Thomas Häfer

List of Publications by Year
in descending order

119 papers	10,917 citations	31976 53 h-index	34986 98 g-index
138 all docs	138 docs citations	138 times ranked	17820 citing authors

#	Article	IF	Citations
1	Guidelines for the use of flow cytometry and cell sorting in immunological studies (second edition). European Journal of Immunology, 2019, 49, 1457-1973.	2.9	766
2	Fundamental properties of unperturbed haematopoiesis from stem cells in vivo. Nature, 2015, 518, 542-546.	27.8	607
3	Telomerase activation by genomic rearrangements in high-risk neuroblastoma. Nature, 2015, 526, 700-704.	27.8	478
4	Disparate Individual Fates Compose Robust CD8$^+$ T Cell Immunity. Science, 2013, 340, 630-635.	12.6	364
5	Modelling of simple and complex calcium oscillations. FEBS Journal, 2002, 269, 1333-1355.	0.2	354
6	Polylox barcoding reveals haematopoietic stem cell fates realized in vivo. Nature, 2017, 548, 456-460.	27.8	312
7	The microRNA miR-182 is induced by IL-2 and promotes clonal expansion of activated helper T lymphocytes. Nature Immunology, 2010, 11, 1057-1062.	14.5	304
8	Constitutively Active Lck Kinase in T Cells Drives Antigen Receptor Signal Transduction. Immunity, 2010, 32, 766-777.	14.3	300
9	Serial Transfer of Single-Cell-Derived Immunocompetence Reveals Stemness of CD8+ Central Memory T Cells. Immunity, 2014, 41, 116-126.	14.3	290
10	Constitutive IDO expression in human cancer is sustained by an autocrine signaling loop involving IL-6, STAT3 and the AHR. Oncotarget, 2014, 5, 1038-1051.	1.8	248
11	Genome-wide nucleosome positioning during embryonic stem cell development. Nature Structural and Molecular Biology, 2012, 19, 1185-1192.	8.2	245
12	Competing feedback loops shape IL-2 signaling between helper and regulatory T lymphocytes in cellular microenvironments. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 3058-3063.	7.1	243
13	Sequential Polarization and Imprinting of Type 1 T Helper Lymphocytes by Interferon-γ and Interleukin-12. Immunity, 2009, 30, 673-683.	14.3	231
14	Multisite protein phosphorylation – from molecular mechanisms to kinetic models. FEBS Journal, 2009, 276, 3177-3198.	4.7	229
15	Control and Plasticity of Intercellular Calcium Waves in Astrocytes: A Modeling Approach. Journal of Neuroscience, 2002, 22, 4850-4859.	3.6	210
16	A Cholesterol-Based Allostery Model of T Cell Receptor Phosphorylation. Immunity, 2016, 44, 1091-1101.	14.3	183
17	Evolutionary Trajectories of IDHWT Glioblastomas Reveal a Common Path of Early Tumorigenesis Instigated Years ahead of Initial Diagnosis. Cancer Cell, 2019, 35, 692-704.e12.	16.8	172
18	Single-Cell RNA Sequencing of Tumor-Infiltrating NK Cells Reveals that Inhibition of Transcription Factor HIF-1α Unleashes NK Cell Activity. Immunity, 2020, 52, 1075-1087.e8.	14.3	167

