

Frederick W Alt

List of Publications by Year in descending order

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Version: 2024-02-01

131
papers

20,316
citations

18465

62
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126
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136
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136
docs citations

136
times ranked

16128
citing authors

#	ARTICLE	IF	CITATIONS
1	The role of chromatin loop extrusion in antibody diversification. <i>Nature Reviews Immunology</i> , 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. <i>Cell Reports</i> , 2022, 38, 110514.	2.9	23
3	Ig Enhancers Increase RNA Polymerase II Stalling at Somatic Hypermutation Target Sequences. <i>Journal of Immunology</i> , 2022, 208, 143-154.	0.4	13
4	C-terminal deletion-induced condensation sequesters AID from IgH targets in immunodeficiency. <i>EMBO Journal</i> , 2022, 41, e109324.	3.5	5
5	SHLD1 is dispensable for 53BP1-dependent V(D)J recombination but critical for productive class switch recombination. <i>Nature Communications</i> , 2022, 13, .	5.8	7
6	Loop extrusion mediates physiological Igh locus contraction for RAG scanning. <i>Nature</i> , 2021, 590, 338-343.	13.7	66
7	Physiological role of the 3 rd IgH CBEs super-anchor in antibody class switching. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 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. <i>Immunity</i> , 2021, 54, 324-339.e8.	6.6	36
9	An in vivo method for diversifying the functions of therapeutic antibodies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	3
10	Ku70 suppresses alternative end joining in G1-arrested progenitor B cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	21
11	Topoisomerase I inhibition and peripheral nerve injury induce DNA breaks and ATF3-associated axon regeneration in sensory neurons. <i>Cell Reports</i> , 2021, 36, 109666.	2.9	16
12	eccDNAs are apoptotic products with high innate immunostimulatory activity. <i>Nature</i> , 2021, 599, 308-314.	13.7	121
13	CTCF orchestrates long-range cohesin-driven V(D)J recombinational scanning. <i>Nature</i> , 2020, 586, 305-310.	13.7	82
14	Direct analysis of brain phenotypes via neural blastocyst complementation. <i>Nature Protocols</i> , 2020, 15, 3154-3181.	5.5	4
15	BCR selection and affinity maturation in Peyer's patch germinal centres. <i>Nature</i> , 2020, 582, 421-425.	13.7	65
16	Conditional antibody expression to avoid central B cell deletion in humanized HIV-1 vaccine mouse models. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 7929-7940.	3.3	10
17	Immune checkpoint modulation enhances HIV-1 antibody induction. <i>Nature Communications</i> , 2020, 11, 948.	5.8	27
18	Increased Neural Progenitor Proliferation in a hiPSC Model of Autism Induces Replication Stress-Associated Genome Instability. <i>Cell Stem Cell</i> , 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 10541-10546.	3.3	13
20	Fundamental roles of chromatin loop extrusion in antibody class switching. <i>Nature</i> , 2019, 575, 385-389.	13.7	105
21	The fundamental role of chromatin loop extrusion in physiological V(D)J recombination. <i>Nature</i> , 2019, 573, 600-604.	13.7	126
22	Targeted selection of HIV-specific antibody mutations by engineering B cell maturation. <i>Science</i> , 2019, 366, .	6.0	118
23	Three classes of recurrent DNA break clusters in brain progenitors identified by 3D proximity-based break joining assay. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 762-767.	3.3	58
25	Defective DNA damage repair leads to frequent catastrophic genomic events in murine and human tumors. <i>Nature Communications</i> , 2018, 9, 4760.	5.8	66
26	Guiding a mutator in antibody diversification. <i>Cell Research</i> , 2018, 28, 963-964.	5.7	0
27	RAG Chromatin Scanning During V(D)J Recombination and Chromatin Loop Extrusion are Related Processes. <i>Advances in Immunology</i> , 2018, 139, 93-135.	1.1	50
28	Neural blastocyst complementation enables mouse forebrain organogenesis. <i>Nature</i> , 2018, 563, 126-130.	13.7	38
29	Parp3 promotes long-range end joining in murine cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 10076-10081.	3.3	11
30	CTCF-Binding Elements Mediate Accessibility of RAG Substrates During Chromatin Scanning. <i>Cell</i> , 2018, 174, 102-116.e14.	13.5	100
31	DNA melting initiates the RAG catalytic pathway. <i>Nature Structural and Molecular Biology</i> , 2018, 25, 732-742.	3.6	40
32	Kinase-dependent structural role of DNA-PKcs during immunoglobulin class switch recombination. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 8615-8620.	3.3	23
33	DNA double-strand breaks as drivers of neural genomic change, function, and disease. <i>DNA Repair</i> , 2018, 71, 158-163.	1.3	75
34	Human Ig knockin mice to study the development and regulation of broadly neutralizing antibodies. <i>Immunological Reviews</i> , 2017, 275, 89-107.	2.8	37
35	Phosphatidylinositol 3-kinase $\hat{\imath}$ blockade increases genomic instability in B cells. <i>Nature</i> , 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. <i>DNA Repair</i> , 2017, 57, 133-138.	1.3	21

