

# Robert A Seder

## List of Publications by Year in descending order

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111  
papers

19,887  
citations

20817

60  
h-index

22166

113  
g-index

132  
all docs

132  
docs citations

132  
times ranked

22052  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vaccine Adjuvants: Putting Innate Immunity to Work. <i>Immunity</i> , 2010, 33, 492-503.	14.3	1,522
2	T-cell quality in memory and protection: implications for vaccine design. <i>Nature Reviews Immunology</i> , 2008, 8, 247-258.	22.7	1,410
3	Multifunctional TH1 cells define a correlate of vaccine-mediated protection against <i>Leishmania major</i> . <i>Nature Medicine</i> , 2007, 13, 843-850.	30.7	1,272
4	DNA Vaccines: Immunology, Application, and Optimization. <i>Annual Review of Immunology</i> , 2000, 18, 927-974.	21.8	1,104
5	Evaluation of the mRNA-1273 Vaccine against SARS-CoV-2 in Nonhuman Primates. <i>New England Journal of Medicine</i> , 2020, 383, 1544-1555.	27.0	936
6	Similarities and differences in CD4+ and CD8+ effector and memory T cell generation. <i>Nature Immunology</i> , 2003, 4, 835-842.	14.5	740
7	Protection Against Malaria by Intravenous Immunization with a Nonreplicating Sporozoite Vaccine. <i>Science</i> , 2013, 341, 1359-1365.	12.6	686
8	SARS-CoV-2 Omicron virus causes attenuated disease in mice and hamsters. <i>Nature</i> , 2022, 603, 687-692.	27.8	475
9	Serum Neutralizing Activity Elicited by mRNA-1273 Vaccine. <i>New England Journal of Medicine</i> , 2021, 384, 1468-1470.	27.0	417
10	Prevention of tuberculosis in macaques after intravenous BCG immunization. <i>Nature</i> , 2020, 577, 95-102.	27.8	394
11	Tuberculosis Subunit Vaccination Provides Long-Term Protective Immunity Characterized by Multifunctional CD4 Memory T Cells. <i>Journal of Immunology</i> , 2009, 182, 8047-8055.	0.8	379
12	In vivo characterization of the physicochemical properties of polymer-linked TLR agonists that enhance vaccine immunogenicity. <i>Nature Biotechnology</i> , 2015, 33, 1201-1210.	17.5	362
13	Vaccination with DNA Encoding the Immunodominant LACK Parasite Antigen Confers Protective Immunity to Mice Infected with <i>Leishmania major</i> . <i>Journal of Experimental Medicine</i> , 1997, 186, 1137-1147.	8.5	348
14	Vaccines against intracellular infections requiring cellular immunity. <i>Nature</i> , 2000, 406, 793-798.	27.8	334
15	Sterile protection against human malaria by chemoattenuated PfSPZ vaccine. <i>Nature</i> , 2017, 542, 445-449.	27.8	332
16	HIV Gag protein conjugated to a Toll-like receptor 7/8 agonist improves the magnitude and quality of Th1 and CD8+ T cell responses in nonhuman primates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 15190-15194.	7.1	323
17	SARS-CoV-2 variant prediction and antiviral drug design are enabled by RBD in vitro evolution. <i>Nature Microbiology</i> , 2021, 6, 1188-1198.	13.3	314
18	Protection against malaria at 1 year and immune correlates following PfSPZ vaccination. <i>Nature Medicine</i> , 2016, 22, 614-623.	30.7	313

