Friedrich Haag

List of Publications by Year
in descending order

120 papers	6,029 citations	57758 44 h-index	79698 73 g-index
120 all docs	120 docs citations	120 times ranked	6024 citing authors

#	Article	IF	Citations
1	Single domain antibodies: promising experimental and therapeutic tools in infection and immunity. Medical Microbiology and Immunology, 2009, 198, 157-174.	4.8	421
2	NAD-Induced T Cell Death. Immunity, 2003, 19, 571-582.	14.3	297
3	In silico characterization of the family of PARP-like poly(ADP-ribosyl)transferases (pARTs). BMC Genomics, 2005, 6, 139.	2.8	224
4	Cutting Edge: A Natural P451L Mutation in the Cytoplasmic Domain Impairs the Function of the Mouse P2X7 Receptor. Journal of Immunology, 2002, 169, 4108-4112.	0.8	184
5	Extracellular NAD+ shapes the Foxp3+ regulatory T cell compartment through the ART2â€“P2X7 pathway. Journal of Experimental Medicine, 2010, 207, 2561-2568.	8.5	165
6	Extracellular NAD and ATP: Partners in immune cell modulation. Purinergic Signalling, 2007, 3, 71-81.	2.2	152
7	The family of toxin-related ecto-ADP-ribosyltransferases in humans and the mouse. Protein Science, 2009, 11, 1657-1670.	7.6	147
8	Nanobodies that block gating of the P2X7 ion channel ameliorate inflammation. Science Translational Medicine, 2016, 8, 366ra162.	12.4	139
9	NAD+ Released during Inflammation Participates in T Cell Homeostasis by Inducing ART2-Mediated Death of Naive T Cells In Vivo. Journal of Immunology, 2007, 179, 186-194.	0.8	135
10	Mouse T Cell Membrane Proteins Rt6â^'1 and Rt6â^'2 Are Arginine/Protein Mono(ADPribosyl)transferases and Share Secondary Structure Motifs with ADP-ribosylating Bacterial Toxins. Journal of Biological Chemistry, 1996, 271, 7686-7693.	3.4	127
11	ADPâ€ribosylation at R125 gates the P2X7 ion channel by presenting a covalent ligand to its nucleotide binding site. FASEB Journal, 2008, 22, 861-869.	0.5	116
12	NAD+ and ATP Released from Injured Cells Induce P2X7-Dependent Shedding of CD62L and Externalization of Phosphatidylserine by Murine T Cells. Journal of Immunology, 2009, 182, 2898-2908.	0.8	116
13	SARS-CoV2-specific Humoral and T-cell Immune Response After Second Vaccination in Liver Cirrhosis and Transplant Patients. Clinical Gastroenterology and Hepatology, 2022, 20, 162-172.e9.	4.4	113
14	ADP-ribosylation of arginine. Amino Acids, 2011, 41, 257-269.	2.7	110
15	Ecto-ADP-Ribosyltransferases (ARTs): Emerging Actors in Cell Communication and Signaling. Current Medicinal Chemistry, 2004, 11, 857-872.	2.4	109
16	Compartmentation of NAD⁺â€dependent signalling. FEBS Letters, 2011, 585, 1651-1656.	2.8	108
17	Actin is ADP-ribosylated by the Salmonella enterica virulence-associated protein SpvB. Molecular Microbiology, 2001, 39, 606-619.	2.5	106
18	Single domain antibodies from llama effectively and specifically block T cell ectoâ€ADPâ€ribosyltransferase ART2.2 in vivo. FASEB Journal, 2007, 21, 3490-3498.	0.5	106

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19	The structure of human ADP-ribosylhydrolase 3 (ARH3) provides insights into the reversibility of protein ADP-ribosylation. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15026-15031.	7.1	104
20	P2X7 on Mouse T Cells: One Channel, Many Functions. Frontiers in Immunology, 2015, 6, 204.	4.8	93