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37	AID Recognizes Structured DNA for Class Switch Recombination. <i>Molecular Cell</i> , 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E10560-E10567.	3.3	13
40	Mechanism of tandem duplication formation in BRCA1-mutant cells. <i>Nature</i> , 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. <i>Research and Perspectives in Neurosciences</i> , 2017, , 63-72.	0.4	7
42	Detecting DNA double-stranded breaks in mammalian genomes by linear amplification-mediated high-throughput genome-wide translocation sequencing. <i>Nature Protocols</i> , 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10619-10624.	3.3	88
44	Induction of HIV Neutralizing Antibody Lineages in Mice with Diverse Precursor Repertoires. <i>Cell</i> , 2016, 166, 1471-1484.e18.	13.5	198
45	Orientation-specific RAG activity in chromosomal loop domains contributes to <i>Tcrd</i> V(D)J recombination during T cell development. <i>Journal of Experimental Medicine</i> , 2016, 213, 1921-1936.	4.2	38
46	An Ectopic CTCF Binding Element Inhibits <i>Tcrd</i> Rearrangement by Limiting Contact between <i>Vβ</i> and <i>Dβ</i> Gene Segments. <i>Journal of Immunology</i> , 2016, 197, 3188-3197.	0.4	20
47	Highly sensitive and unbiased approach for elucidating antibody repertoires. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 7846-7851.	3.3	77
48	Transcription-associated processes cause DNA double-strand breaks and translocations in neural stem/progenitor cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 2258-2263.	3.3	88
49	Long Neural Genes Harbor Recurrent DNA Break Clusters in Neural Stem/Progenitor Cells. <i>Cell</i> , 2016, 164, 644-655.	13.5	225
50	Sequential activation and distinct functions for distal and proximal modules within the IgH 3 α 2 regulatory region. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 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. <i>Microbiology Spectrum</i> , 2015, 3, MDNA3-0037-2014.	1.2	73
53	Aberrant TCR β rearrangement underlies the T-cell lymphocytopenia and t(12;14) translocation associated with ATM deficiency. <i>Blood</i> , 2015, 125, 2665-2668.	0.6	14
54	CTCF-binding elements 1 and 2 in the <i>Igh</i> intergenic control region cooperatively regulate V(D)J recombination. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 1815-1820.	3.3	61