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19	Toll-like receptor agonists influence the magnitude and quality of memory T cell responses after prime-boost immunization in nonhuman primates. <i>Journal of Experimental Medicine</i> , 2006, 203, 1249-1258.	8.5	270
20	Distinct lineages of TH1 cells have differential capacities for memory cell generation in vivo. <i>Nature Immunology</i> , 2002, 3, 852-858.	14.5	258
21	Immune correlates of protection by mRNA-1273 vaccine against SARS-CoV-2 in nonhuman primates. <i>Science</i> , 2021, 373, eabj0299.	12.6	244
22	Albumin/vaccine nanocomplexes that assemble in vivo for combination cancer immunotherapy. <i>Nature Communications</i> , 2017, 8, 1954.	12.8	237
23	A human monoclonal antibody prevents malaria infection by targeting a new site of vulnerability on the parasite. <i>Nature Medicine</i> , 2018, 24, 408-416.	30.7	235
24	Malaria Vaccines: Recent Advances and New Horizons. <i>Cell Host and Microbe</i> , 2018, 24, 43-56.	11.0	234
25	InÂvitro and inÂvivo functions of SARS-CoV-2 infection-enhancing and neutralizing antibodies. <i>Cell</i> , 2021, 184, 4203-4219.e32.	28.9	228
26	Vaccine requirements for sustained cellular immunity to an intracellular parasitic infection. <i>Nature Medicine</i> , 1998, 4, 1409-1415.	30.7	223
27	Peptideâ€“TLR-7/8a conjugate vaccines chemically programmed for nanoparticle self-assembly enhance CD8 T-cell immunity to tumor antigens. <i>Nature Biotechnology</i> , 2020, 38, 320-332.	17.5	210
28	Attenuated PfSPZ Vaccine induces strain-transcending T cells and durable protection against heterologous controlled human malaria infection. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2711-2716.	7.1	201
29	Neutralizing antibody vaccine for pandemic and pre-emergent coronaviruses. <i>Nature</i> , 2021, 594, 553-559.	27.8	199
30	Dendritic cell-targeted vaccines â€” hope or hype?. <i>Nature Reviews Immunology</i> , 2014, 14, 705-711.	22.7	189
31	CpG Oligodeoxynucleotides as Vaccine Adjuvants in Primates. <i>Journal of Immunology</i> , 2002, 168, 1659-1663.	0.8	184
32	mRNA-1273 or mRNA-Omicron boost in vaccinated macaques elicits similar B cell expansion, neutralizing responses, and protection from Omicron. <i>Cell</i> , 2022, 185, 1556-1571.e18.	28.9	179
33	Vaccination with Heat-killed Leishmania Antigen or Recombinant Leishmanial Protein and CpG Oligodeoxynucleotides Induces Long-Term Memory CD4+and CD8+T Cell Responses and Protection Against Leishmania major Infection. <i>Journal of Experimental Medicine</i> , 2002, 195, 1565-1573.	8.5	162
34	Progress with Plasmodium falciparum sporozoite (PfSPZ)-based malaria vaccines. <i>Vaccine</i> , 2015, 33, 7452-7461.	3.8	152
35	Malaria prevention: from immunological concepts to effective vaccines and protective antibodies. <i>Nature Immunology</i> , 2018, 19, 1199-1211.	14.5	137
36	Atypical B cells are part of an alternative lineage of B cells that participates in responses to vaccination and infection in humans. <i>Cell Reports</i> , 2021, 34, 108684.	6.4	134

