Alex K Shalek

List of Publications by Year in descending order

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145 papers 37,609 citations

23544 58 h-index 130 g-index

198 all docs

198 docs citations

198 times ranked 54828 citing authors

#	Article	IF	CITATIONS
1	Highly Parallel Genome-wide Expression Profiling of Individual Cells Using Nanoliter Droplets. Cell, 2015, 161, 1202-1214.	13.5	5,908
2	Single-cell RNA-seq highlights intratumoral heterogeneity in primary glioblastoma. Science, 2014, 344, 1396-1401.	6.0	3,648
3	Dissecting the multicellular ecosystem of metastatic melanoma by single-cell RNA-seq. Science, 2016, 352, 189-196.	6.0	3,421
4	MAST: a flexible statistical framework for assessing transcriptional changes and characterizing heterogeneity in single-cell RNA sequencing data. Genome Biology, 2015, 16, 278.	3.8	2,047
5	SARS-CoV-2 Receptor ACE2 Is an Interferon-Stimulated Gene in Human Airway Epithelial Cells and Is Detected in Specific Cell Subsets across Tissues. Cell, 2020, 181, 1016-1035.e19.	13.5	1,956
6	The Human Cell Atlas. ELife, 2017, 6, .	2.8	1,547
7	Single-cell transcriptomics reveals bimodality in expression and splicing in immune cells. Nature, 2013, 498, 236-240.	13.7	1,103
8	A Cancer Cell Program Promotes T Cell Exclusion and Resistance to Checkpoint Blockade. Cell, 2018, 175, 984-997.e24.	13.5	892
9	Single-cell RNA-seq reveals dynamic paracrine control of cellular variation. Nature, 2014, 510, 363-369.	13.7	872
10	Intra- and Inter-cellular Rewiring of the Human Colon during Ulcerative Colitis. Cell, 2019, 178, 714-730.e22.	13.5	806
11	Reconstructing and Reprogramming the Tumor-Propagating Potential of Glioblastoma Stem-like Cells. Cell, 2014, 157, 580-594.	13.5	751
12	Seq-Well: portable, low-cost RNA sequencing of single cells at high throughput. Nature Methods, 2017, 14, 395-398.	9.0	706
13	Single-Cell RNA-Seq Reveals AML Hierarchies Relevant to Disease Progression and Immunity. Cell, 2019, 176, 1265-1281.e24.	13.5	642
14	Dynamic regulatory network controlling TH17 cell differentiation. Nature, 2013, 496, 461-468.	13.7	608
15	COVID-19 tissue atlases reveal SARS-CoV-2 pathology and cellular targets. Nature, 2021, 595, 107-113.	13.7	537
16	Vertical nanowire electrode arrays as a scalable platform for intracellular interfacing to neuronal circuits. Nature Nanotechnology, 2012, 7, 180-184.	15.6	532
17	Systematic comparison of single-cell and single-nucleus RNA-sequencing methods. Nature Biotechnology, 2020, 38, 737-746.	9.4	527
18	Vertical silicon nanowires as a universal platform for delivering biomolecules into living cells. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1870-1875.	3.3	518