21	Mammalian ADP-ribosyltransferases and ADP-ribosylhydrolases. Frontiers in Bioscience - Landmark, 2008, Volume, 6716.	3.0	91
22	The spvB gene-product of the Salmonella enterica virulence plasmid is a mono(ADP-ribosyl)transferase. Molecular Microbiology, 2000, 37, 1106-1115.	2.5	88
23	CD38 Controls ADP-Ribosyltransferase-2-Catalyzed ADP-Ribosylation of T Cell Surface Proteins. Journal of Immunology, 2005, 174, 3298-3305.	0.8	87
24	Premature Stop Codons Inactivate the RT6 Genes of the Human and Chimpanzee Species. Journal of Molecular Biology, 1994, 243, 537-546.	4.2	77
25	Both allelic forms of the rat T cell differentiation marker RT6 display nicotinamide adenine dinucleotide (NAD)-glycohydrolase activity, yet only RT6.2 is capable of automodification upon incubation with NAD. European Journal of Immunology, 1995, 25, 2355-2361.	2.9	71
26	Emerging Roles of NAD ⁺ and Its Metabolites in Cell SignalingA report on the NAD2008 symposium, Hamburg, Germany, 14 to 17 September 2008.. Science Signaling, 2009, 2, mr1.	3.6	71
27	The expression of CD39 on regulatory T cells is genetically driven and further upregulated at sites of inflammation. Journal of Autoimmunity, 2015, 58, 12-20.	6.5	68
28	Targeted Disruption of CD38 Accelerates Autoimmune Diabetes in NOD/Lt Mice by Enhancing Autoimmunity in an ADP-Ribosyltransferase 2-Dependent Fashion. Journal of Immunology, 2006, 176, 4590-4599.	0.8	65
29	Two Novel Human Members of an Emerging Mammalian Gene Family Related to Mono-ADP-Ribosylating Bacterial Toxins. Genomics, 1997, 39, 370-376.	2.9	61
30	Mono(Adp-Ribosyl)Transferases and Related Enzymes in Animal Tissues. Advances in Experimental Medicine and Biology, 1997, 419, 1-13.	1.6	60
31	Rapid Induction of Naive T Cell Apoptosis by Ecto-Nicotinamide Adenine Dinucleotide: Requirement for Mono(ADP-Ribosyl)Transferase 2 and a Downstream Effector. Journal of Immunology, 2001, 167, 196-203.	0.8	59
32	Metalloprotease-Mediated Shedding of Enzymatically Active Mouse ecto-ADP-ribosyltransferase ART2.2 Upon T Cell Activation. Journal of Immunology, 2000, 165, 4463-4469.	0.8	58
33	Activity and specificity of toxin-related mouse T cell ectoâ€“ADP-ribosyltransferase ART2.2 depends on its association with lipid rafts. Blood, 2005, 105, 3663-3670.	1.4	56
34	Selection of Nanobodies that Block the Enzymatic and Cytotoxic Activities of the Binary Clostridium Difficile Toxin CDT. Scientific Reports, 2015, 5, 7850.	3.3	55
35	Nanobodies effectively modulate the enzymatic activity of CD38 and allow specific imaging of CD38+ tumors in mouse models in vivo. Scientific Reports, 2017, 7, 14289.	3.3	55
36	Extracellular NAD+: a danger signal hindering regulatory T cells. Microbes and Infection, 2012, 14, 1284-1292.	1.9	54

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37	Nanobody-Enhanced Targeting of AAV Gene Therapy Vectors. Molecular Therapy - Methods and Clinical Development, 2019, 15, 211-220.	4.1	53
38	Structure of the Ecto-ADP-ribosyl Transferase ART2.2 from Rat. Journal of Molecular Biology, 2002, 322, 687-696.	4.2	52
39	Generation and Characterization of Ecto-ADP-Ribosyltransferase ART2.1/ART2.2-Deficient Mice. Molecular and Cellular Biology, 2002, 22, 7535-7542.	2.3	51
40	Differential Regulation of P2X7 Receptor Activation by Extracellular Nicotinamide Adenine Dinucleotide and Ecto-ADP-Ribosyltransferases in Murine Macrophages and T Cells. Journal of Immunology, 2009, 183, 578-592.	0.8	51