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37	Requirements for the Maintenance of Th1 Immunity In Vivo Following DNA Vaccination: A Potential Immunoregulatory Role for CD8+ T Cells. <i>Journal of Immunology</i> , 2000, 165, 915-924.	0.8	132
38	The Potency and Durability of DNA- and Protein-Based Vaccines Against <i>Leishmania major</i> Evaluated Using Low-Dose, Intradermal Challenge. <i>Journal of Immunology</i> , 2001, 166, 5122-5128.	0.8	131
39	Immunization with HIV Gag targeted to dendritic cells followed by recombinant New York vaccinia virus induces robust T-cell immunity in nonhuman primates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 7131-7136.	7.1	121
40	Poly(I:C) is an effective adjuvant for antibody and multi-functional CD4+ T cell responses to <i>Plasmodium falciparum</i> circumsporozoite protein (CSP) and Î±DEC-CSP in non human primates. <i>Vaccine</i> , 2010, 28, 7256-7266.	3.8	119
41	Quality and quantity of T <sub>FH</sub> cells are critical for broad antibody development in SHIV <sub>AD8</sub> infection. <i>Science Translational Medicine</i> , 2015, 7, 298ra120.	12.4	119
42	Defining the risk of SARS-CoV-2 variants on immune protection. <i>Nature</i> , 2022, 605, 640-652.	27.8	117
43	Safety, Immunogenicity, and Protective Efficacy against Controlled Human Malaria Infection of <i>Plasmodium falciparum</i> Sporozoite Vaccine in Tanzanian Adults. <i>American Journal of Tropical Medicine and Hygiene</i> , 2018, 99, 338-349.	1.4	114
44	Intravenous nanoparticle vaccination generates stem-like TCF1+ neoantigen-specific CD8+ T cells. <i>Nature Immunology</i> , 2021, 22, 41-52.	14.5	110
45	Comparative Analysis of the Magnitude, Quality, Phenotype, and Protective Capacity of Simian Immunodeficiency Virus Gag-Specific CD8+ T Cells following Human-, Simian-, and Chimpanzee-Derived Recombinant Adenoviral Vector Immunization. <i>Journal of Immunology</i> , 2013, 190, 2720-2735.	0.8	99
46	A Potent Anti-Malarial Human Monoclonal Antibody Targets Circumsporozoite Protein Minor Repeats and Neutralizes Sporozoites in the Liver. <i>Immunity</i> , 2020, 53, 733-744.e8.	14.3	99
47	Th1 memory: implications for vaccine development. <i>Immunological Reviews</i> , 2006, 211, 58-66.	6.0	98
48	Antigen expression determines adenoviral vaccine potency independent of IFN and STING signaling. <i>Journal of Clinical Investigation</i> , 2015, 125, 1129-1146.	8.2	97
49	The role of cytokine DNAs as vaccine adjuvants for optimizing cellular immune responses. <i>Immunological Reviews</i> , 2004, 202, 266-274.	6.0	96
50	A Monoclonal Antibody for Malaria Prevention. <i>New England Journal of Medicine</i> , 2021, 385, 803-814.	27.0	95
51	Innate transcriptional effects by adjuvants on the magnitude, quality, and durability of HIV envelope responses in NHPs. <i>Blood Advances</i> , 2017, 1, 2329-2342.	5.2	90
52	Aerosol Vaccination with AERAS-402 Elicits Robust Cellular Immune Responses in the Lungs of Rhesus Macaques but Fails To Protect against High-Dose <i>Mycobacterium tuberculosis</i> Challenge. <i>Journal of Immunology</i> , 2014, 193, 1799-1811.	0.8	87
53	Antibody Feedback Limits the Expansion of B Cell Responses to Malaria Vaccination but Drives Diversification of the Humoral Response. <i>Cell Host and Microbe</i> , 2020, 28, 572-585.e7.	11.0	87
54	Protection against SARS-CoV-2 Beta variant in mRNA-1273 vaccine-boosted nonhuman primates. <i>Science</i> , 2021, 374, 1343-1353.	12.6	83