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19	Single-Cell Genomics Unveils Critical Regulators of Th17 Cell Pathogenicity. Cell, 2015, 163, 1400-1412.	13.5	504
20	Whole-exome sequencing of circulating tumor cells provides a window into metastatic prostate cancer. Nature Biotechnology, 2014, 32, 479-484.	9.4	495
21	Transcriptional and Epigenetic Dynamics during Specification of Human Embryonic Stem Cells. Cell, 2013, 153, 1149-1163.	13.5	419
22	Prevention of tuberculosis in macaques after intravenous BCG immunization. Nature, 2020, 577, 95-102.	13.7	394
23	T Helper Cell Cytokines Modulate Intestinal Stem Cell Renewal and Differentiation. Cell, 2018, 175, 1307-1320.e22.	13.5	388
24	Allergic inflammatory memory in human respiratory epithelial progenitor cells. Nature, 2018, 560, 649-654.	13.7	368
25	Deconstructing transcriptional heterogeneity in pluripotent stem cells. Nature, 2014, 516, 56-61.	13.7	343
26	The Human Tumor Atlas Network: Charting Tumor Transitions across Space and Time at Single-Cell Resolution. Cell, 2020, 181, 236-249.	13.5	334
27	Longitudinal Multi-omics Analyses Identify Responses of Megakaryocytes, Erythroid Cells, and Plasmablasts as Hallmarks of Severe COVID-19. Immunity, 2020, 53, 1296-1314.e9.	6.6	278
28	Scaling by shrinking: empowering single-cell 'omics' with microfluidic devices. Nature Reviews Genetics, 2017, 18, 345-361.	7.7	274
29	Pathogen Cell-to-Cell Variability Drives Heterogeneity in Host Immune Responses. Cell, 2015, 162, 1309-1321.	13.5	255
30	Preparation of Singleâ€Cell RNAâ€Seq Libraries for Next Generation Sequencing. Current Protocols in Molecular Biology, 2014, 107, 4.22.1-17.	2.9	232
31	Multiplexed barcoded CRISPR-Cas9 screening enabled by CombiGEM. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2544-2549.	3.3	210
32	Impaired local intrinsic immunity to SARS-CoV-2 infection in severe COVID-19. Cell, 2021, 184, 4713-4733.e22.	13.5	206
33	Single-cell transcriptomic atlas of the human retina identifies cell types associated with age-related macular degeneration. Nature Communications, 2019, 10, 4902.	5.8	203
34	Microenvironment drives cell state, plasticity, and drug response in pancreatic cancer. Cell, 2021, 184, 6119-6137.e26.	13.5	201
35	Systematic Discovery of TLR Signaling Components Delineates Viral-Sensing Circuits. Cell, 2011, 147, 853-867.	13.5	177
36	Single-Cell Analysis of the Liver Epithelium Reveals Dynamic Heterogeneity and an Essential Role for YAP in Homeostasis and Regeneration. Cell Stem Cell, 2019, 25, 23-38.e8.	5.2	176

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37	Identification of a Master Regulator of Differentiation in Toxoplasma. Cell, 2020, 180, 359-372.e16.	13.5	170
38	Second-Strand Synthesis-Based Massively Parallel scRNA-Seq Reveals Cellular States and Molecular Features of Human Inflammatory Skin Pathologies. Immunity, 2020, 53, 878-894.e7.	6.6	169
39	Heterogeneity in immune responses: from populations to single cells. Trends in Immunology, 2014, 35, 219-229.	2.9	166
40	Single-Cell Analyses of Colon and Blood Reveal Distinct Immune Cell Signatures of Ulcerative Colitis and Crohn's Disease. Gastroenterology, 2020, 159, 591-608.e10.	0.6	160
41	Nanowire-Mediated Delivery Enables Functional Interrogation of Primary Immune Cells: Application to the Analysis of Chronic Lymphocytic Leukemia. Nano Letters, 2012, 12, 6498-6504.	4.5	154
42	Group 3 innate lymphoid cells mediate early protective immunity against tuberculosis. Nature, 2019, 570, 528-532.	13.7	153
43	Multiplexed, targeted profiling of single-cell proteomes and transcriptomes in a single reaction. Genome Biology, 2016, 17, 188.	3.8	143
44	Initiation of Antiviral B Cell Immunity Relies on Innate Signals from Spatially Positioned NKT Cells. Cell, 2018, 172, 517-533.e20.	13.5	142
45	IFNÎ 3 -Dependent Tissue-Immune Homeostasis Is Co-opted in the Tumor Microenvironment. Cell, 2017, 170, 127-141.e15.	13.5	140
46	A microfluidic platform enabling single-cell RNA-seq of multigenerational lineages. Nature Communications, 2016, 7, 10220.	5.8	137
47	Innate Lymphoid Cells Are Depleted Irreversibly during Acute HIV-1 Infection in the Absence of Viral Suppression. Immunity, 2016, 44, 391-405.	6.6	125
48	Single-cell analyses to tailor treatments. Science Translational Medicine, 2017, 9, .	5.8	116
49	Lymph nodes are innervated by a unique population of sensory neurons with immunomodulatory potential. Cell, 2021, 184, 441-459.e25.	13.5	101
50	Integrated single-cell analysis of multicellular immune dynamics during hyperacute HIV-1 infection. Nature Medicine, 2020, 26, 511-518.	15.2	100
51	Targeting Treg cells with GITR activation alleviates resistance to immunotherapy in murine glioblastomas. Nature Communications, 2021, 12, 2582.	5.8	96
52	Probing Enzymatic Activity inside Living Cells Using a Nanowire–Cell "Sandwich―Assay. Nano Letters, 2013, 13, 153-158.	4.5	92
53	Multimodal profiling of lung granulomas in macaques reveals cellular correlates of tuberculosis control. Immunity, 2022, 55, 827-846.e10.	6.6	92
54	TCR sequencing paired with massively parallel 3′ RNA-seq reveals clonotypic T cell signatures. Nature Immunology, 2019, 20, 1692-1699.	7.0	89