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19	Regulation of CD4$^+$CD25$^+$ regulatory T cell activity: it takes (IL–)two to tango. European Journal of Immunology, 2005, 35, 1336-1341.	2.9	152
20	Model of Intercellular Calcium Oscillations in Hepatocytes: Synchronization of Heterogeneous Cells. Biophysical Journal, 1999, 77, 1244-1256.	0.5	147
21	Stable T-bet+GATA-3+ Th1/Th2 Hybrid Cells Arise In Vivo, Can Develop Directly from Naive Precursors, and Limit Immunopathologic Inflammation. PLoS Biology, 2013, 11, e1001633.	5.6	147
22	Models of IP3 and Ca2+ Oscillations: Frequency Encoding and Identification of Underlying Feedbacks. Biophysical Journal, 2006, 90, 3120-3133.	0.5	143
23	Multi–layered stochasticity and paracrine signal propagation shape the type–I interferon response. Molecular Systems Biology, 2012, 8, 584.	7.2	139
24	Clonal selection drives protective memory B cell responses in controlled human malaria infection. Science Immunology, 2018, 3, .	11.9	132
25	Nucleosome repositioning links DNA (de)methylation and differential CTCF binding during stem cell development. Genome Research, 2014, 24, 1285-1295.	5.5	130
26	Single-cell transcriptomic analyses provide insights into the developmental origins of neuroblastoma. Nature Genetics, 2021, 53, 683-693.	21.4	128
27	Long-lived virus-reactive memory T cells generated from purified cytokine-secreting T helper type 1 and type 2 effectors. Journal of Experimental Medicine, 2008, 205, 53-61.	8.5	121
28	Stochastic and reversible assembly of a multiprotein DNA repair complex ensures accurate target site recognition and efficient repair. Journal of Cell Biology, 2010, 189, 445-463.	5.2	114
29	Cellular pattern formation during Dictyostelium aggregation. Physica D: Nonlinear Phenomena, 1995, 85, 425-444.	2.8	112
30	Circadian Conformational Change of the Neurospora Clock Protein FREQUENCY Triggered by Clustered Hyperphosphorylation of a Basic Domain. Molecular Cell, 2011, 43, 713-722.	9.7	111
31	Intercellular Ca2+ Wave Propagation through Gap-Junctional Ca2+ Diffusion: A Theoretical Study. Biophysical Journal, 2001, 80, 75-87.	0.5	109
32	Robust classification of single-cell transcriptome data by nonnegative matrix factorization. Bioinformatics, 2017, 33, 235-242.	4.1	103
33	Differential induction of interferon stimulated genes between type I and type III interferons is independent of interferon receptor abundance. PLoS Pathogens, 2018, 14, e1007420.	4.7	100
34	Competition for IL-2 between Regulatory and Effector T Cells to Chisel Immune Responses. Frontiers in Immunology, 2012, 3, 268.	4.8	96
35	Resolving Fates and Single-Cell Transcriptomes of Hematopoietic Stem Cell Clones by PolyloxExpress Barcoding. Cell Stem Cell, 2020, 27, 383-395.e8.	11.1	88
36	Integrative Genome-Scale Analysis Identifies Epigenetic Mechanisms of Transcriptional Deregulation in Unfavorable Neuroblastomas. Cancer Research, 2016, 76, 5523-5537.	0.9	83

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37	Allosteric Regulation of the Transcription Factor NFAT1 by Multiple Phosphorylation Sites: A Mathematical Analysis. Journal of Molecular Biology, 2003, 327, 31-45.	4.2	82
38	Competition for cytokines: Treg cells take all. Nature Immunology, 2007, 8, 1285-1287.	14.5	82
39	Optogenetic control shows that kinetic proofreading regulates the activity of the T cell receptor. ELife, 2019, 8, .	6.0	82
40	A Global Circadian Repressor Controls Antiphasic Expression of Metabolic Genes in Neurospora. Molecular Cell, 2011, 44, 687-697.	9.7	81
41	Specificity, propagation, and memory of pericentric heterochromatin. Molecular Systems Biology, 2014, 10, 746.	7.2	80
42	Three-Dimensional Gradients of Cytokine Signaling between T Cells. PLoS Computational Biology, 2015, 11, e1004206.	3.2	79
43	GATA-3 transcriptional imprinting in Th2 lymphocytes: A mathematical model. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9364-9368.	7.1	78
44	Decoding of Calcium Oscillations by Phosphorylation Cycles: Analytic Results. Biophysical Journal, 2008, 94, 1203-1215.	0.5	78
45	Short‐term memory in gene induction reveals the regulatory principle behind stochastic IL‐4 expression. Molecular Systems Biology, 2010, 6, 359.	7.2	78
46	NFATc1 autoregulation: a crucial step for cell-fate determination. Trends in Immunology, 2006, 27, 461-469.	6.8	76
47	Identification of a tumor-reactive T-cell repertoire in the immune infiltrate of patients with resectable pancreatic ductal adenocarcinoma. OncoImmunology, 2016, 5, e1240859.	4.6	75
48	Frequency Modulation of Transcriptional Bursting Enables Sensitive and Rapid Gene Regulation. Cell Systems, 2018, 6, 409-423.e11.	6.2	74
49	Adaptation of humoral memory. Immunological Reviews, 2006, 211, 295-302.	6.0	73
50	Phenotypic memory in Bacillus subtilis links dormancy entry and exit by a spore quantity-quality tradeoff. Nature Communications, 2018, 9, 69.	12.8	73
51	MYCN mediates cysteine addiction and sensitizes neuroblastoma to ferroptosis. Nature Cancer, 2022, 3, 471-485.	13.2	73
52	Protein abundance of AKT and ERK pathway components governs cell type‐specific regulation of proliferation. Molecular Systems Biology, 2017, 13, 904.	7.2	72
53	Asynchronous nuclear cycles in multinucleated *Plasmodium falciparum* facilitate rapid proliferation. Science Advances, 2022, 8, eabj5362.	10.3	70
54	Digital NFATc2 Activation per Cell Transforms Graded T Cell Receptor Activation into an All-or-None IL-2 Expression. PLoS ONE, 2007, 2, e935.	2.5	69

