Rino Rappuoli

List of Publications by Citations

611 papers	51,234 citations	117 h-index	198 g-index
659 ext. papers	57,104 ext. citations	9.6 avg, IF	7.58 L-index

#	Paper	IF	Citations
611	Genome analysis of multiple pathogenic isolates of Streptococcus agalactiae: implications for the microbial "pan-genome". *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 13950-5	11.5	1585
610	cag, a pathogenicity island of Helicobacter pylori, encodes type I-specific and disease-associated virulence factors. *Proceedings of the National Academy of Sciences of the United States of America*, **1996**, 93, 14648-53	11.5	1559
609	Identification of vaccine candidates against serogroup B meningococcus by whole-genome sequencing. *Science*, **2000**, 287, 1816-20	33.3	1084
608	Complete genome sequence of Neisseria meningitidis serogroup B strain MC58. *Science*, **2000**, 287, 1809-15	33.3	986
607	Helicobacter pylori virulence and genetic geography. *Science*, **1999**, 284, 1328-33	33.3	887
606	The microbial pan-genome. *Current Opinion in Genetics and Development*, **2005**, 15, 589-94	4.9	856
605	A universal vaccine for serogroup B meningococcus. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 10834-9	11.5	588
604	An efficient method to make human monoclonal antibodies from memory B cells: potent neutralization of SARS coronavirus. *Nature Medicine*, **2004**, 10, 871-5	50.5	563
603	Development of a mouse model of Helicobacter pylori infection that mimics human disease. *Science* , **1995**, 267, 1655-8	33.3	520
602	Tyrosine phosphorylation of the Helicobacter pylori CagA antigen after cag-driven host cell translocation. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 1263-8	11.5	497
601	Reverse vaccinology. *Current Opinion in Microbiology*, **2000**, 3, 445-50	7.9	478
600	Identification of a universal Group B streptococcus vaccine by multiple genome screen. *Science*, **2005**, 309, 148-50	33.3	446
599	Analysis of expression of CagA and VacA virulence factors in 43 strains of Helicobacter pylori reveals that clinical isolates can be divided into two major types and that CagA is not necessary for expression of the vacuolating cytotoxin. *Infection and Immunity*, **1995**, 63, 94-8	3.7	442
598	Coxsackie B4 virus infection of beta cells and natural killer cell insulitis in recent-onset type 1 diabetic patients. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 5115-20	11.5	441
597	Complete genome sequence and comparative genomic analysis of an emerging human pathogen, serotype V Streptococcus agalactiae. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 12391-6	11.5	405
596	Living dangerously: how Helicobacter pylori survives in the human stomach. *Nature Reviews Molecular Cell Biology*, **2001**, 2, 457-66	48.7	391
595	Nonviral delivery of self-amplifying RNA vaccines. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 14604-9	11.5	376