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55	Inflammasomes within Hyperactive Murine Dendritic Cells Stimulate Long-Lived T Cell-Mediated Anti-tumor Immunity. Cell Reports, 2020, 33, 108381.	2.9	86
56	High-fat diet-activated fatty acid oxidation mediates intestinal stemness and tumorigenicity. Cell Reports, 2021, 35, 109212.	2.9	85
57	Computational Methods for Single-Cell RNA Sequencing. Annual Review of Biomedical Data Science, 2020, 3, 339-364.	2.8	81
58	Single-Cell Profiling of Ebola Virus Disease InÂVivo Reveals Viral and Host Dynamics. Cell, 2020, 183, 1383-1401.e19.	13.5	79
59	Human airway mast cells proliferate and acquire distinct inflammation-driven phenotypes during type 2 inflammation. Science Immunology, 2021, 6, .	5.6	79
60	Single-cell analysis of human primary prostate cancer reveals the heterogeneity of tumor-associated epithelial cell states. Nature Communications, 2022, 13, 141.	5.8	76
61	Germline-Encoded Affinity for Cognate Antigen Enables Vaccine Amplification of a Human Broadly Neutralizing Response against Influenza Virus. Immunity, 2019, 51, 735-749.e8.	6.6	71
62	A validated single-cell-based strategy to identify diagnostic and therapeutic targets in complex diseases. Genome Medicine, 2019, 11, 47.	3.6	68
63	Somatic mutation as a mechanism of Wnt/ \hat{l}^2 -catenin pathway activation in CLL. Blood, 2014, 124, 1089-1098.	0.6	65
64	Expression of Foxp3 by T follicular helper cells in end-stage germinal centers. Science, 2021, 373, .	6.0	63
65	The cellular architecture of the antimicrobial response network in human leprosy granulomas. Nature Immunology, 2021, 22, 839-850.	7.0	60
66	Antiviral CD8+ T Cells Restricted by Human Leukocyte Antigen Class II Exist during Natural HIV Infection and Exhibit Clonal Expansion. Immunity, 2016, 45, 917-930.	6.6	59
67	Augmentation of HIV-specific T cell function by immediate treatment of hyperacute HIV-1 infection. Science Translational Medicine, 2019, $11,\ldots$	5.8	58
68	Circulating CXCR5+CXCR3+PD-1lo Tfh-like cells in HIV-1 controllers with neutralizing antibody breadth. JCI Insight, 2017, 2, e89574.	2.3	58
69	Functional compensation precedes recovery of tissue mass following acute liver injury. Nature Communications, 2020, 11, 5785.	5.8	56
70	IL- $5R\hat{l}\pm$ marks nasal polyp IgG4- and IgE-expressing cells in aspirin-exacerbated respiratory disease. Journal of Allergy and Clinical Immunology, 2020, 145, 1574-1584.	1.5	55
71	Enteric Coronavirus Infection and Treatment Modeled With an Immunocompetent Human Intestine-On-A-Chip. Frontiers in Pharmacology, 2021, 12, 718484.	1.6	52
72	Optofluidic real-time cell sorter for longitudinal CTC studies in mouse models of cancer. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2232-2236.	3.3	51