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55	Versatile regulation of multisite protein phosphorylation by the order of phosphate processing and protein-protein interactions. FEBS Journal, 2007, 274, 1046-1061.	4.7	69
56	Transcriptional control networks of cell differentiation: insights from helper T lymphocytes. Progress in Biophysics and Molecular Biology, 2004, 86, 45-76.	2.9	66
57	Determining all extreme semi-positive conservation relations in chemical reaction systems: a test criterion for conservativity. Journal of the Chemical Society, Faraday Transactions, 1991, 87, 2561-2566.	1.7	62
58	Cell-Cycle Position of Single MYC-Driven Cancer Cells Dictates Their Susceptibility to a Chemotherapeutic Drug. Cell Systems, 2017, 5, 237-250.e8.	6.2	58
59	Fate Mapping and Quantitation of Hematopoiesis In Vivo. Annual Review of Immunology, 2016, 34, 449-478.	21.8	57
60	TCR Signal Quality Modulates Fate Decisions of Single CD4 + T Cells in a Probabilistic Manner. Cell Reports, 2017, 20, 806-818.	6.4	57
61	Differentiation-based model of hematopoietic stem cell functions and lineage pathways. Blood, 2018, 132, 1106-1113.	1.4	55
62	CCND1â€"CDK4â€"mediated cell cycle progression provides a competitive advantage for human hematopoietic stem cells in vivo. Journal of Experimental Medicine, 2015, 212, 1171-1183.	8.5	50
63	Do haematopoietic stem cells age?. Nature Reviews Immunology, 2020, 20, 196-202.	22.7	50
64	Live Cell Analysis and Mathematical Modeling Identify Determinants of Attenuation of Dengue Virus 2â€™-O-Methylation Mutant. PLoS Pathogens, 2015, 11, e1005345.	4.7	49
65	Whither systems medicine?. Experimental and Molecular Medicine, 2018, 50, e453-e453.	7.7	49
66	Hormone-Induced Calcium Oscillations Depend on Cross-Coupling with Inositol 1,4,5-Trisphosphate Oscillations. Cell Reports, 2014, 9, 1209-1218.	6.4	47
67	SETD1A protects HSCs from activation-induced functional decline in vivo. Blood, 2018, 131, 1311-1324.	1.4	47
68	Phosphorylation modulates rapid nucleocytoplasmic shuttling and cytoplasmic accumulation of <i>Neurospora</i> clock protein FRQ on a circadian time scale. Genes and Development, 2009, 23, 2192-2200.	5.9	46
69	CD8+ T cell diversification by asymmetric cell division. Nature Immunology, 2015, 16, 891-893.	14.5	44
70	Heterogeneous kinetics of AKT signaling in individual cells are accounted for by variable protein concentration. Frontiers in Physiology, 2012, 3, 451.	2.8	43
71	The Allostery Model of TCR Regulation. Journal of Immunology, 2017, 198, 47-52.	0.8	42
72	Kinetic models of phosphorylation cycles: A systematic approach using the rapid-equilibrium approximation for proteinâ€"protein interactions. BioSystems, 2006, 83, 195-206.	2.0	41

