Bali Pulendran

List of Publications by Citations

130 papers	16,427 citations	61 h-index	128 g-index
144 ext. papers	20,971 ext. citations	19.2 avg, IF	6.92 L-index

#	Paper	IF	Citations
130	Systems biology approach predicts immunogenicity of the yellow fever vaccine in humans. *Nature Immunology*, **2009**, 10, 116-125	19.1	817
129	Lamina propria macrophages and dendritic cells differentially induce regulatory and interleukin 17-producing T cell responses. *Nature Immunology*, **2007**, 8, 1086-94	19.1	813
128	Programming the magnitude and persistence of antibody responses with innate immunity. *Nature*, **2011**, 470, 543-7	50.4	703
127	Mice lacking flt3 ligand have deficient hematopoiesis affecting hematopoietic progenitor cells, dendritic cells, and natural killer cells. *Blood*, **2000**, 95, 3489-3497	2.2	691
126	Immunological mechanisms of vaccination. *Nature Immunology*, **2011**, 12, 509-17	19.1	621
125	Systems biology of vaccination for seasonal influenza in humans. *Nature Immunology*, **2011**, 12, 786-95	19.1	589
124	Translating innate immunity into immunological memory: implications for vaccine development. *Cell*, **2006**, 124, 849-63	56.2	489
123	Systems biological assessment of immunity to mild versus severe COVID-19 infection in humans. *Science*, **2020**, 369, 1210-1220	33.3	485
122	Predicting network activity from high throughput metabolomics. *PLoS Computational Biology*, **2013**, 9, e1003123	5	431
121	Molecular signatures of antibody responses derived from a systems biology study of five human vaccines. *Nature Immunology*, **2014**, 15, 195-204	19.1	429
120	Yellow fever vaccine YF-17D activates multiple dendritic cell subsets via TLR2, 7, 8, and 9 to stimulate polyvalent immunity. *Journal of Experimental Medicine*, **2006**, 203, 413-24	16.6	426
119	Activation of beta-catenin in dendritic cells regulates immunity versus tolerance in the intestine. *Science*, **2010**, 329, 849-53	33.3	413
118	TLR5-mediated sensing of gut microbiota is necessary for antibody responses to seasonal influenza vaccination. *Immunity*, **2014**, 41, 478-492	32.3	326
117	New paradigms in type 2 immunity. *Science*, **2012**, 337, 431-5	33.3	319
116	Zika Virus Infects Human Placental Macrophages. *Cell Host and Microbe*, **2016**, 20, 83-90	23.4	315
115	Toll-like receptor-mediated induction of type I interferon in plasmacytoid dendritic cells requires the rapamycin-sensitive PI(3)K-mTOR-p70S6K pathway. *Nature Immunology*, **2008**, 9, 1157-64	19.1	305
114	A Blueprint for HIV Vaccine Discovery. *Cell Host and Microbe*, **2012**, 12, 396-407	23.4	302

113	Systems vaccinology. *Immunity*, **2010**, 33, 516-29	32.3	283
112	Programming dendritic cells to induce T(H)2 and tolerogenic responses. *Nature Immunology*, **2010**, 11, 647-55	19.1	276
111	The T helper type 2 response to cysteine proteases requires dendritic cell-basophil cooperation via ROS-mediated signaling. *Nature Immunology*, **2010**, 11, 608-17	19.1	260
110	Modulating vaccine responses with dendritic cells and Toll-like receptors. *Immunological Reviews*, **2004**, 199, 227-50	11.3	259
109	Functional specializations of intestinal dendritic cell and macrophage subsets that control Th17 and regulatory T cell responses are dependent on the T cell/APC ratio, source of mouse strain, and regional localization. *Journal of Immunology*, **2011**, 187, 733-47	5.3	257
108	Impairment of dendritic cells and adaptive immunity by anthrax lethal toxin. *Nature*, **2003**, 424, 329-34	50.4	256
107	Dendritic cell control of tolerogenic responses. *Immunological Reviews*, **2011**, 241, 206-27	11.3	252
106	Toll-like receptor 2-dependent induction of vitamin A-metabolizing enzymes in dendritic cells promotes T regulatory responses and inhibits autoimmunity. *Nature Medicine*, **2009**, 15, 401-9	50.5	250
105	Modulating the immune response with dendritic cells and their growth factors. *Trends in Immunology*, **2001**, 22, 41-7	14.4	239
104	N6-Methyladenosine Modification Controls Circular RNA Immunity. *Molecular Cell*, **2019**, 76, 96-109.e9	17.6	207
103	Learning immunology from the yellow fever vaccine: innate immunity to systems vaccinology. *Nature Reviews Immunology*, **2009**, 9, 741-7	36.5	206
102	Antibiotics-Driven Gut Microbiome Perturbation Alters Immunity to Vaccines in Humans. *Cell*, **2019**, 178, 1313-1328.e13	56.2	205
101	CXCL13 is a plasma biomarker of germinal center activity. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 2702-7	11.5	204
100	Systems Analysis of Immunity to Influenza Vaccination across Multiple Years and in Diverse Populations Reveals Shared Molecular Signatures. *Immunity*, **2015**, 43, 1186-98	32.3	176
99	A versatile role of mammalian target of rapamycin in human dendritic cell function and differentiation. *Journal of Immunology*, **2010**, 185, 3919-31	5.3	171
98	Systems analysis of protective immune responses to RTS,S malaria vaccination in humans. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 2425-2430	11.5	167
97	Metabolic Phenotypes of Response to Vaccination in Humans. *Cell*, **2017**, 169, 862-877.e17	56.2	157
96	Dengue virus infection induces expansion of a CD14(+)CD16(+) monocyte population that stimulates plasmablast differentiation. *Cell Host and Microbe*, **2014**, 16, 115-27	23.4	157