41	Alternative Splicing of the N-Terminal Cytosolic and Transmembrane Domains of P2X7 Controls Gating of the Ion Channel by ADP-Ribosylation. PLoS ONE, 2012, 7, e41269.	2.5	50
42	CD39 is upregulated during activation of mouse and human T cells and attenuates the immune response to Listeria monocytogenes. PLoS ONE, 2018, 13, e0197151.	2.5	49
43	High Sensitivity of Intestinal CD8+ T Cells to Nucleotides Indicates P2X7 as a Regulator for Intestinal T Cell Responses. Journal of Immunology, 2008, 181, 3861-3869.	0.8	48
44	Technical Advance: A new cell preparation strategy that greatly improves the yield of vital and functional Tregs and NKT cells. Journal of Leukocyte Biology, 2013, 95, 543-549.	3.3	48
45	Defining the CD39/CD73 Axis in SARS-CoV-2 Infection: The CD73- Phenotype Identifies Polyfunctional Cytotoxic Lymphocytes. Cells, 2020, 9, 1750.	4.1	48
46	Sustained Response After Remdesivir and Convalescent Plasma Therapy in a B-Cellâ€“Depleted Patient With Protracted Coronavirus Disease 2019 (COVID-19). Clinical Infectious Diseases, 2021, 73, e4020-e4024.	5.8	47
47	Targeting CD38-Expressing Multiple Myeloma and Burkitt Lymphoma Cells In Vitro with Nanobody-Based Chimeric Antigen Receptors (Nb-CARs). Cells, 2020, 9, 321.	4.1	46
48	B cell analysis in SARS-CoV-2 versus malaria: Increased frequencies of plasmablasts and atypical memory B cells in COVID-19. Journal of Leukocyte Biology, 2021, 109, 77-90.	3.3	46
49	Flow cytometric and immunoblot assays for cell surface ADP-ribosylation using a monoclonal antibody specific for ethenoadenosine. Analytical Biochemistry, 2003, 314, 108-115.	2.4	45
50	Molecular imaging of tumors with nanobodies and antibodies: Timing and dosage are crucial factors for improved <i>in vivo</i> detection. Contrast Media and Molecular Imaging, 2015, 10, 367-378.	0.8	43
51	Generation and Function of Non-cell-bound CD73 in Inflammation. Frontiers in Immunology, 2019, 10, 1729.	4.8	43
52	ADPâ€ribosylation of membrane proteins: Unveiling the secrets of a crucial regulatory mechanism in mammalian cells. Annals of Medicine, 2006, 38, 188-199.	3.8	42
53	Neutrophil Extracellular Traps Contain Selected Antigens of Anti-Neutrophil Cytoplasmic Antibodies. Frontiers in Immunology, 2017, 8, 439.	4.8	42
54	ADP-Ribosylation of P2X7: A Matter of Life and Death for Regulatory T Cells and Natural Killer T Cells. Current Topics in Microbiology and Immunology, 2014, 384, 107-126.	1.1	40

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55	Uncovered: the family relationship of a T-cell-membrane protein and bacterial toxins. Trends in Immunology, 1996, 17, 402-405.	7.5	38
56	<i>In vivo</i> nearâ€infrared fluorescence targeting of T cells: comparison of nanobodies and conventional monoclonal antibodies. Contrast Media and Molecular Imaging, 2014, 9, 135-142.	0.8	37
57	Activation of the P2X7 ion channel by soluble and covalently bound ligands. Purinergic Signalling, 2009, 5, 139-149.	2.2	36
58	Structure, chromosomal localization, and expression of the gene for mouse ecto-mono(ADP-ribosyl)transferase ART5. Gene, 2001, 275, 267-277.	2.2	35
59	Use of genetic immunization to raise antibodies recognizing toxin-related cell surface ADP-ribosyltransferases in native conformation. Cellular Immunology, 2005, 236, 66-71.	3.0	35