594	A pneumococcal pilus influences virulence and host inflammatory responses. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 2857-62	11.5	369
593	Molecular and cellular signatures of human vaccine adjuvants. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 10501-6	11.5	362
592	Vaccination against Neisseria meningitidis using three variants of the lipoprotein GNA1870. *Journal of Experimental Medicine*, **2003**, 197, 789-99	16.6	357
591	A novel glyco-conjugate vaccine against fungal pathogens. *Journal of Experimental Medicine*, **2005**, 202, 597-606	16.6	356
590	Pili in gram-positive pathogens. *Nature Reviews Microbiology*, **2006**, 4, 509-19	22.2	354
589	c-Src/Lyn kinases activate Helicobacter pylori CagA through tyrosine phosphorylation of the EPIYA motifs. *Molecular Microbiology*, **2002**, 43, 971-80	4.1	354
588	SARS--beginning to understand a new virus. *Nature Reviews Microbiology*, **2003**, 1, 209-18	22.2	343
587	Reverse vaccinology: developing vaccines in the era of genomics. *Immunity*, **2010**, 33, 530-41	32.3	329
586	NadA, a novel vaccine candidate of Neisseria meningitidis. *Journal of Experimental Medicine*, **2002**, 195, 1445-54	16.6	316
585	New adjuvants for human vaccines. *Current Opinion in Immunology*, **2010**, 22, 411-6	7.8	304
584	Reverse vaccinology, a genome-based approach to vaccine development. *Vaccine*, **2001**, 19, 2688-91	4.1	295
583	Cloning and sequencing of the pertussis toxin genes: operon structure and gene duplication. *Proceedings of the National Academy of Sciences of the United States of America*, **1986**, 83, 4631-5	11.5	287
582	Filamentous hemagglutinin of Bordetella pertussis: nucleotide sequence and crucial role in adherence. *Proceedings of the National Academy of Sciences of the United States of America*, **1989**, 86, 2637-41	11.5	286
581	Microbiology in the post-genomic era. *Nature Reviews Microbiology*, **2008**, 6, 419-30	22.2	281
580	Mutants of pertussis toxin suitable for vaccine development. *Science*, **1989**, 246, 497-500	33.3	281
579	Correlates of adjuvanticity: A review on adjuvants in licensed vaccines. *Seminars in Immunology*, **2018**, 39, 14-21	10.7	277
578	MF59 adjuvant enhances diversity and affinity of antibody-mediated immune response to pandemic influenza vaccines. *Science Translational Medicine*, **2011**, 3, 85ra48	17.5	260
577	Mutants of Escherichia coli heat-labile toxin lacking ADP-ribosyltransferase activity act as nontoxic, mucosal adjuvants. *Proceedings of the National Academy of Sciences of the United States of America*, **1995**, 92, 1644-8	11.5	260

576	Sequences required for expression of Bordetella pertussis virulence factors share homology with prokaryotic signal transduction proteins. *Proceedings of the National Academy of Sciences of the United States of America*, **1989**, 86, 6671-5	11.5	257
575	Genome analysis reveals pili in Group B Streptococcus. *Science*, **2005**, 309, 105	33.3	255
574	The new multicomponent vaccine against meningococcal serogroup B, 4CMenB: immunological, functional and structural characterization of the antigens. *Vaccine*, **2012**, 30 Suppl 2, B87-97	4.1	248
573	Selective inhibition of Ii-dependent antigen presentation by Helicobacter pylori toxin VacA. *Journal of Experimental Medicine*, **1998**, 187, 135-40	16.6	246
572	Hemagglutination inhibition antibody titers as a correlate of protection for inactivated influenza vaccines in children. *Pediatric Infectious Disease Journal*, **2011**, 30, 1081-5	3.4	244
571	Mucosal adjuvanticity and immunogenicity of LTR72, a novel mutant of Escherichia coli heat-labile enterotoxin with partial knockout of ADP-ribosyltransferase activity. *Journal of Experimental Medicine*, **1998**, 187, 1123-32	16.6	244
570	The neutrophil-activating protein (HP-NAP) of Helicobacter pylori is a protective antigen and a major virulence factor. *Journal of Experimental Medicine*, **2000**, 191, 1467-76	16.6	243
569	Vaccines for the 21st century. *EMBO Molecular Medicine*, **2014**, 6, 708-20	12	241
568	Qualitative and quantitative assessment of meningococcal antigens to evaluate the potential strain coverage of protein-based vaccines. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 19490-5	11.5	239
567	Group B Streptococcus: global incidence and vaccine development. *Nature Reviews Microbiology*, **2006**, 4, 932-42	22.2	239
566	Vaccine manufacturing: challenges and solutions. *Nature Biotechnology*, **2006**, 24, 1377-83	44.5	235
565	Predicted strain coverage of a meningococcal multicomponent vaccine (4CMenB) in Europe: a qualitative and quantitative assessment. *Lancet Infectious Diseases, The*, **2013**, 13, 416-25	25.5	233
564	The amino-acid sequence of two non-toxic mutants of diphtheria toxin: CRM45 and CRM197. *Nucleic Acids Research*, **1984**, 12, 4063-9	20.1	218
563	Adjuvanted H5N1 vaccine induces early CD4+ T cell response that predicts long-term persistence of protective antibody levels. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 3877-82	11.5	215
562	Repeat-associated phase variable genes in the complete genome sequence of Neisseria meningitidis strain MC58. *Molecular Microbiology*, **2000**, 37, 207-15	4.1	212
561	Transient facial nerve paralysis (Bell© palsy) following intranasal delivery of a genetically detoxified mutant of Escherichia coli heat labile toxin. *PLoS ONE*, **2009**, 4, e6999	3.7	211
560	Formation of anion-selective channels in the cell plasma membrane by the toxin VacA of Helicobacter pylori is required for its biological activity. *EMBO Journal*, **1999**, 18, 5517-27	13	210
559	Reverse vaccinology 2.0: Human immunology instructs vaccine antigen design. *Journal of Experimental Medicine*, **2016**, 213, 469-81	16.6	210