95	Emerging functions of the unfolded protein response in immunity. *Nature Immunology*, **2014**, 15, 910-9	19.1	156
94	Vaccine activation of the nutrient sensor GCN2 in dendritic cells enhances antigen presentation. *Science*, **2014**, 343, 313-317	33.3	154
93	The amino acid sensor GCN2 controls gut inflammation by inhibiting inflammasome activation. *Nature*, **2016**, 531, 523-527	50.4	152
92	Sequential Infection with Common Pathogens Promotes Human-like Immune Gene Expression and Altered Vaccine Response. *Cell Host and Microbe*, **2016**, 19, 713-9	23.4	144
91	Variegation of the immune response with dendritic cells and pathogen recognition receptors. *Journal of Immunology*, **2005**, 174, 2457-65	5.3	140
90	Emerging concepts in the science of vaccine adjuvants. *Nature Reviews Drug Discovery*, **2021**, 20, 454-475	64.1	115
89	Systems vaccinology: probing humanity's diverse immune systems with vaccines. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 12300-6	11.5	114
88	Systems biology of immunity to MF59-adjuvanted versus nonadjuvanted trivalent seasonal influenza vaccines in early childhood. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 1853-8	11.5	111
87	Direct Probing of Germinal Center Responses Reveals Immunological Features and Bottlenecks for Neutralizing Antibody Responses to HIV Env Trimer. *Cell Reports*, **2016**, 17, 2195-2209	10.6	110
86	Distinct TLR adjuvants differentially stimulate systemic and local innate immune responses in nonhuman primates. *Blood*, **2012**, 119, 2044-55	2.2	101
85	Case of yellow fever vaccine--associated viscerotropic disease with prolonged viremia, robust adaptive immune responses, and polymorphisms in CCR5 and RANTES genes. *Journal of Infectious Diseases*, **2008**, 198, 500-7	7	97
84	Adjuvanting a subunit COVID-19 vaccine to induce protective immunity. *Nature*, **2021**, 594, 253-258	50.4	92
83	Cytokine-Independent Detection of Antigen-Specific Germinal Center T Follicular Helper Cells in Immunized Nonhuman Primates Using a Live Cell Activation-Induced Marker Technique. *Journal of Immunology*, **2016**, 197, 994-1002	5.3	89
82	Chronic but not acute virus infection induces sustained expansion of myeloid suppressor cell numbers that inhibit viral-specific T cell immunity. *Immunity*, **2013**, 38, 309-21	32.3	88
81	The science of adjuvants. *Expert Review of Vaccines*, **2007**, 6, 673-84	5.2	87
80	Initial viral load determines the magnitude of the human CD8 T cell response to yellow fever vaccination. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 3050-5	11.5	84
79	The varieties of immunological experience: of pathogens, stress, and dendritic cells. *Annual Review of Immunology*, **2015**, 33, 563-606	34.7	84
78	Epitopes for neutralizing antibodies induced by HIV-1 envelope glycoprotein BG505 SOSIP trimers in rabbits and macaques. *PLoS Pathogens*, **2018**, 14, e1006913	7.6	78