60	Singleâ€domain llama antibodies as specific intracellular inhibitors of SpvB, the actin ADPâ€ribosylating toxin of <i>Salmonella typhimurium</i>. FASEB Journal, 2011, 25, 526-534.	0.5	35
61	CD38-Specific Biparatopic Heavy Chain Antibodies Display Potent Complement-Dependent Cytotoxicity Against Multiple Myeloma Cells. Frontiers in Immunology, 2018, 9, 2553.	4.8	35
62	Novel biologics targeting the P2X7 ion channel. Current Opinion in Pharmacology, 2019, 47, 110-118.	3.5	33
63	Update of the simplified criteria for autoimmune hepatitis: Evaluation of the methodology for immunoserological testing. Journal of Hepatology, 2021, 74, 312-320.	3.7	31
64	Down-regulation of CD73 on B cells of patients with viremic HIV correlates with B cell activation and disease progression. Journal of Leukocyte Biology, 2017, 101, 1263-1271.	3.3	30
65	Lipopolysaccharide, IFN-Î³, and IFN-Î² Induce Expression of the Thiol-Sensitive ART2.1 Ecto-ADP-Ribosyltransferase in Murine Macrophages. Journal of Immunology, 2007, 179, 6215-6227.	0.8	29
66	Mono-ADP-ribosyltransferases in human monocytes: regulation by lipopolysaccharide. Biochemical Journal, 2002, 362, 717-723.	3.7	28
67	SARSâ€CoVâ€2 vaccination response in patients with autoimmune hepatitis and autoimmune cholestatic liver disease. United European Gastroenterology Journal, 2022, 10, 319-329.	3.8	27
68	ADP-ribosyltransferases: plastic tools for inactivating protein and small molecular weight targets. Journal of Biotechnology, 2001, 92, 81-87.	3.8	26
69	Probing the expression and function of the P2X7 purinoceptor with antibodies raised by genetic immunization. Cellular Immunology, 2005, 236, 72-77.	3.0	26
70	A cDNA Immunization Strategy to Generate Nanobodies against Membrane Proteins in Native Conformation. Frontiers in Immunology, 2018, 8, 1989.	4.8	26
71	A panel of monoclonal antibodies recognizing GPI-anchored ADP-ribosyltransferase ART4, the carrier of the Dombrock blood group antigens. Cellular Immunology, 2005, 236, 59-65.	3.0	25
72	Monitoring the expression of purinoceptors and nucleotide-metabolizing ecto-enzymes with antibodies directed against proteins in native conformation. Purinergic Signalling, 2007, 3, 359-366.	2.2	25

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73	Nanobody-Based Biologics for Modulating Purinergic Signaling in Inflammation and Immunity. Frontiers in Pharmacology, 2018, 9, 266.	3.5	25
74	<scp>CD</scp>8â€Î² <scp>ADP</scp>â€ribosylation affects <scp>CD</scp>8⁺<scp>T</scp>â€cell function. European Journal of Immunology, 2013, 43, 1828-1838.	2.9	24
75	Control of SARS-CoV-2 infection in rituximab-treated neuroimmunological patients. Journal of Neurology, 2021, 268, 5-7.	3.6	24
76	Molecular characterization and expression of the gene for mouse NAD+:arginine ecto-mono(ADP-ribosyl)transferase, Art1. Biochemical Journal, 1998, 336, 561-568.	3.7	23
77	Mono-ADP-ribosyltransferases in human monocytes: regulation by lipopolysaccharide. Biochemical Journal, 2002, 362, 717.	3.7	21
78	Basal and inducible expression of the thiol-sensitive ART2.1 ecto-ADP-ribosyltransferase in myeloid and lymphoid leukocytes. Purinergic Signalling, 2009, 5, 369-383.	2.2	20
79	Tuning IL-2 signaling by ADP-ribosylation of CD25. Scientific Reports, 2015, 5, 8959.	3.3	20
