

Thomas Häfner

List of Publications by Year in descending order

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119
papers

10,917
citations

31976

53
h-index

34986

98
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138
all docs

138
docs citations

138
times ranked

17820
citing authors

#	ARTICLE	IF	CITATIONS
1	Temporal control of the integrated stress response by a stochastic molecular switch. <i>Science Advances</i> , 2022, 8, eabk2022.	10.3	13
2	Asynchronous nuclear cycles in multinucleated <i>Plasmodium falciparum</i> facilitate rapid proliferation. <i>Science Advances</i> , 2022, 8, eabj5362.	10.3	70
3	Modeling the B cell receptor signaling on single cell level reveals a stable network circuit topology between non-malignant B cells and chronic lymphocytic leukemia cells and between untreated cells and cells treated with kinase inhibitors. <i>International Journal of Cancer</i> , 2022, , .	5.1	0
4	MYCN mediates cysteine addiction and sensitizes neuroblastoma to ferroptosis. <i>Nature Cancer</i> , 2022, 3, 471-485.	13.2	73
5	Single-cell transcriptomic analyses provide insights into the developmental origins of neuroblastoma. <i>Nature Genetics</i> , 2021, 53, 683-693.	21.4	128
6	Reconciling Flux Experiments for Quantitative Modeling of Normal and Malignant Hematopoietic Stem/Progenitor Dynamics. <i>Stem Cell Reports</i> , 2021, 16, 741-753.	4.8	13
7	Carbon ion radiotherapy eradicates medulloblastomas with chromothripsis in an orthotopic Li-Fraumeni patient-derived mouse model. <i>Neuro-Oncology</i> , 2021, 23, 2028-2041.	1.2	7
8	Fate mapping of single NK cells identifies a type 1 innate lymphoid-like lineage that bridges innate and adaptive recognition of viral infection. <i>Immunity</i> , 2021, 54, 2288-2304.e7.	14.3	39
9	Dengue virus is sensitive to inhibition prior to productive replication. <i>Cell Reports</i> , 2021, 37, 109801.	6.4	4
10	Do haematopoietic stem cells age?. <i>Nature Reviews Immunology</i> , 2020, 20, 196-202.	22.7	50
11	Chromothripsis in Human Breast Cancer. <i>Cancer Research</i> , 2020, 80, 4918-4931.	0.9	11
12	Resolving Fates and Single-Cell Transcriptomes of Hematopoietic Stem Cell Clones by PolyloxExpress Barcoding. <i>Cell Stem Cell</i> , 2020, 27, 383-395.e8.	11.1	88
13	Early emergence of T central memory precursors programs clonal dominance during chronic viral infection. <i>Nature Immunology</i> , 2020, 21, 1563-1573.	14.5	38
14	Single-Cell Tracing Dissects Regulation of Maintenance and Inheritance of Transcriptional Reinduction Memory. <i>Molecular Cell</i> , 2020, 78, 915-925.e7.	9.7	18
15	Single-Cell RNA Sequencing of Tumor-Infiltrating NK Cells Reveals that Inhibition of Transcription Factor HIF-1 α Unleashes NK Cell Activity. <i>Immunity</i> , 2020, 52, 1075-1087.e8.	14.3	167
16	Hidden long-range memories of growth and cycle speed correlate cell cycles in lineage trees. <i>ELife</i> , 2020, 9, .	6.0	19
17	Prospective isolation of nonhematopoietic cells of the niche and their differential molecular interactions with HSCs. <i>Blood</i> , 2019, 134, 1214-1226.	1.4	27
18	A Missing Switch in Peptide Exchange for MHC Class II Molecules. <i>Frontiers in Immunology</i> , 2019, 10, 2513.	4.8	5