77	Systems vaccinology: Enabling rational vaccine design with systems biological approaches. *Vaccine*, **2015**, 33, 5294-301	4.1	75
76	mTOR regulates metabolic adaptation of APCs in the lung and controls the outcome of allergic inflammation. *Science*, **2017**, 357, 1014-1021	33.3	68
75	Adjuvanting a DNA vaccine with a TLR9 ligand plus Flt3 ligand results in enhanced cellular immunity against the simian immunodeficiency virus. *Journal of Experimental Medicine*, **2007**, 204, 2733-46	16.6	67
74	Systems vaccinology of the BNT162b2 mRNA vaccine in humans. *Nature*, **2021**, 596, 410-416	50.4	67
73	Multicohort analysis reveals baseline transcriptional predictors of influenza vaccination responses. *Science Immunology*, **2017**, 2,	28	66
72	Systems vaccinology: learning to compute the behavior of vaccine induced immunity. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2012**, 4, 193-205	6.6	65
71	Immunity to viruses: learning from successful human vaccines. *Immunological Reviews*, **2013**, 255, 243-55	11.3	63
70	Th1/Th17 polarization persists following whole-cell pertussis vaccination despite repeated acellular boosters. *Journal of Clinical Investigation*, **2018**, 128, 3853-3865	15.9	61
69	T cell-inducing vaccine durably prevents mucosal SHIV infection even with lower neutralizing antibody titers. *Nature Medicine*, **2020**, 26, 932-940	50.5	60
68	Adjuvanting a Simian Immunodeficiency Virus Vaccine with Toll-Like Receptor Ligands Encapsulated in Nanoparticles Induces Persistent Antibody Responses and Enhanced Protection in TRIM5 Restrictive Macaques. *Journal of Virology*, **2017**, 91,	6.6	58
67	The science and medicine of human immunology. *Science*, **2020**, 369,	33.3	54
66	The Impact of the Microbiome on Immunity to Vaccination in Humans. *Cell Host and Microbe*, **2020**, 28, 169-179	23.4	50
65	Low doses of imatinib induce myelopoiesis and enhance host anti-microbial immunity. *PLoS Pathogens*, **2015**, 11, e1004770	7.6	49
64	Auto-antibodies to type I IFNs can underlie adverse reactions to yellow fever live attenuated vaccine. *Journal of Experimental Medicine*, **2021**, 218,	16.6	49
63	Liver fibrosis occurs through dysregulation of MyD88-dependent innate B-cell activity. *Hepatology*, **2015**, 61, 2067-79	11.2	46
62	Vaccinology in the era of high-throughput biology. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2015**, 370,	5.8	46
61	Refined protocol for generating monoclonal antibodies from single human and murine B cells. *Journal of Immunological Methods*, **2016**, 438, 67-70	2.5	44
60	Systems vaccinology: its promise and challenge for HIV vaccine development. *Current Opinion in HIV and AIDS*, **2012**, 7, 24-31	4.2	43