80	DNA methylation contributes to tissue- and allele-specific expression of the T-cell differentiation marker RT6. Immunogenetics, 2001, 52, 231-241.	2.4	18
81	T Cells of Different Developmental Stages Differ in Sensitivity to Apoptosis Induced by Extracellular NAD. Autoimmunity, 2002, 9, 197-202.	0.6	18
82	Nucleotide-Induced Membrane-Proximal Proteolysis Controls the Substrate Specificity of T Cell Ectoâ€"ADP-Ribosyltransferase ARTC2.2. Journal of Immunology, 2015, 195, 2057-2066.	0.8	17
83	Nanobody-based CD38-specific heavy chain antibodies induce killing of multiple myeloma and other hematological malignancies. Theranostics, 2020, 10, 2645-2658.	10.0	17
84	Strategies for the identification of arginine ADP-ribosylation sites. Journal of Proteomics, 2011, 75, 169-176.	2.4	16
85	Loss of Rt6 Message and Most Circulating T Cells after Thymectomy of Diabetes Prone BB Rats. Autoimmunity, 1994, 18, 15-22.	2.6	14
86	Daratumumab and Nanobody-Based Heavy Chain Antibodies Inhibit the ADPR Cyclase but not the NAD+ Hydrolase Activity of CD38-Expressing Multiple Myeloma Cells. Cancers, 2021, 13, 76.	3.7	14
87	P2X7-mediated ATP secretion is accompanied by depletion of cytosolic ATP. Purinergic Signalling, 2019, 15, 155-166.	2.2	13
88	Use of the EST Database Resource to Identify and Clone Novel Mono(ADP-Ribosyl)Transferase Gene Family Members. Advances in Experimental Medicine and Biology, 1997, 419, 163-168.	1.6	12
89	The RT6 system of the rat: developmental, molecular and functional aspects. Immunological Reviews, 2001, 184, 96-108.	6.0	12
90	Characterisation of the R276A gain-of-function mutation in the ectodomain of murine P2X7. Purinergic Signalling, 2009, 5, 151-161.	2.2	12

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91	Ecto-ADP-ribosyltransferase ARTC2.1 functionally modulates Fcî³R1 and Fcî³R2B on murine microglia. Scientific Reports, 2017, 7, 16477.	3.3	12
92	Evaluation of P2X7 Receptor Function in Tumor Contexts Using rAAV Vector and Nanobodies (AAVnano). Frontiers in Oncology, 2020, 10, 1699.	2.8	11
93	Expression and Comparative Analysis of Recombinant Rat and Mouse RT6 T Cell Mono(ADP-Ribosyl)Transferases In E. Coli. Advances in Experimental Medicine and Biology, 1997, 419, 175-180.	1.6	11
94	Quantitative Magnetic Resonance Imaging of Enzyme Activity on the Cell Surface: In Vitro and In Vivo Monitoring of ADP-Ribosyltransferase 2 on T Cells. Molecular Imaging, 2010, 9, 7290.2010.00017.	1.4	10
95	Identification and Analysis of ADP-Ribosylated Proteins. Current Topics in Microbiology and Immunology, 2014, 384, 33-50.	1.1	10
96	Decreased Frequency of Intestinal CD39+ Î³Î´+ T Cells With Tissue-Resident Memory Phenotype in Inflammatory Bowel Disease. Frontiers in Immunology, 2020, 11, 567472.	4.8	10
97	Monoclonal Antibodies for the Identification and Purification of vNAR Domains and IgNAR Immunoglobulins from the Horn Shark<i>Heterodontus francisci</i>. Hybridoma, 2011, 30, 323-329.	0.4	9
98	Multi-dimensional and longitudinal systems profiling reveals predictive pattern of severe COVID-19. IScience, 2021, 24, 102752.	4.1	9
99	The art of blocking <scp>ADP</scp>â€ribosyltransferases (<scp>ART</scp>s): Nanobodies as experimental and therapeutic tools to block mammalian and toxin <scp>ART</scp>s. FEBS Journal, 2013, 280, 3543-3550.	4.7	8
