell Acute Lymphoblastic Leukemia. Blood, 2010, 116, 4177-4177.	0.6	0
78	Evolution of Phosphorylation-Dependent Regulation of Activation-Induced Cytidine Deaminase. Molecular Cell, 2008, 32, 285-291.	4.5	43
79	Productive Coupling of Accessible VÎ²14 Segments and DJÎ² Complexes Determines the Frequency of VÎ²14 Rearrangement. Journal of Immunology, 2008, 180, 2339-2346.	0.4	20
80	AID expression levels determine the extent of cMyc oncogenic translocations and the incidence of B cell tumor development. Journal of Experimental Medicine, 2008, 205, 1949-1957.	4.2	140
81	S-S Synapsis during Class Switch Recombination Is Promoted by Distantly Located Transcriptional Elements and Activation-Induced Deaminase. Immunity, 2007, 27, 711-722.	6.6	184
82	IgH class switching and translocations use a robust non-classical end-joining pathway. Nature, 2007, 449, 478-482.	13.7	523
83	Antibody Class Switching Mediated by Yeast Endonuclease-Generated DNA Breaks. Science, 2007, 315, 377-381.	6.0	92
84	From gene amplification to V(D)J recombination and back: A personal account of my early years in B cell biology. European Journal of Immunology, 2007, 37, S138-S147.	1.6	0
85	MECHANISM AND CONTROL OF V(D)J RECOMBINATION AT THE IMMUNOGLOBULIN HEAVY CHAIN LOCUS. Annual Review of Immunology, 2006, 24, 541-570.	9.5	502
86	Elucidation of IgH intronic enhancer functions via germ-line deletion. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14362-14367.	3.3	165
87	Activating Notch1 Mutations in Mouse Models of T-ALL.. Blood, 2005, 106, 2609-2609.	0.6	2
88	The cellular response to general and programmed DNA double strand breaks. DNA Repair, 2004, 3, 781-796.	1.3	279
89	Transcription-targeted DNA deamination by the AID antibody diversification enzyme. Nature, 2003, 422, 726-730.	13.7	681
90	T cell receptor (TCR) Â/Â locus enhancer identity and position are critical for the assembly of TCR Â and Â variable region genes. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 2598-2603.	3.3	31

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91	Internal IgH class switch region deletions are position-independent and enhanced by AID expression. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9984-9989.	3.3	81
92	Unrepaired DNA Breaks in p53-Deficient Cells Lead to Oncogenic Gene Amplification Subsequent to Translocations. Cell, 2002, 109, 811-821.	13.5	395
93	DNA double strand break repair and chromosomal translocation: Lessons from animal models. Oncogene, 2001, 20, 5572-5579.	2.6	303
94	Plasma cell differentiation requires the transcription factor XBP-1. Nature, 2001, 412, 300-307.	13.7	1,146
95	Telomere dysfunction impairs DNA repair and enhances sensitivity to ionizing radiation. Nature Genetics, 2000, 26, 85-88.	9.4	297
96	Interplay of p53 and DNA-repair protein XRCC4 in tumorigenesis, genomic stability and development. Nature, 2000, 404, 897-900.	13.7	541
97	RNA editing meets DNA shuffling. Nature, 2000, 407, 31-33.	13.7	15
98	Antigen-Independent Appearance of Recombination Activating Gene (Rag)-Positive Bone Marrow B Cells in the Spleens of Immunized Mice. Journal of Experimental Medicine, 2000, 192, 1745-1754.	4.2	52
99	DNA Ligase IV Deficiency in Mice Leads to Defective Neurogenesis and Embryonic Lethality via the p53 Pathway. Molecular Cell, 2000, 5, 993-1002.	4.5	457
100	Vav Family Proteins Couple to Diverse Cell Surface Receptors. Molecular and Cellular Biology, 2000, 20, 6364-6373.	1.1	12
101	The Ig heavy chain intronic enhancer core region is necessary and sufficient to promote efficient class switch recombination. International Immunology, 1999, 11, 1709-1713.	1.8	38
102	Developmental Regulation of TCRÎ´ Locus Accessibility and Expression by the TCRÎ´ Enhancer. Immunity, 1999, 10, 503-513.	6.6	60
103	RAG2:GFP Knockin Mice Reveal Novel Aspects of RAG2 Expression in Primary and Peripheral Lymphoid Tissues. Immunity, 1999, 11, 201-212.	6.6	157
104	Late embryonic lethality and impaired V (D)J recombination in mice lacking DNA ligase IV. Nature, 1998, 396, 173-177.	13.7	520
105	A Critical Role for DNA End-Joining Proteins in Both Lymphogenesis and Neurogenesis. Cell, 1998, 95, 891-902.	13.5	622
106	Function of the TCRÎ± Enhancer in Î±Î² and Î³Î´ T Cells. Immunity, 1997, 7, 505-515.	6.6	191
107	Growth Retardation and Leaky SCID Phenotype of Ku70-Deficient Mice. Immunity, 1997, 7, 653-665.	6.6	414
108	Repertoires of Antigen Receptors in Tdt Congenitally Deficient Mice. International Reviews of Immunology, 1996, 13, 317-325.	1.5	31