59	The immunology of SARS-CoV-2 infections and vaccines. *Seminars in Immunology*, **2020**, 50, 101422	10.7	41
58	The potential of the microbiota to influence vaccine responses. *Journal of Leukocyte Biology*, **2018**, 103, 225-231	6.5	39
57	3M-052, a synthetic TLR-7/8 agonist, induces durable HIV-1 envelope-specific plasma cells and humoral immunity in nonhuman primates. *Science Immunology*, **2020**, 5,	28	38
56	Injectable Hydrogels for Sustained Codelivery of Subunit Vaccines Enhance Humoral Immunity. *ACS Central Science*, **2020**, 6, 1800-1812	16.8	38
55	BALDR: a computational pipeline for paired heavy and light chain immunoglobulin reconstruction in single-cell RNA-seq data. *Genome Medicine*, **2018**, 10, 20	14.4	37
54	Cell type discovery and representation in the era of high-content single cell phenotyping. *BMC Bioinformatics*, **2017**, 18, 559	3.6	36
53	Elicitation of broadly protective sarbecovirus immunity by receptor-binding domain nanoparticle vaccines. *Cell*, **2021**, 184, 5432-5447.e16	56.2	34
52	Vaccine-induced plasmablast responses in rhesus macaques: phenotypic characterization and a source for generating antigen-specific monoclonal antibodies. *Journal of Immunological Methods*, **2015**, 416, 69-83	2.5	32
51	Immune imprinting, breadth of variant recognition, and germinal center response in human SARS-CoV-2 infection and vaccination.. *Cell*, **2022**,	56.2	32
50	Vaccine induction of antibodies and tissue-resident CD8+ T cells enhances protection against mucosal SHIV-infection in young macaques. *JCI Insight*, **2019**, 4,	9.9	31
49	Broadly reactive human CD8 T cells that recognize an epitope conserved between VZV, HSV and EBV. *PLoS Pathogens*, **2014**, 10, e1004008	7.6	30
48	Activation of toll-like receptor-2 by endogenous matrix metalloproteinase-2 modulates dendritic-cell-mediated inflammatory responses. *Cell Reports*, **2014**, 9, 1856-1870	10.6	28
47	Antibodies elicited by SARS-CoV-2 infection or mRNA vaccines have reduced neutralizing activity against Beta and Omicron pseudoviruses.. *Science Translational Medicine*, **2022**, 14, eabn7842	17.5	26
46	Modulation of immune responses to vaccination by the microbiota: implications and potential mechanisms. *Nature Reviews Immunology*, **2021**,	36.5	26
45	Virus-Like Particles Displaying Trimeric Simian Immunodeficiency Virus (SIV) Envelope gp160 Enhance the Breadth of DNA/Modified Vaccinia Virus Ankara SIV Vaccine-Induced Antibody Responses in Rhesus Macaques. *Journal of Virology*, **2016**, 90, 8842-54	6.6	25
44	Adjuvanted H5N1 influenza vaccine enhances both cross-reactive memory B cell and strain-specific naive B cell responses in humans. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 17957-17964	11.5	25
43	Systems biology of vaccination in the elderly. *Current Topics in Microbiology and Immunology*, **2013**, 363, 117-42	3.3	24
42	B Cell Competition for Restricted T Cell Help Suppresses Rare-Epitope Responses. *Cell Reports*, **2018**, 25, 321-327.e3	10.6	24

41	Will Systems Biology Deliver Its Promise and Contribute to the Development of New or Improved Vaccines? From Data to Understanding through Systems Biology. *Cold Spring Harbor Perspectives in Biology*, **2018**, 10,	10.2	23
40	The single-cell epigenomic and transcriptional landscape of immunity to influenza vaccination. *Cell*, **2021**, 184, 3915-3935.e21	56.2	23
39	Characterization and Implementation of a Diverse Simian Immunodeficiency Virus SIVsm Envelope Panel in the Assessment of Neutralizing Antibody Breadth Elicited in Rhesus Macaques by Multimodal Vaccines Expressing the SIVmac239 Envelope. *Journal of Virology*, **2015**, 89, 8130-51	6.6	20
38	Designing spatial and temporal control of vaccine responses. *Nature Reviews Materials*, **2021**, 1-22	73.3	16
37	Understanding the immunology of the Zostavax shingles vaccine. *Current Opinion in Immunology*, **2019**, 59, 25-30	7.8	15
36	Breadth and Functionality of Varicella-Zoster Virus Glycoprotein-Specific Antibodies Identified after Zostavax Vaccination in Humans. *Journal of Virology*, **2018**, 92,	6.6	15
35	Identifying gnostic predictors of the vaccine response. *Current Opinion in Immunology*, **2012**, 24, 332-6	7.8	15
34	Squalene emulsion-based vaccine adjuvants stimulate CD8 T cell, but not antibody responses, through a RIPK3-dependent pathway. *ELife*, **2020**, 9,	8.9	15
33	Signatures in Simian Immunodeficiency Virus SIVsmE660 Envelope gp120 Are Associated with Mucosal Transmission but Not Vaccination Breakthrough in Rhesus Macaques. *Journal of Virology*, **2016**, 90, 1880-7	6.6	14
32	Direct comparison of antibody responses to four SARS-CoV-2 vaccines in Mongolia. *Cell Host and Microbe*, **2021**, 29, 1738-1743.e4	23.4	13
31	Systems Vaccinology for a Live Attenuated Tularemia Vaccine Reveals Unique Transcriptional Signatures That Predict Humoral and Cellular Immune Responses. *Vaccines*, **2019**, 8,	5.3	12
30	Elicitation of broadly protective sarbecovirus immunity by receptor-binding domain nanoparticle vaccines **2021**,		12
29	Emerging technologies for systems vaccinology - multi-omics integration and single-cell (epi)genomic profiling. *Current Opinion in Immunology*, **2020**, 65, 57-64	7.8	11
28	Mechanisms of innate and adaptive immunity to the Pfizer-BioNTech BNT162b2 vaccine.. *Nature Immunology*, **2022**,	19.1	11
27	West Nile Virus Infection Blocks Inflammatory Response and T Cell Costimulatory Capacity of Human Monocyte-Derived Dendritic Cells. *Journal of Virology*, **2019**, 93,	6.6	10
26	STAT5: a Target of Antagonism by Neurotropic Flaviviruses. *Journal of Virology*, **2019**, 93,	6.6	10
25	Learning vaccinology from viral infections. *Journal of Experimental Medicine*, **2011**, 208, 2347-9	16.6	10
24	Early non-neutralizing, afucosylated antibody responses are associated with COVID-19 severity.. *Science Translational Medicine*, **2022**, 14, eabm7853	17.5	10