100	Characterisation of a novel glycosylphosphatidylinositol-anchored mono-ADP-ribosyltransferase isoform in ovary cells. European Journal of Cell Biology, 2011, 90, 665-677.	3.6	7
101	Significance of Anti-Nuclear Antibodies and Cryoglobulins in Patients with Acute and Chronic HEV Infection. Pathogens, 2020, 9, 755.	2.8	7
102	ADP-Ribosylation Regulates the Signaling Function of IFN-Î³. Frontiers in Immunology, 2021, 12, 642545.	4.8	7
103	The best defense is a good offense â€" Salmonella deploys an ADP-ribosylating toxin: Response. Trends in Microbiology, 2001, 9, 4-5.	7.7	5
104	Transgenic overexpression of toxin-related ecto-ADP-ribosyltransferase ART2.2 sensitizes T cells but not B cells to NAD-induced cell death. Molecular Immunology, 2011, 48, 1762-1770.	2.2	5
105	Off-label application of intravenous immunoglobulin (IVIG) for treatment of Coganâ€™s syndrome during pregnancy. BMJ Case Reports, 2019, 12, e227917.	0.5	5
106	A simple, sensitive, and lowâ€cost FACS assay for detecting antibodies against the native SARSâ€CoVâ€2 spike protein. Immunity, Inflammation and Disease, 2021, 9, 905-917.	2.7	5
107	Nanobodies as probes to investigate purinergic signaling. Biochemical Pharmacology, 2021, 187, 114394.	4.4	5
108	Mouse CD38-Specific Heavy Chain Antibodies Inhibit CD38 GDPR-Cyclase Activity and Mediate Cytotoxicity Against Tumor Cells. Frontiers in Immunology, 2021, 12, 703574.	4.8	5

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109	T-Cell Survival Regulator LKLF Is Not Involved in Inappropriate Apoptosis of Diabetes-Prone BBDP Rat T Cells. Annals of the New York Academy of Sciences, 2003, 1010, 548-551.	3.8	4
110	Monitoring Expression and Enzyme Activity of Ecto-ARTCs. Methods in Molecular Biology, 2018, 1813, 167-186.	0.9	3
111	Inversed Ratio of CD39/CD73 Expression on Î³Î´ T Cells in HIV Versus Healthy Controls Correlates With Immune Activation and Disease Progression. Frontiers in Immunology, 2022, 13, 867167.	4.8	3
112	Development of Antibody and Nanobody Tools for P2X7. Methods in Molecular Biology, 2022, , 99-127.	0.9	3
113	Monitoring the Sensitivity of T Cell Populations Towards NAD+ Released During Cell Preparation. Methods in Molecular Biology, 2018, 1813, 317-326.	0.9	2
114	Characterization of multiple alleles of the T-cell differentiation marker ART2 (RT6) in inbred and wild rats. Immunogenetics, 2005, 57, 739-749.	2.4	1
115	The Multiple Roles of ATP-Gated P2(X) Ion Channels in T Lymphocytes. Messenger (Los Angeles, Calif.) Tj ETQq1 1 0.784314 rgBT /Ov	0.3	1
116	Using FRET-Based Fluorescent Sensors to Monitor Cytosolic and Membrane-Proximal Extracellular ATP Levels. Methods in Molecular Biology, 2020, 2041, 223-231.	0.9	1
117	Blockade of Tigit on AML-Derived M2 Macrophages Results in Reprograming into the M1 Phenotype and Enhances CD47-Mediated Phagocytosis. Blood, 2021, 138, 3351-3351.	1.4	1
118	Longitudinal and Functional Analysis of Spontaneous NY-ESO-1-Specific Antibody Responses in Multiple Myeloma Patients.. Blood, 2009, 114, 2831-2831.	1.4	0
119	Analysis of Spontaneous Vs. Vaccine-Induced Antibody Responses Against Cancer-Testis Antigen MAGE-A3 in Cancer Patients. Blood, 2011, 118, 5087-5087.	1.4	0
120	Flow Cytometry of Membrane Purinoreceptors. Methods in Molecular Biology, 2020, 2041, 117-136.	0.9	0