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19	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
20	Using Cre-recombinase-driven Polylox barcoding for in vivo fate mapping in mice. Nature Protocols, 2019, 14, 1820-1840.	12.0	21
21	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
22	Inferring growth and genetic evolution of tumors from genome sequences. Current Opinion in Systems Biology, 2019, 16, 1-9.	2.6	0
23	Stem cell homeostasis by integral feedback through the niche. Journal of Theoretical Biology, 2019, 481, 100-109.	1.7	14
24	Optogenetic control shows that kinetic proofreading regulates the activity of the T cell receptor. ELife, 2019, 8, .	6.0	82
25	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
26	Frequency Modulation of Transcriptional Bursting Enables Sensitive and Rapid Gene Regulation. Cell Systems, 2018, 6, 409-423.e11.	6.2	74
27	Whither systems medicine?. Experimental and Molecular Medicine, 2018, 50, e453-e453.	7.7	49
28	Clonal selection drives protective memory B cell responses in controlled human malaria infection. Science Immunology, 2018, 3, .	11.9	132
29	SETD1A protects HSCs from activation-induced functional decline in vivo. Blood, 2018, 131, 1311-1324.	1.4	47
30	Phenotypic memory in Bacillus subtilis links dormancy entry and exit by a spore quantity-quality tradeoff. Nature Communications, 2018, 9, 69.	12.8	73
31	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
32	Differentiation-based model of hematopoietic stem cell functions and lineage pathways. Blood, 2018, 132, 1106-1113.	1.4	55
33	Antiviral interferon response at single-cell resolution. Immunological Reviews, 2018, 285, 72-80.	6.0	25
34	Abstract 4973: MYCN mediates cysteine addiction and sensitizes to ferroptosis in cancer cells. , 2018, , .		0
35	CVHD Is Sustained By T Cell Maintenance within Target Tissues: Insights from Clonal Tracking and Parabiosis. Blood, 2018, 132, 809-809.	1.4	0
36	The Allosteric Model of TCR Regulation. Journal of Immunology, 2017, 198, 47-52.	0.8	42

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37	Protein abundance of AKT and ERK pathway components governs cell type-specific regulation of proliferation. <i>Molecular Systems Biology</i> , 2017, 13, 904.	7.2	72
38	TCR Signal Quality Modulates Fate Decisions of Single CD4 + T Cells in a Probabilistic Manner. <i>Cell Reports</i> , 2017, 20, 806-818.	6.4	57
39	Polylox barcoding reveals haematopoietic stem cell fates realized in vivo. <i>Nature</i> , 2017, 548, 456-460.	27.8	312
40	Robust classification of single-cell transcriptome data by nonnegative matrix factorization. <i>Bioinformatics</i> , 2017, 33, 235-242.	4.1	103
41	Cell-Cycle Position of Single MYC-Driven Cancer Cells Dictates Their Susceptibility to a Chemotherapeutic Drug. <i>Cell Systems</i> , 2017, 5, 237-250.e8.	6.2	58
42	Strategies for structuring interdisciplinary education in Systems Biology: an European perspective. <i>Npj Systems Biology and Applications</i> , 2016, 2, 16011.	3.0	21
43	A Cholesterol-Based Allosteric Model of T Cell Receptor Phosphorylation. <i>Immunity</i> , 2016, 44, 1091-1101.	14.3	183
44	Fate Mapping and Quantitation of Hematopoiesis In Vivo. <i>Annual Review of Immunology</i> , 2016, 34, 449-478.	21.8	57
45	Integrative Genome-Scale Analysis Identifies Epigenetic Mechanisms of Transcriptional Deregulation in Unfavorable Neuroblastomas. <i>Cancer Research</i> , 2016, 76, 5523-5537.	0.9	83
46	Identification of a tumor-reactive T-cell repertoire in the immune infiltrate of patients with resectable pancreatic ductal adenocarcinoma. <i>Oncotimmunology</i> , 2016, 5, e1240859.	4.6	75
47	Output without input: the lifelong productivity of hematopoietic stem cells. <i>Current Opinion in Cell Biology</i> , 2016, 43, 69-77.	5.4	15
48	Minichromosome Maintenance Complex Is a Critical Node in the miR-183 Signaling Network of MYCN-Amplified Neuroblastoma Cells. <i>Journal of Proteome Research</i> , 2016, 15, 2178-2186.	3.7	6
49	Stem-cell dynamics and lineage topology from in vivo fate mapping in the hematopoietic system. <i>Current Opinion in Biotechnology</i> , 2016, 39, 150-156.	6.6	14
50	Live Cell Analysis and Mathematical Modeling Identify Determinants of Attenuation of Dengue Virus 2's O-Methylation Mutant. <i>PLoS Pathogens</i> , 2015, 11, e1005345.	4.7	49
51	Fundamental properties of unperturbed haematopoiesis from stem cells in vivo. <i>Nature</i> , 2015, 518, 542-546.	27.8	607
52	Individual T Helper Cells Have a Quantitative Cytokine Memory. <i>Immunity</i> , 2015, 42, 108-122.	14.3	38
53	CCND1-mediated cell cycle progression provides a competitive advantage for human hematopoietic stem cells in vivo. <i>Journal of Experimental Medicine</i> , 2015, 212, 1171-1183.	8.5	50
54	Three-Dimensional Gradients of Cytokine Signaling between T Cells. <i>PLoS Computational Biology</i> , 2015, 11, e1004206.	3.2	79