558	A 2020 vision for vaccines against HIV, tuberculosis and malaria. *Nature*, **2011**, 473, 463-9	50.4	206
557	Vaccines with MF59 adjuvant expand the antibody repertoire to target protective sites of pandemic avian H5N1 influenza virus. *Science Translational Medicine*, **2010**, 2, 15ra5	17.5	204
556	Cellular vacuoles induced by Helicobacter pylori originate from late endosomal compartments. *Proceedings of the National Academy of Sciences of the United States of America*, **1994**, 91, 9720-4	11.5	201
555	Invariant NKT cells sustain specific B cell responses and memory. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 3984-9	11.5	198
554	Identification of protective and broadly conserved vaccine antigens from the genome of extraintestinal pathogenic Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 9072-7	11.5	197
553	Structural basis for immunization with postfusion respiratory syncytial virus fusion F glycoprotein (RSV F) to elicit high neutralizing antibody titers. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 9619-24	11.5	193
552	Neisseria meningitidis NadA is a new invasin which promotes bacterial adhesion to and penetration into human epithelial cells. *Molecular Microbiology*, **2005**, 55, 687-98	4.1	191
551	The history of MF59( ) adjuvant: a phoenix that arose from the ashes. *Expert Review of Vaccines*, **2013**, 12, 13-30	5.2	190
550	Self-assembling protein nanoparticles in the design of vaccines. *Computational and Structural Biotechnology Journal*, **2016**, 14, 58-68	6.8	189
549	Previously unrecognized vaccine candidates against group B meningococcus identified by DNA microarrays. *Nature Biotechnology*, **2002**, 20, 914-21	44.5	188
548	The design of vaccines against Helicobacter pylori and their development. *Annual Review of Immunology*, **2001**, 19, 523-63	34.7	187
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546	Bordetella parapertussis and Bordetella bronchiseptica contain transcriptionally silent pertussis toxin genes. *Journal of Bacteriology*, **1987**, 169, 2847-53	3.5	185
545	The small GTP binding protein rab7 is essential for cellular vacuolation induced by Helicobacter pylori cytotoxin. *EMBO Journal*, **1997**, 16, 15-24	13	180
544	Counterselectable markers: untapped tools for bacterial genetics and pathogenesis. *Infection and Immunity*, **1998**, 66, 4011-7	3.7	180
543	Induction of antigen-specific antibodies in vaginal secretions by using a nontoxic mutant of heat-labile enterotoxin as a mucosal adjuvant. *Infection and Immunity*, **1996**, 64, 974-9	3.7	175
542	Low pH activates the vacuolating toxin of Helicobacter pylori, which becomes acid and pepsin resistant. *Journal of Biological Chemistry*, **1995**, 270, 23937-40	5.4	173
541	Neisseria meningitidis GNA2132, a heparin-binding protein that induces protective immunity in humans. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 3770-5	11.5	172