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73	Oct1 and OCA-B are selectively required for CD4 memory T cell function. Journal of Experimental Medicine, 2015, 212, 2115-2131.	4.2	50
74	Distribution and storage of inflammatory memory in barrier tissues. Nature Reviews Immunology, 2020, 20, 308-320.	10.6	47
75	Regulation of X-linked gene expression during early mouse development by Rlim. ELife, 2016, 5, .	2.8	46
76	Mitogenic and progenitor gene programmes in single pilocytic astrocytoma cells. Nature Communications, 2019, 10, 3731.	5.8	45
77	Linking single-cell measurements of mass, growth rate, and gene expression. Genome Biology, 2018, 19, 207.	3.8	42
78	Deciphering molecular circuits from genetic variation underlying transcriptional responsiveness to stimuli. Nature Biotechnology, 2013, 31, 342-349.	9.4	41
79	Selective expansion of myeloid and NK cells in humanized mice yields human-like vaccine responses. Nature Communications, 2018, 9, 5031.	5.8	39
80	Identification of immune correlates of fatal outcomes in critically ill COVID-19 patients. PLoS Pathogens, 2021, 17, e1009804.	2.1	39
81	Spatiotemporal single-cell profiling reveals that invasive and tissue-resident memory donor CD8 ⁺ T cells drive gastrointestinal acute graft-versus-host disease. Science Translational Medicine, 2021, 13, .	5.8	39
82	Deciphering the immunopeptidome in vivo reveals new tumour antigens. Nature, 2022, 607, 149-155.	13.7	38
83	A Reproducibility-Based Computational Framework Identifies an Inducible, Enhanced Antiviral State in Dendritic Cells from HIV-1 Elite Controllers. Genome Biology, 2018, 19, 10.	3.8	37
84	Mepolizumab targets multiple immune cells in aspirin-exacerbated respiratory disease. Journal of Allergy and Clinical Immunology, 2021, 148, 574-584.	1.5	37
85	Mechanisms of Lymphoma Clearance Induced by High-Dose Alkylating Agents. Cancer Discovery, 2019, 9, 944-961.	7.7	36
86	Harnessing single-cell genomics to improve the physiological fidelity of organoid-derived cell types. BMC Biology, 2018, 16, 62.	1.7	35
87	Induction of metabolic quiescence defines the transitional to follicular B cell switch. Science Signaling, 2019, 12, .	1.6	35
88	Seq-Well: A Sample-Efficient, Portable Picowell Platform for Massively Parallel Single-Cell RNA Sequencing. Methods in Molecular Biology, 2019, 1979, 111-132.	0.4	33
89	Evolution and Diversity of Immune Responses during Acute HIV Infection. Immunity, 2020, 53, 908-924.	6.6	31
90	Longitudinal transcriptomics define the stages of myeloid activation in the living human brain after intracerebral hemorrhage. Science Immunology, 2021, 6, .	5.6	31