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55	IL-10 production differentially influences the magnitude, quality, and protective capacity of Th1 responses depending on the vaccine platform. <i>Journal of Experimental Medicine</i> , 2010, 207, 1421-1433.	8.5	81
56	Analysis of immunoglobulin transcripts and hypermutation following SHIVAD8 infection and protein-plus-adjuvant immunization. <i>Nature Communications</i> , 2015, 6, 6565.	12.8	77
57	Full-Length Plasmodium falciparum Circumsporozoite Protein Administered with Long-Chain Poly(I $\alpha$ -C) or the Toll-Like Receptor 4 Agonist Glucopyranosyl Lipid Adjuvant-Stable Emulsion Elicits Potent Antibody and CD4 <sup>+</sup> T Cell Immunity and Protection in Mice. <i>Infection and Immunity</i> , 2013, 81, 789-800.	2.2	74
58	Regulation of transforming growth factor $\beta$ production by interleukin $\beta$ 12. <i>European Journal of Immunology</i> , 1997, 27, 1213-1220.	2.9	73
59	CD8+ T Cell Responses following Replication-Defective Adenovirus Serotype 5 Immunization Are Dependent on CD11c+ Dendritic Cells but Show Redundancy in Their Requirement of TLR and Nucleotide-Binding Oligomerization Domain-Like Receptor Signaling. <i>Journal of Immunology</i> , 2010, 185, 1513-1521.	0.8	66
60	Genetic immunization in the lung induces potent local and systemic immune responses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 22213-22218.	7.1	65
61	Protection from SARS-CoV-2 Delta one year after mRNA-1273 vaccination in rhesus macaques coincides with anamnestic antibody response in the lung. <i>Cell</i> , 2022, 185, 113-130.e15.	28.9	64
62	Cytokine regulation of IL-12 receptor $\beta$ 2 expression: differential effects on human T and NK cells. <i>European Journal of Immunology</i> , 2000, 30, 1364-1374.	2.9	63
63	Variant SARS-CoV-2 mRNA vaccines confer broad neutralization as primary or booster series in mice. <i>Vaccine</i> , 2021, 39, 7394-7400.	3.8	63
64	Safety and Differential Antibody and T-Cell Responses to the Plasmodium falciparum Sporozoite Malaria Vaccine, PfSPZ Vaccine, by Age in Tanzanian Adults, Adolescents, Children, and Infants. <i>American Journal of Tropical Medicine and Hygiene</i> , 2019, 100, 1433-1444.	1.4	61
65	Fab-dimerized glycan-reactive antibodies are a structural category of natural antibodies. <i>Cell</i> , 2021, 184, 2955-2972.e25.	28.9	57
66	mRNA-1273 protects against SARS-CoV-2 beta infection in nonhuman primates. <i>Nature Immunology</i> , 2021, 22, 1306-1315.	14.5	57
67	Protective antibodies elicited by SARS-CoV-2 spike protein vaccination are boosted in the lung after challenge in nonhuman primates. <i>Science Translational Medicine</i> , 2021, 13, .	12.4	56
68	Robust IgM responses following intravenous vaccination with Bacille Calmette-Guérin associate with prevention of Mycobacterium tuberculosis infection in macaques. <i>Nature Immunology</i> , 2021, 22, 1515-1523.	14.5	55
69	Fc $\gamma$ receptor-positive cells are a major source of antigen-induced interleukin-4 in spleens of mice infected with <i>Schistosoma mansoni</i> . <i>European Journal of Immunology</i> , 1993, 23, 1910-1916.	2.9	54
70	Polyinosinic-Polycytidylic Acid Is the Most Effective TLR Adjuvant for SIV Gag Protein-Induced T Cell Responses In Nonhuman Primates. <i>Journal of Immunology</i> , 2013, 190, 4103-4115.	0.8	49
71	Safety, immunogenicity and efficacy of PfSPZ Vaccine against malaria in infants in western Kenya: a double-blind, randomized, placebo-controlled phase 2 trial. <i>Nature Medicine</i> , 2021, 27, 1636-1645.	30.7	47
72	A SARS-CoV-2 spike ferritin nanoparticle vaccine protects hamsters against Alpha and Beta virus variant challenge. <i>Npj Vaccines</i> , 2021, 6, 129.	6.0	47