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55	A Rapid Embryonic Stem Cell-Based Mouse Model for B-cell Lymphomas Driven by Epstein-Barr Virus Protein LMP1. <i>Cancer Immunology Research</i> , 2015, 3, 641-649.	1.6	3
56	An Oncogenic Role for Alternative NF- κ B Signaling in DLBCL Revealed upon Deregulated BCL6 Expression. <i>Cell Reports</i> , 2015, 11, 715-726.	2.9	66
57	Chromosomal Loop Domains Direct the Recombination of Antigen Receptor Genes. <i>Cell</i> , 2015, 163, 947-959.	13.5	140
58	Orientation-specific joining of AID-initiated DNA breaks promotes antibody class switching. <i>Nature</i> , 2015, 525, 134-139.	13.7	93
59	Sequence-Intrinsic Mechanisms that Target AID Mutational Outcomes on Antibody Genes. <i>Cell</i> , 2015, 163, 1124-1137.	13.5	136
60	Genome-wide detection of DNA double-stranded breaks induced by engineered nucleases. <i>Nature Biotechnology</i> , 2015, 33, 179-186.	9.4	590
61	PI3Kdelta Inhibitors Increase Genomic Instability By Upregulating Aid Expression. <i>Blood</i> , 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 10269-10274.	3.3	32
63	Convergent Transcription at Intragenic Super-Enhancers Targets AID-Initiated Genomic Instability. <i>Cell</i> , 2014, 159, 1538-1548.	13.5	221
64	Functional overlaps between XLF and the ATM-dependent DNA double strand break response. <i>DNA Repair</i> , 2014, 16, 11-22.	1.3	56
65	A systematic analysis of recombination activity and genotype-phenotype correlation in human recombination-activating gene 1 deficiency. <i>Journal of Allergy and Clinical Immunology</i> , 2014, 133, 1099-1108.e12.	1.5	132
66	Mechanisms That Can Promote Peripheral B-cell Lymphoma in ATM-Deficient Mice. <i>Cancer Immunology Research</i> , 2014, 2, 857-866.	1.6	17
67	Reprint of "Functional overlaps between XLF and the ATM-dependent DNA double strand break response". <i>DNA Repair</i> , 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. <i>Immunity</i> , 2013, 39, 229-244.	6.6	130
69	SIRT7 Represses Myc Activity to Suppress ER Stress and Prevent Fatty Liver Disease. <i>Cell Reports</i> , 2013, 5, 654-665.	2.9	241
70	Mechanisms of Programmed DNA Lesions and Genomic Instability in the Immune System. <i>Cell</i> , 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). <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 2473-2478.	3.3	106
72	CTCF-binding elements mediate control of V(D)J recombination. <i>Nature</i> , 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. <i>Cell</i> , 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 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. <i>Journal of Experimental Medicine</i> , 2010, 207, 417-427.	4.2	161
76	Downstream class switching leads to IgE antibody production by B lymphocytes lacking IgM switch regions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 3040-3045.	3.3	30
77	The BCL11B Tumor Suppressor Is Mutated In Human T-Cell Acute Lymphoblastic Leukemia. <i>Blood</i> , 2010, 116, 4177-4177.	0.6	0
78	Evolution of Phosphorylation-Dependent Regulation of Activation-Induced Cytidine Deaminase. <i>Molecular Cell</i> , 2008, 32, 285-291.	4.5	43
79	Productive Coupling of Accessible V ^H 214 Segments and DJ ^H 2 Complexes Determines the Frequency of V ^H 214 Rearrangement. <i>Journal of Immunology</i> , 2008, 180, 2339-2346.	0.4	20
80	AID expression levels determine the extent of <i>cMyc</i> oncogenic translocations and the incidence of B cell tumor development. <i>Journal of Experimental Medicine</i> , 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. <i>Immunity</i> , 2007, 27, 711-722.	6.6	184
82	IgH class switching and translocations use a robust non-classical end-joining pathway. <i>Nature</i> , 2007, 449, 478-482.	13.7	523
83	Antibody Class Switching Mediated by Yeast Endonuclease-Generated DNA Breaks. <i>Science</i> , 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. <i>European Journal of Immunology</i> , 2007, 37, S138-S147.	1.6	0
85	MECHANISM AND CONTROL OF V(D)J RECOMBINATION AT THE IMMUNOGLOBULIN HEAVY CHAIN LOCUS. <i>Annual Review of Immunology</i> , 2006, 24, 541-570.	9.5	502
86	Elucidation of IgH intronic enhancer functions via germ-line deletion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 14362-14367.	3.3	165
87	Activating Notch1 Mutations in Mouse Models of T-ALL. <i>Blood</i> , 2005, 106, 2609-2609.	0.6	2
88	The cellular response to general and programmed DNA double strand breaks. <i>DNA Repair</i> , 2004, 3, 781-796.	1.3	279
89	Transcription-targeted DNA deamination by the AID antibody diversification enzyme. <i>Nature</i> , 2003, 422, 726-730.	13.7	681
90	T cell receptor (TCR) α/α locus enhancer identity and position are critical for the assembly of TCR α and β variable region genes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 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 TCR β Locus Accessibility and Expression by the TCR β 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 TCR β Enhancer in β 2 μ and β 3 μ 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 of cis-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 $\alpha\beta$ antigen receptor repertoire in the fetal thymus. Immunity, 1995, 3, 439-447.	6.6	61
113	CD3 μ -mediated signals rescue the development of CD4 ⁺ CD8 ⁺ thymocytes in RAG-2 ^{-/-} mice in the absence of TCR β chain expression. International Immunology, 1994, 6, 995-1001.	1.8	194
114	IL-2 receptor β 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