540	Vaccines, new opportunities for a new society. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 12288-93	11.5	171
539	Neisseria meningitidis is structured in clades associated with restriction modification systems that modulate homologous recombination. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 4494-9	11.5	170
538	Antibodies to influenza nucleoprotein cross-react with human hypocretin receptor 2. *Science Translational Medicine*, **2015**, 7, 294ra105	17.5	167
537	Families of bacterial signal-transducing proteins. *Molecular Microbiology*, **1989**, 3, 1661-7	4.1	165
536	Alum adjuvanticity: unraveling a century old mystery. *European Journal of Immunology*, **2008**, 38, 2068-71	6.1	164
535	Identification of iron-activated and -repressed Fur-dependent genes by transcriptome analysis of Neisseria meningitidis group B. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 9542-7	11.5	164
534	Role of the Helicobacter pylori virulence factors vacuolating cytotoxin, CagA, and urease in a mouse model of disease. *Infection and Immunity*, **1995**, 63, 4154-60	3.7	164
533	Oligomeric and subunit structure of the Helicobacter pylori vacuolating cytotoxin. *Journal of Cell Biology*, **1996**, 133, 801-7	7.3	160
532	The m2 form of the Helicobacter pylori cytotoxin has cell type-specific vacuolating activity. *Proceedings of the National Academy of Sciences of the United States of America*, **1998**, 95, 10212-7	11.5	160
531	Vacuoles induced by Helicobacter pylori toxin contain both late endosomal and lysosomal markers. *Journal of Biological Chemistry*, **1997**, 272, 25339-44	5.4	153
530	Mucosal administration of Ag85B-ESAT-6 protects against infection with Mycobacterium tuberculosis and boosts prior bacillus Calmette-Guerin immunity. *Journal of Immunology*, **2006**, 177, 6353-60	5.3	153
529	SARS-CoV-2 escape from a highly neutralizing COVID-19 convalescent plasma **2020**,		153
528	The Fur repressor controls transcription of iron-activated and -repressed genes in Helicobacter pylori. *Molecular Microbiology*, **2001**, 42, 1297-309	4.1	152
527	Tyrosine-phosphorylated bacterial proteins: Trojan horses for the host cell. *Journal of Experimental Medicine*, **2000**, 191, 587-92	16.6	148
526	Therapeutic intragastric vaccination against Helicobacter pylori in mice eradicates an otherwise chronic infection and confers protection against reinfection. *Infection and Immunity*, **1997**, 65, 4996-5002	3.7	148
525	Did the inheritance of a pathogenicity island modify the virulence of Helicobacter pylori?. *Trends in Microbiology*, **1997**, 5, 205-8	12.4	147
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523	Fur functions as an activator and as a repressor of putative virulence genes in Neisseria meningitidis. *Molecular Microbiology*, **2004**, 52, 1081-90	4.1	145

522	The design of semi-synthetic and synthetic glycoconjugate vaccines. *Expert Opinion on Drug Discovery*, **2011**, 6, 1045-66	6.2	144
521	Rapidly produced SAM( ) vaccine against H7N9 influenza is immunogenic in mice. *Emerging Microbes and Infections*, **2013**, 2, e52	18.9	143
520	A second pilus type in Streptococcus pneumoniae is prevalent in emerging serotypes and mediates adhesion to host cells. *Journal of Bacteriology*, **2008**, 190, 5480-92	3.5	143
519	Bridging the knowledge gaps in vaccine design. *Nature Biotechnology*, **2007**, 25, 1361-6	44.5	143
518	The Helicobacter pylori neutrophil-activating protein is an iron-binding protein with dodecameric structure. *Molecular Microbiology*, **1999**, 34, 238-46	4.1	143
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516	From empiricism to rational design: a personal perspective of the evolution of vaccine development. *Nature Reviews Immunology*, **2014**, 14, 505-14	36.5	138
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514	Synthetic generation of influenza vaccine viruses for rapid response to pandemics. *Science Translational Medicine*, **2013**, 5, 185ra68	17.5	134
513	RrgA is a pilus-associated adhesin in Streptococcus pneumoniae. *Molecular Microbiology*, **2007**, 66, 329-40	4.1	134
512	Development and phase 1 clinical testing of a conjugate vaccine against meningococcus A and C. *Vaccine*, **1992**, 10, 691-8	4.1	133
511	Helicobacter pylori vacuolating toxin forms anion-selective channels in planar lipid bilayers: possible implications for the mechanism of cellular vacuolation. *Biophysical Journal*, **1999**, 76, 1401-9	2.9	131
510	Three conserved consensus sequences identify the NAD-binding site of ADP-ribosylating enzymes, expressed by eukaryotes, bacteria and T-even bacteriophages. *Molecular Microbiology*, **1996**, 21, 667-74	4.1	131
509	Intranasal immunogenicity and adjuvanticity of site-directed mutant derivatives of cholera toxin. *Infection and Immunity*, **1997**, 65, 2821-8	3.7	131
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507	Structure-based antigen design: a strategy for next generation vaccines. *Trends in Biotechnology*, **2008**, 26, 659-67	15.1	126
506	Vaccine composition formulated with a novel TLR7-dependent adjuvant induces high and broad protection against Staphylococcus aureus. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 3680-5	11.5	125
505	Influenza vaccine immunology. *Immunological Reviews*, **2011**, 239, 167-77	11.3	125