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55	Telomerase activation by genomic rearrangements in high-risk neuroblastoma. <i>Nature</i> , 2015, 526, 700-704.	27.8	478
56	CD8+ T cell diversification by asymmetric cell division. <i>Nature Immunology</i> , 2015, 16, 891-893.	14.5	44
57	CCND1-CDK4-mediated cell cycle progression provides a competitive advantage for human hematopoietic stem cells in vivo. <i>Journal of Cell Biology</i> , 2015, 210, 210201A144.	5.2	0
58	Robustness of DNA Repair through Collective Rate Control. <i>PLoS Computational Biology</i> , 2014, 10, e1003438.	3.2	17
59	Hormone-Induced Calcium Oscillations Depend on Cross-Coupling with Inositol 1,4,5-Trisphosphate Oscillations. <i>Cell Reports</i> , 2014, 9, 1209-1218.	6.4	47
60	Specificity, propagation, and memory of pericentric heterochromatin. <i>Molecular Systems Biology</i> , 2014, 10, 746.	7.2	80
61	Nucleosome repositioning links DNA (de)methylation and differential CTCF binding during stem cell development. <i>Genome Research</i> , 2014, 24, 1285-1295.	5.5	130
62	Serial Transfer of Single-Cell-Derived Immunocompetence Reveals Stemness of CD8+ Central Memory T Cells. <i>Immunity</i> , 2014, 41, 116-126.	14.3	290
63	Constitutive IDO expression in human cancer is sustained by an autocrine signaling loop involving IL-6, STAT3 and the AHR. <i>Oncotarget</i> , 2014, 5, 1038-1051.	1.8	248
64	Disparate Individual Fates Compose Robust CD8 ⁺ T Cell Immunity. <i>Science</i> , 2013, 340, 630-635.	12.6	364
65	Stable T-bet+GATA-3+ Th1/Th2 Hybrid Cells Arise In Vivo, Can Develop Directly from Naive Precursors, and Limit Immunopathologic Inflammation. <i>PLoS Biology</i> , 2013, 11, e1001633.	5.6	147
66	The <i>Neurospora</i> photoreceptor VIVID exerts negative and positive control on light sensing to achieve adaptation. <i>Molecular Systems Biology</i> , 2013, 9, 667.	7.2	32
67	Competition for IL-2 between Regulatory and Effector T Cells to Chisel Immune Responses. <i>Frontiers in Immunology</i> , 2012, 3, 268.	4.8	96
68	Heterogeneous kinetics of AKT signaling in individual cells are accounted for by variable protein concentration. <i>Frontiers in Physiology</i> , 2012, 3, 451.	2.8	43
69	Multi-layered stochasticity and paracrine signal propagation shape the type-I interferon response. <i>Molecular Systems Biology</i> , 2012, 8, 584.	7.2	139
70	Genome-wide nucleosome positioning during embryonic stem cell development. <i>Nature Structural and Molecular Biology</i> , 2012, 19, 1185-1192.	8.2	245
71	Systems biology for biomedical innovation. <i>Biotechnology Advances</i> , 2012, 30, 1-3.	11.7	6
72	Circadian Conformational Change of the <i>Neurospora</i> Clock Protein FREQUENCY Triggered by Clustered Hyperphosphorylation of a Basic Domain. <i>Molecular Cell</i> , 2011, 43, 713-722.	9.7	111