23	Vaccine innovations for emerging infectious diseases-a symposium report. *Annals of the New York Academy of Sciences*, **2020**, 1462, 14-26	6.5	10
22	Immunology taught by vaccines. *Science*, **2019**, 366, 1074-1075	33.3	10
21	Clade C HIV-1 Envelope Vaccination Regimens Differ in Their Ability To Elicit Antibodies with Moderate Neutralization Breadth against Genetically Diverse Tier 2 HIV-1 Envelope Variants. *Journal of Virology*, **2019**, 93,	6.6	9
20	Persistence of Varicella-Zoster Virus-Specific Plasma Cells in Adult Human Bone Marrow following Childhood Vaccination. *Journal of Virology*, **2020**, 94,	6.6	9
19	Systems analysis of West Nile virus infection. *Current Opinion in Virology*, **2014**, 6, 70-5	7.5	9
18	The C3/465 glycan hole cluster in BG505 HIV-1 envelope is the major neutralizing target involved in preventing mucosal SHIV infection. *PLoS Pathogens*, **2021**, 17, e1009257	7.6	9
17	Durability of immune responses to the BNT162b2 mRNA vaccine.. *Med*, **2022**, 3, 25-27	31.7	8
16	Adjuvanting a subunit SARS-CoV-2 nanoparticle vaccine to induce protective immunity in non-human primates **2021**,		7
15	Hydrogel-Based Slow Release of a Receptor-Binding Domain Subunit Vaccine Elicits Neutralizing Antibody Responses Against SARS-CoV-2. *Advanced Materials*, **2021**, e2104362	24	6
14	Safety, immunogenicity, and protection provided by unadjuvanted and adjuvanted formulations of a recombinant plant-derived virus-like particle vaccine candidate for COVID-19 in nonhuman primates.. *Cellular and Molecular Immunology*, **2022**,	15.4	5
13	Natural resistance against infections: focus on COVID-19.. *Trends in Immunology*, **2021**,	14.4	5
12	Systems Biological Analysis of Immune Response to Influenza Vaccination. *Cold Spring Harbor Perspectives in Medicine*, **2021**, 11,	5.4	5
11	Durability of immune responses to the BNT162b2 mRNA vaccine		4
10	Divergent early antibody responses define COVID-19 disease trajectories **2021**,		3
9	A molecular atlas of innate immunity to adjuvanted and live attenuated vaccines, in mice.. *Nature Communications*, **2022**, 13, 549	17.4	2
8	Systems Biological Approaches for Mucosal Vaccine Development **2020**, 753-772		2
7	A system-view of Bordetella pertussis booster vaccine responses in adults primed with whole-cell versus acellular vaccine in infancy. *JCI Insight*, **2021**, 6,	9.9	2
6	Safety, immunogenicity and protection provided by unadjuvanted and adjuvanted formulations of recombinant plant-derived virus-like particle vaccine candidate for COVID-19 in non-human primates		2

5	Immunophenotyping assessment in a COVID-19 cohort (IMPACC): A prospective longitudinal study. *Science Immunology*, **2021**, 6,	28	2
4	Injectable hydrogels for sustained co-delivery of subunit vaccines enhance humoral immunity		1
3	Epigenetic adjuvants: durable reprogramming of the innate immune systemsy with adjuvants.. *Current Opinion in Immunology*, **2022**, 77, 102189	7.8	1
2	Response to Comment on "Activation of □Catenin in Dendritic Cells Regulates Immunity Versus Tolerance in the Intestine". *Science*, **2011**, 333, 405-405	33.3	
1	Regional localization of intestinal dendritic cell subsets control Th-17 responses. *FASEB Journal*, **2010**, 24, 355.7	0.9	