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73	Assembly of multiprotein complexes that control genome function. Journal of Cell Biology, 2009, 185, 21-26.	5.2	41
74	Fate mapping of single NK cells identifies a type 1 innate lymphoid-like lineage that bridges innate and adaptive recognition of viral infection. Immunity, 2021, 54, 2288-2304.e7.	14.3	39
75	Individual T Helper Cells Have a Quantitative Cytokine Memory. Immunity, 2015, 42, 108-122.	14.3	38
76	Early emergence of T central memory precursors programs clonal dominance during chronic viral infection. Nature Immunology, 2020, 21, 1563-1573.	14.5	38
77	Molecular networks and system-level properties. Journal of Biotechnology, 2009, 144, 224-233.	3.8	37
78	Mathematical Modelling of DNA Replication Reveals a Trade-off between Coherence of Origin Activation and Robustness against Rereplication. PLoS Computational Biology, 2010, 6, e1000783.	3.2	37
79	The <i>Neurospora</i> photoreceptor VIVID exerts negative and positive control on light sensing to achieve adaptation. Molecular Systems Biology, 2013, 9, 667.	7.2	32
80	Timing control in regulatory networks by multisite protein modifications. Trends in Cell Biology, 2010, 20, 634-641.	7.9	31
81	A Second-order Approach to Metabolic Control Analysis. Journal of Theoretical Biology, 1993, 164, 85-102.	1.7	29
82	Streaming instability of slime mold amoebae: An analytical model. Physical Review E, 1997, 56, 2074-2080.	2.1	29
83	SysBioMed report: Advancing systems biology for medical applications. IET Systems Biology, 2009, 3, 131-136.	1.5	27
84	Prospective isolation of nonhematopoietic cells of the niche and their differential molecular interactions with HSCs. Blood, 2019, 134, 1214-1226.	1.4	27
85	Antiviral interferon response at single‐cell resolution. Immunological Reviews, 2018, 285, 72-80.	6.0	25
86	Competition Effects Shape the Response Sensitivity and Kinetics of Phosphorylation Cycles in Cell Signaling. Annals of the New York Academy of Sciences, 2006, 1091, 517-530.	3.8	21
87	Strategies for structuring interdisciplinary education in Systems Biology: an European perspective. Npj Systems Biology and Applications, 2016, 2, 16011.	3.0	21
88	Using Cre-recombinase-driven Polylox barcoding for in vivo fate mapping in mice. Nature Protocols, 2019, 14, 1820-1840.	12.0	21
89	Hidden long-range memories of growth and cycle speed correlate cell cycles in lineage trees. ELife, 2020, 9, .	6.0	19
90	Single-Cell Tracing Dissects Regulation of Maintenance and Inheritance of Transcriptional Reinduction Memory. Molecular Cell, 2020, 78, 915-925.e7.	9.7	18