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73	Increase of Dose Associated With Decrease in Protection Against Controlled Human Malaria Infection by PfSPZ Vaccine in Tanzanian Adults. <i>Clinical Infectious Diseases</i> , 2020, 71, 2849-2857.	5.8	46
74	SIV infection of rhesus macaques results in dysfunctional T- and B-cell responses to neo and recall <i>Leishmania major</i> vaccination. <i>Blood</i> , 2011, 118, 5803-5812.	1.4	45
75	Monocytes Acquire the Ability to Prime Tissue-Resident T Cells via IL-10-Mediated TGF- $\beta$ Release. <i>Cell Reports</i> , 2019, 28, 1127-1135.e4.	6.4	45
76	Type I IFN Induced by Adenovirus Serotypes 28 and 35 Has Multiple Effects on T Cell Immunogenicity. <i>Journal of Immunology</i> , 2012, 188, 6109-6118.	0.8	44
77	Thermoresponsive Polymer Nanoparticles Co-deliver RSV F Trimers with a TLR-7/8 Adjuvant. <i>Bioconjugate Chemistry</i> , 2016, 27, 2372-2385.	3.6	44
78	Humoral protection against mosquito bite-transmitted <i>Plasmodium falciparum</i> infection in humanized mice. <i>Npj Vaccines</i> , 2017, 2, 27.	6.0	44
79	Boosting BCG with proteins or rAd5 does not enhance protection against tuberculosis in rhesus macaques. <i>Npj Vaccines</i> , 2019, 4, 21.	6.0	44
80	Human and rhesus plasmacytoid dendritic cell and B-cell responses to Toll-like receptor stimulation. <i>Immunology</i> , 2011, 134, 257-269.	4.4	43
81	Increased frequency of interleukin 4-producing T cells as a result of polyclonal priming. Use of a single-cell assay to detect interleukin 4-producing cells. <i>European Journal of Immunology</i> , 1991, 21, 1241-1247.	2.9	41
82	Human Anti-CD40 Antibody and Poly IC:LC Adjuvant Combination Induces Potent T Cell Responses in the Lung of Nonhuman Primates. <i>Journal of Immunology</i> , 2015, 195, 1015-1024.	0.8	36
83	Star nanoparticles delivering HIV-1 peptide minimal immunogens elicit near-native envelope antibody responses in nonhuman primates. <i>PLoS Biology</i> , 2019, 17, e3000328.	5.6	33
84	Impact of Polymer-TLR-7/8 Agonist (Adjuvant) Morphology on the Potency and Mechanism of CD8 T Cell Induction. <i>Biomacromolecules</i> , 2019, 20, 854-870.	5.4	32
85	Bystander responses impact accurate detection of murine and human antigen-specific CD8+ T cells. <i>Journal of Clinical Investigation</i> , 2019, 129, 3894-3908.	8.2	29
86	A nonhuman primate toxicology and immunogenicity study evaluating aerosol delivery of AERAS-402/Ad35 vaccine. <i>Human Vaccines and Immunotherapeutics</i> , 2014, 10, 2199-2210.	3.3	25
87	Safety, Tolerability, and Immunogenicity of <i>Plasmodium falciparum</i> Sporozoite Vaccine Administered by Direct Venous Inoculation to Infants and Young Children: Findings From an Age De-escalation, Dose-Escalation, Double-blind, Randomized Controlled Study in Western Kenya. <i>Clinical Infectious Diseases</i> , 2020, 71, 1063-1071.	5.8	25
88	Enhancing durability of CIS43 monoclonal antibody by Fc mutation or AAV delivery for malaria prevention. <i>JCI Insight</i> , 2021, 6, .	5.0	25
89	IFN- $\gamma$ Mediates the Death of Th1 Cells in a Paracrine Manner. <i>Journal of Immunology</i> , 2008, 180, 842-849.	0.8	22
90	Rapid SIV Env-specific mucosal and serum antibody induction augments cellular immunity in protecting immunized, elite-controller macaques against high dose heterologous SIV challenge. <i>Virology</i> , 2011, 411, 87-102.	2.4	22