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109	ACCESSIBILITY CONTROL OF ANTIGEN-RECEPTOR VARIABLE-REGION GENE ASSEMBLY: Role ofcis-Acting Elements. Annual Review of Immunology, 1996, 14, 459-481.	9.5	287
110	Defective signalling through the T- and B-cell antigen receptors in lymphoid cells lacking the vav proto-oncogene. Nature, 1995, 374, 470-473.	13.7	390
111	Increased T-cell apoptosis and terminal B-cell differentiation induced by inactivation of the Ets-1 proto-oncogene. Nature, 1995, 377, 635-638.	13.7	314
112	The role of short homology repeats and TdT in generation of the invariant Î³Î´ antigen receptor repertoire in the fetal thymus. Immunity, 1995, 3, 439-447.	6.6	61
113	CD3Îµ-mediated signals rescue the development of CD4+CD8+ thymocytes in RAG-2â^'/â^' mice in the absence of TCR Î² chain expression. International Immunology, 1994, 6, 995-1001.	1.8	194
114	IL-2 receptor Î± chain expression during early B lymphocyte differentiation. International Immunology, 1994, 6, 1265-1268.	1.8	48
115	An early haematopoietic defect in mice lacking the transcription factor GATA-2. Nature, 1994, 371, 221-226.	13.7	1,314
116	Generation of normal lymphocyte populations by Rb-deficient embryonic stem cells. Current Biology, 1993, 3, 405-413.	1.8	37
117	Diversity of immunoglobulin heavy chain gene segment rearrangement in B lymphoblastoid cell lines from X-linked agammaglobulinemia patients. European Journal of Immunology, 1991, 21, 2355-2363.	1.6	24
118	VH to VHDJH rearrangement is mediated by the internal VH heptamer. International Immunology, 1990, 2, 579-583.	1.8	48
119	Human Heavy Chain Variable Region Gene Diversity, Organization, and Expression. International Reviews of Immunology, 1990, 5, 203-214.	1.5	19
120	Gene Expression in Renal Growth and Regrowth. Journal of Urology, 1988, 140, 1145-1148.	0.2	14
121	Myc family of cellular oncogenes. Journal of Cellular Biochemistry, 1987, 33, 257-266.	1.2	52
122	Introduced T cell receptor variable region gene segments recombine in pre-B cells: Evidence that B and T cells use a common recombinase. Cell, 1986, 44, 251-259.	13.5	455
123	Human N-myc is closely related in organization and nucleotide sequence to c-myc. Nature, 1986, 319, 73-77.	13.7	254
124	A functional T3 molecule associated with a novel heterodimer on the surface of immature human thymocytes. Nature, 1986, 322, 179-181.	13.7	423
125	Antibody diversity: New mechanism revealed. Nature, 1986, 322, 772-773.	13.7	10
126	Regulation of Genome Rearrangement Events during Lymphocyte Differentiation. Immunological Reviews, 1986, 89, 5-30.	2.8	425

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127	Preferential utilization of the most JH-proximal VH gene segments in pre-B-cell lines. Nature, 1984, 311, 727-733.	13.7	654
128	Insertion of N regions into heavy-chain genes is correlated with expression of terminal deoxytransferase in B cells. Nature, 1984, 311, 752-755.	13.7	517
129	Novel immunoglobulin heavy chains are produced from DJH gene segment rearrangements in lymphoid cells. Nature, 1984, 312, 418-423.	13.7	276
130	Immunology: Exclusive immunoglobulin genes. Nature, 1984, 312, 502-503.	13.7	15
131	Related Mechanisms of Antibody Somatic Hypermutation and Class Switch Recombination. , 0, , 325-348.		3