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91	Robustness of DNA Repair through Collective Rate Control. PLoS Computational Biology, 2014, 10, e1003438.	3.2	17
92	Turing patterns in fish skin?. Nature, 1996, 380, 678-678.	27.8	15
93	Output without input: the lifelong productivity of hematopoietic stem cells. Current Opinion in Cell Biology, 2016, 43, 69-77.	5.4	15
94	Stem-cell dynamics and lineage topology from in vivo fate mapping in the hematopoietic system. Current Opinion in Biotechnology, 2016, 39, 150-156.	6.6	14
95	Stem cell homeostasis by integral feedback through the niche. Journal of Theoretical Biology, 2019, 481, 100-109.	1.7	14
96	Reconciling Flux Experiments for Quantitative Modeling of Normal and Malignant Hematopoietic Stem/Progenitor Dynamics. Stem Cell Reports, 2021, 16, 741-753.	4.8	13
97	Temporal control of the integrated stress response by a stochastic molecular switch. Science Advances, 2022, 8, eabk2022.	10.3	13
98	Activation of the transcription factor NFAT1: concerted or modular regulation?. FEBS Letters, 2005, 579, 621-626.	2.8	11
99	Modelling and simulating interleukin‐10 production and regulation by macrophages after stimulation with an immunomodulator of parasitic nematodes. FEBS Journal, 2009, 276, 3454-3469.	4.7	11
100	Chromothripsis in Human Breast Cancer. Cancer Research, 2020, 80, 4918-4931.	0.9	11
101	Quantitative Analysis of Protein Phosphorylations and Interactions by Multi-Colour IP-FCM as an Input for Kinetic Modelling of Signalling Networks. PLoS ONE, 2011, 6, e22928.	2.5	10
102	Carbon ion radiotherapy eradicates medulloblastomas with chromothripsis in an orthotopic Li-Fraumeni patient-derived mouse model. Neuro-Oncology, 2021, 23, 2028-2041.	1.2	7
103	On the kinetic design of transcription. Genome Informatics, 2005, 16, 73-82.	0.4	7
104	Systems biology for biomedical innovation. Biotechnology Advances, 2012, 30, 1-3.	11.7	6
105	Minichromosome Maintenance Complex Is a Critical Node in the miR-183 Signaling Network of <i>MYCN</i>-Amplified Neuroblastoma Cells. Journal of Proteome Research, 2016, 15, 2178-2186.	3.7	6
106	A Missing Switch in Peptide Exchange for MHC Class II Molecules. Frontiers in Immunology, 2019, 10, 2513.	4.8	5
107	Dengue virus is sensitive to inhibition prior to productive replication. Cell Reports, 2021, 37, 109801.	6.4	4
108	INTERPLAY OF CELL-CELL SIGNALLING AND MULTICELLULAR MORPHOGENESIS DURING DICTYOSTELIUM AGGREGATION. , 1996, , 15-28.		1

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109	Protocol for the use of Polylox â€" endogenous barcoding for high resolution in vivo lineage tracing. Protocol Exchange, 0, , .	0.3	1
110	Use of convex analysis for the modelling of biochemical reaction systems. Lecture Notes in Control and Information Sciences, 1994, , 365-374.	1.0	0
111	Chemotaxis and aggregation in the cellular slime mould. , 1999, , 137-150.		0
112	Modelling of Periodic Intercellular Ca2+ Waves. , 2004, , 99-110.		0
113	Inferring growth and genetic evolution of tumors from genome sequences. Current Opinion in Systems Biology, 2019, 16, 1-9.	2.6	0
114	Cellular calcium oscillations: From bifurcation analysis to experiment. World Scientific Lecture Notes in Complex Systems, 2007, , 115-134.	0.1	0
115	CCND1â€"CDK4â€"mediated cell cycle progression provides a competitive advantage for human hematopoietic stem cells in vivo. Journal of Cell Biology, 2015, 210, 2102OIA144.	5.2	0
116	Abstract 4973: MYCN mediates cysteine addiction and sensitizes to ferroptosis in cancer cells. , 2018, , .		0
117	GVHD Is Sustained By T Cell Maintenance within Target Tissues: Insights from Clonal Tracking and Parabiosis. Blood, 2018, 132, 809-809.	1.4	0
118	Modelling Single Cell B-Cell Receptor Signaling Reveals Enhanced Activity in Primary CLL Cells Compared to Non-Malignant Cells While Fundamental Network Circuit Topology Remains Stable Even with Novel Therapeutic Inhibitors. Blood, 2019, 134, 4275-4275.	1.4	0
119	Modeling the Bâ€cell receptor signaling on single cell level reveals a stable network circuit topology between nonâ€malignant B cells and chronic lymphocytic leukemia cells and between untreated cells and cells treated with kinase inhibitors. International Journal of Cancer, 2022, , .	5.1	0