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73	A Global Circadian Repressor Controls Antiphase Expression of Metabolic Genes in <i>Neurospora</i> . <i>Molecular Cell</i> , 2011, 44, 687-697.	9.7	81
74	Quantitative Analysis of Protein Phosphorylations and Interactions by Multi-Colour IP-FCM as an Input for Kinetic Modelling of Signalling Networks. <i>PLoS ONE</i> , 2011, 6, e22928.	2.5	10
75	Timing control in regulatory networks by multisite protein modifications. <i>Trends in Cell Biology</i> , 2010, 20, 634-641.	7.9	31
76	Constitutively Active Lck Kinase in T Cells Drives Antigen Receptor Signal Transduction. <i>Immunity</i> , 2010, 32, 766-777.	14.3	300
77	The microRNA miR-182 is induced by IL-2 and promotes clonal expansion of activated helper T lymphocytes. <i>Nature Immunology</i> , 2010, 11, 1057-1062.	14.5	304
78	Stochastic and reversible assembly of a multiprotein DNA repair complex ensures accurate target site recognition and efficient repair. <i>Journal of Cell Biology</i> , 2010, 189, 445-463.	5.2	114
79	Mathematical Modelling of DNA Replication Reveals a Trade-off between Coherence of Origin Activation and Robustness against Rereplication. <i>PLoS Computational Biology</i> , 2010, 6, e1000783.	3.2	37
80	Short-term memory in gene induction reveals the regulatory principle behind stochastic IL-4 expression. <i>Molecular Systems Biology</i> , 2010, 6, 359.	7.2	78
81	Competing feedback loops shape IL-2 signaling between helper and regulatory T lymphocytes in cellular microenvironments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 3058-3063.	7.1	243
82	Assembly of multiprotein complexes that control genome function. <i>Journal of Cell Biology</i> , 2009, 185, 21-26.	5.2	41
83	Phosphorylation modulates rapid nucleocytoplasmic shuttling and cytoplasmic accumulation of <i>Neurospora</i> clock protein FRQ on a circadian time scale. <i>Genes and Development</i> , 2009, 23, 2192-2200.	5.9	46
84	SysBioMed report: Advancing systems biology for medical applications. <i>IET Systems Biology</i> , 2009, 3, 131-136.	1.5	27
85	Multisite protein phosphorylation – from molecular mechanisms to kinetic models. <i>FEBS Journal</i> , 2009, 276, 3177-3198.	4.7	229
86	Modelling and simulating interleukin-10 production and regulation by macrophages after stimulation with an immunomodulator of parasitic nematodes. <i>FEBS Journal</i> , 2009, 276, 3454-3469.	4.7	11
87	Molecular networks and system-level properties. <i>Journal of Biotechnology</i> , 2009, 144, 224-233.	3.8	37
88	Sequential Polarization and Imprinting of Type 1 T Helper Lymphocytes by Interferon- β and Interleukin-12. <i>Immunity</i> , 2009, 30, 673-683.	14.3	231
89	Decoding of Calcium Oscillations by Phosphorylation Cycles: Analytic Results. <i>Biophysical Journal</i> , 2008, 94, 1203-1215.	0.5	78
90	Long-lived virus-reactive memory T cells generated from purified cytokine-secreting T helper type 1 and type 2 effectors. <i>Journal of Experimental Medicine</i> , 2008, 205, 53-61.	8.5	121