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91	High-Frequency, Functional HIV-Specific T-Follicular Helper and Regulatory Cells Are Present Within Germinal Centers in Children but Not Adults. Frontiers in Immunology, 2018, 9, 1975.	2.2	29
92	Cyclin D3 drives inertial cell cycling in dark zone germinal center B cells. Journal of Experimental Medicine, 2021, 218, .	4.2	29
93	A single-cell liver atlas of Plasmodium vivax infection. Cell Host and Microbe, 2022, 30, 1048-1060.e5.	5.1	29
94	Live cell tagging tracking and isolation for spatial transcriptomics using photoactivatable cell dyes. Nature Communications, 2021, 12, 4995.	5.8	25
95	Genomic and transcriptomic correlates of immunotherapy response within the tumor microenvironment of leptomeningeal metastases. Nature Communications, 2021, 12, 5955.	5.8	25
96	Screening for modulators of the cellular composition of gut epithelia via organoid models of intestinal stem cell differentiation. Nature Biomedical Engineering, 2022, 6, 476-494.	11.6	24
97	A Single Human VH-gene Allows for a Broad-Spectrum Antibody Response Targeting Bacterial Lipopolysaccharides in the Blood. Cell Reports, 2020, 32, 108065.	2.9	23
98	Immunological Fingerprints of Controllers Developing Neutralizing HIV-1 Antibodies. Cell Reports, 2020, 30, 984-996.e4.	2.9	22
99	A human liver cell-based system modeling a clinical prognostic liver signature for therapeutic discovery. Nature Communications, 2021, 12, 5525.	5.8	21
100	PI3K activation allows immune evasion by promoting an inhibitory myeloid tumor microenvironment., 2022, 10, e003402.		21
101	Cellular and transcriptional diversity over the course of human lactation. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2121720119.	3.3	19
102	Measuring kinetics and metastatic propensity of CTCs by blood exchange between mice. Nature Communications, 2021, 12, 5680.	5.8	18
103	Novel in vitro booster vaccination to rapidly generate antigen-specific human monoclonal antibodies. Journal of Experimental Medicine, 2017, 214, 2471-2490.	4.2	17
104	Photoinduced Interfacial Charging and "Explosion―of Monolayer Pentacene Islands. Nano Letters, 2005, 5, 2241-2245.	4.5	15
105	Improved haplotype inference by exploiting long-range linking and allelic imbalance in RNA-seq datasets. Nature Communications, 2020, 11 , 4662.	5.8	14
106	MR1-Restricted MAIT Cells From The Human Lung Mucosal Surface Have Distinct Phenotypic, Functional, and Transcriptomic Features That Are Preserved in HIV Infection. Frontiers in Immunology, 2021, 12, 631410.	2,2	12
107	Leukocyte dynamics after intracerebral hemorrhage in a living patient reveal rapid adaptations to tissue milieu. JCI Insight, 2021, 6, .	2.3	11
108	JAK inhibition in a patient with a STAT1 gain-of-function variant reveals STAT1 dysregulation as a common feature of aplastic anemia. Med, 2022, 3, 42-57.e5.	2.2	11

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109	Single-cell immunophenotyping of the skin lesion erythema migrans identifies IgM memory B cells. JCI Insight, 2021, 6, .	2.3	10
110	Aggregated Mycobacterium tuberculosis Enhances the Inflammatory Response. Frontiers in Microbiology, 2021, 12, 757134.	1.5	10
111	Allelic variation in class I HLA determines CD8 T cell repertoire shape and cross-reactive memory responses to SARS-CoV-2. Science Immunology, 2021, , eabk3070.	5.6	10
112	Loss of DNA methyltransferase activity in primed human ES cells triggers increased cell-cell variability and transcriptional repression. Development (Cambridge), 2019, 146, .	1.2	9
113	Innate Lymphoid Cell Activation and Sustained Depletion in Blood and Tissue of Children Infected with HIV from Birth Despite Antiretroviral Therapy. Cell Reports, 2020, 32, 108153.	2.9	9
114	The Human Cell Atlas and equity: lessons learned. Nature Medicine, 2020, 26, 1509-1511.	15.2	7
115	HIV infection drives interferon signaling within intestinal SARS-CoV-2 target cells. JCI Insight, 2021, 6, .	2.3	7
116	Seq-Well: portable, low-cost RNA sequencing of single cells at high throughput. Protocol Exchange, 0, , .	0.3	7
117	Identification and Tracking of Alloreactive T Cell Clones in Rhesus Macaques Through the RM-scTCR-Seq Platform. Frontiers in Immunology, 2021, 12, 804932.	2.2	7
118	MERFISHing for spatial context. Trends in Immunology, 2015, 36, 390-391.	2.9	6
119	Revisiting airway epithelial remodeling in type 2 immunity: Beyond goblet cell metaplasia. Journal of Allergy and Clinical Immunology, 2019, 144, 1158-1160.	1.5	6
120	Single-Cell Multiomics Reveals Clonal T-Cell Expansions and Exhaustion in Blastic Plasmacytoid Dendritic Cell Neoplasm. Frontiers in Immunology, 2022, 13, 809414.	2.2	6
121	Voices in methods development. Nature Methods, 2019, 16, 945-951.	9.0	5
122	Vitrification preserves murine ovarian follicular cell transcriptome in a 3D encapsulated i>in vitro i>follicle growth system. Biology of Reproduction, 2021, 105, 1378-1380.	1,2	5
123	Hypoxic, glycolytic metabolism is a vulnerability of B-acute lymphoblastic leukemia-initiating cells. Cell Reports, 2022, 39, 110752.	2.9	5
124	Marrying microfluidics and microwells for parallel, high-throughput single-cell genomics. Genome Biology, 2015, 16, 129.	13.9	3
125	Single cell biology—a Keystone Symposia report. Annals of the New York Academy of Sciences, 2021, 1506, 74-97.	1.8	3
126	P154 SINGLE-CELL ANALYSIS OF T CELL PATHOGENESIS IN PEDIATRIC CROHN'S DISEASE. Gastroenterology, 2019, 156, S100.	0.6	1