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91	Stochastic Expansions Maintain the Clonal Stability of CD8+ T Cell Populations Undergoing Memory Inflation Driven by Murine Cytomegalovirus. <i>Journal of Immunology</i> , 2020, 204, 112-121.	0.8	21
92	Functional human IgA targets a conserved site on malaria sporozoites. <i>Science Translational Medicine</i> , 2021, 13, .	12.4	21
93	The P. falciparum CSP repeat region contains three distinct epitopes required for protection by antibodies in vivo. <i>PLoS Pathogens</i> , 2021, 17, e1010042.	4.7	21
94	Protective effects of combining monoclonal antibodies and vaccines against the Plasmodium falciparum circumsporozoite protein. <i>PLoS Pathogens</i> , 2021, 17, e1010133.	4.7	20
95	Coadministration of Polyinosinic:Polycytidylic Acid and Immunostimulatory Complexes Modifies Antigen Processing in Dendritic Cell Subsets and Enhances HIV Gag-Specific T Cell Immunity. <i>Journal of Immunology</i> , 2013, 191, 5085-5096.	0.8	19
96	Vaccination in a humanized mouse model elicits highly protective PfCSP-targeting anti-malarial antibodies. <i>Immunity</i> , 2021, 54, 2859-2876.e7.	14.3	19
97	T Cells Specific for a Mycobacterial Glycolipid Expand after Intravenous Bacillus Calmette-Guérin Vaccination. <i>Journal of Immunology</i> , 2021, 206, 1240-1250.	0.8	18
98	Combination recombinant simian or chimpanzee adenoviral vectors for vaccine development. <i>Vaccine</i> , 2015, 33, 7344-7351.	3.8	16
99	Design of Alphavirus Virus-Like Particles Presenting Circumsporozoite Junctional Epitopes That Elicit Protection against Malaria. <i>Vaccines</i> , 2021, 9, 272.	4.4	16
100	Chemical cross-linking of HIV-1 Env for direct TLR7/8 ligand conjugation compromises recognition of conserved antigenic determinants. <i>Virology</i> , 2013, 446, 56-65.	2.4	15
101	Immunological and pathological evaluation of rhesus macaques infected with Leishmania major. <i>Experimental Parasitology</i> , 2003, 103, 160-168.	1.2	13
102	Evaluation of heterologous prime-boost vaccination strategies using chimpanzee adenovirus and modified vaccinia virus for TB subunit vaccination in rhesus macaques. <i>Npj Vaccines</i> , 2020, 5, 39.	6.0	13
103	The light chain of the L9 antibody is critical for binding circumsporozoite protein minor repeats and preventing malaria. <i>Cell Reports</i> , 2022, 38, 110367.	6.4	11
104	<sc>OMIP</sc>: 28-Color Flow Cytometry Panel to Evaluate Human T-Cell Phenotype and Function. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2020, 97, 1032-1036.	1.5	10
105	Highly protective antimalarial antibodies via precision library generation and yeast display screening. <i>Journal of Experimental Medicine</i> , 2022, 219, .	8.5	9
106	Are Differentiated Human T Helper Cells Reversible?. <i>International Archives of Allergy and Immunology</i> , 1997, 113, 163-166.	2.1	7
107	Memory may not need reminding. <i>Nature Medicine</i> , 2004, 10, 1045-1047.	30.7	6
108	Caregiver and community perceptions and experiences participating in an infant malaria prevention trial of PfSPZ Vaccine administered by direct venous inoculation: a qualitative study in Siaya County, western Kenya. <i>Malaria Journal</i> , 2020, 19, 226.	2.3	6

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109	Host-pathogen interactions in the 21st century. <i>Current Opinion in Immunology</i> , 2005, 17, 335-337.	5.5	3
110	mRNA-1273 vaccination protects against SARS-CoV-2-elicited lung inflammation in nonhuman primates. <i>JCI Insight</i> , 2022, 7, .	5.0	3
111	Progress with PfSPZ Vaccine, a radiation attenuated <i>Plasmodium falciparum</i> sporozoite vaccine. <i>Malaria Journal</i> , 2014, 13, .	2.3	0