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91	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
92	Competition for cytokines: Treg cells take all. Nature Immunology, 2007, 8, 1285-1287.	14.5	82
93	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
94	Cellular calcium oscillations: From bifurcation analysis to experiment. World Scientific Lecture Notes in Complex Systems, 2007, , 115-134.	0.1	0
95	Models of IP3 and Ca2+ Oscillations: Frequency Encoding and Identification of Underlying Feedbacks. Biophysical Journal, 2006, 90, 3120-3133.	0.5	143
96	NFATc1 autoregulation: a crucial step for cell-fate determination. Trends in Immunology, 2006, 27, 461-469.	6.8	76
97	Adaptation of humoral memory. Immunological Reviews, 2006, 211, 295-302.	6.0	73
98	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
99	Kinetic models of phosphorylation cycles: A systematic approach using the rapid-equilibrium approximation for protein-protein interactions. BioSystems, 2006, 83, 195-206.	2.0	41
100	Regulation of CD4 ⁺ CD25 ⁺ regulatory T cell activity: it takes (IL-2) two to tango. European Journal of Immunology, 2005, 35, 1336-1341.	2.9	152
101	Activation of the transcription factor NFAT1: concerted or modular regulation?. FEBS Letters, 2005, 579, 621-626.	2.8	11
102	On the kinetic design of transcription. Genome Informatics, 2005, 16, 73-82.	0.4	7
103	Transcriptional control networks of cell differentiation: insights from helper T lymphocytes. Progress in Biophysics and Molecular Biology, 2004, 86, 45-76.	2.9	66
104	Modelling of Periodic Intercellular Ca2+ Waves. , 2004, , 99-110.		0
105	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
106	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
107	Control and Plasticity of Intercellular Calcium Waves in Astrocytes: A Modeling Approach. Journal of Neuroscience, 2002, 22, 4850-4859.	3.6	210
108	Modelling of simple and complex calcium oscillations. FEBS Journal, 2002, 269, 1333-1355.	0.2	354

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109	Intercellular Ca ²⁺ Wave Propagation through Gap-Junctional Ca ²⁺ Diffusion: A Theoretical Study. Biophysical Journal, 2001, 80, 75-87.	0.5	109
110	Chemotaxis and aggregation in the cellular slime mould. , 1999, , 137-150.		0
111	Model of Intercellular Calcium Oscillations in Hepatocytes: Synchronization of Heterogeneous Cells. Biophysical Journal, 1999, 77, 1244-1256.	0.5	147
112	Streaming instability of slime mold amoebae: An analytical model. Physical Review E, 1997, 56, 2074-2080.	2.1	29
113	Turing patterns in fish skin?. Nature, 1996, 380, 678-678.	27.8	15
114	INTERPLAY OF CELL-CELL SIGNALLING AND MULTICELLULAR MORPHOGENESIS DURING DICTYOSTELIUM AGGREGATION. , 1996, , 15-28.		1
115	Cellular pattern formation during Dictyostelium aggregation. Physica D: Nonlinear Phenomena, 1995, 85, 425-444.	2.8	112
116	Use of convex analysis for the modelling of biochemical reaction systems. Lecture Notes in Control and Information Sciences, 1994, , 365-374.	1.0	0
117	A Second-order Approach to Metabolic Control Analysis. Journal of Theoretical Biology, 1993, 164, 85-102.	1.7	29
118	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
119	Protocol for the use of Polylox " endogenous barcoding for high resolution in vivo lineage tracing. Protocol Exchange, 0, , .	0.3	1