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127	Sensitivity to Wnt Pathway Inhibition in CLL Is Associated with Specific Gene Expression Signatures. Blood, 2011, 118, 801-801.	0.6	1
128	Abstract 4380: Dissecting the multicellular ecosystem of metastatic melanoma by single-cell RNA-sequencing. , 2016, , .		1
129	Abstract P057: Targeting Treg cells with GITR activation alleviates resistance to immunotherapy in murine glioblastomas. Cancer Immunology Research, 2022, 10, P057-P057.	1.6	1
130	P154 SINGLE-CELL ANALYSIS OF T CELL PATHOGENESIS IN PEDIATRIC CROHN'S DISEASE. Inflammatory Bowe Diseases, 2019, 25, S69-S69.	el 0.9	0
131	Mast cell hyperplasia in human type 2 inflammation: insights from single cell RNA sequencing. Journal of Allergy and Clinical Immunology, 2019, 143, AB178.	1.5	0
132	Oct1 and OCA-B are selectively required for CD4 memory T cell function. Journal of Cell Biology, 2015, 211, 2112OIA234.	2.3	0
133	Speed kills. Science Translational Medicine, 2016, 8, .	5.8	0
134	Implementation of single-cell genomics as a translational tool in patients with metastatic melanoma Journal of Clinical Oncology, 2016, 34, 11503-11503.	0.8	0
135	Made-by-measure. Science Translational Medicine, 2016, 8, .	5.8	O
136	Zika meets its match. Science Translational Medicine, 2016, 8, .	5.8	0
137	On the right track. Science Translational Medicine, 2016, 8, .	5.8	O
138	A basic strategy for detecting CD8 T cell specificity. Science Translational Medicine, 2016, 8, .	5.8	0
139	Size no longer matters. Science Translational Medicine, 2016, 8, 365ec185.	5.8	O
140	A case of mistaken identity. Science Translational Medicine, 2017, 9, .	5.8	0
141	Abstract PR11: Dissecting mechanisms of PD-1 blockade with single-cell RNA-sequencing. , 2017, , .		0
142	Baring cellular souls. Science Translational Medicine, 2017, 9, .	5.8	0
143	Abstract 3027: Dissecting mechanisms of anti-PD-1 therapy with massively parallel single-cell RNA-sequencing. , $2017, \ldots$		O
144	Alkylating Agent-Induced ER Stress Overcomes Microenvironmental Resistance to Lymphoma Therapy. SSRN Electronic Journal, 0, , .	0.4	0

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145	Single-Cell RNA-Seq Reveals AML Cellular Hierarchies Relevant to Clinical Outcomes and Immunity. Blood, 2018, 132, 542-542.	0.6	O