504	Structure of the neutrophil-activating protein from Helicobacter pylori. *Journal of Molecular Biology* , **2002**, 323, 125-30	6.5	124
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502	Medicine. The intangible value of vaccination. *Science*, **2002**, 297, 937-9	33.3	123
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500	Pertussis toxin potentiates Th1 and Th2 responses to co-injected antigen: adjuvant action is associated with enhanced regulatory cytokine production and expression of the co-stimulatory molecules B7-1, B7-2 and CD28. *International Immunology*, **1998**, 10, 651-62	4.9	119
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496	Helicobacter pylori toxin VacA induces vacuole formation by acting in the cell cytosol. *Molecular Microbiology*, **1997**, 26, 665-74	4.1	116
495	Vaccinology in the genome era. *Journal of Clinical Investigation*, **2009**, 119, 2515-25	15.9	115
494	Positive transcriptional feedback at the bvg locus controls expression of virulence factors in Bordetella pertussis. *Proceedings of the National Academy of Sciences of the United States of America*, **1990**, 87, 6753-7	11.5	115
493	Probing the structure-activity relationship of Escherichia coli LT-A by site-directed mutagenesis. *Molecular Microbiology*, **1994**, 14, 51-60	4.1	114
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489	The Hsp60 protein of Helicobacter pylori: structure and immune response in patients with gastroduodenal diseases. *Molecular Microbiology*, **1993**, 9, 645-52	4.1	110
488	Defining a protective epitope on factor H binding protein, a key meningococcal virulence factor and vaccine antigen. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 3304-9	11.5	109
487	MF59 adjuvant: the best insurance against influenza strain diversity. *Expert Review of Vaccines*, **2011**, 10, 447-62	5.2	109

486	Common features of the NAD-binding and catalytic site of ADP-ribosylating toxins. *Molecular Microbiology*, **1994**, 14, 41-50	4.1	109
485	Mycobacterial heat-shock proteins as carrier molecules. II: The use of the 70-kDa mycobacterial heat-shock protein as carrier for conjugated vaccines can circumvent the need for adjuvants and Bacillus Calmette Gufin priming. *European Journal of Immunology*, **1992**, 22, 1365-72	6.1	108
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483	Distribution and genetic variability of three vaccine components in a panel of strains representative of the diversity of serogroup B meningococcus. *Vaccine*, **2009**, 27, 2794-803	4.1	106
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481	SARS-CoV-2 escape from a highly neutralizing COVID-19 convalescent plasma. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	106
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479	Pneumococcal pili are composed of protofilaments exposing adhesive clusters of Rrg A. *PLoS Pathogens*, **2008**, 4, e1000026	7.6	104
478	The use of genomics in microbial vaccine development. *Drug Discovery Today*, **2009**, 14, 252-60	8.8	102
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475	A genetically detoxified derivative of heat-labile Escherichia coli enterotoxin induces neutralizing antibodies against the A subunit. *Journal of Experimental Medicine*, **1994**, 180, 2147-53	16.6	102
474	Genetic characterization of Bordetella pertussis filamentous haemagglutinin: a protein processed from an unusually large precursor. *Molecular Microbiology*, **1990**, 4, 787-800	4.1	102
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467	Mutants of the Escherichia coli heat-labile enterotoxin as safe and strong adjuvants for intranasal delivery of vaccines. *Expert Review of Vaccines*, **2003**, 2, 285-93	5.2	96
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464	Synthesis and characterization of a native, oligomeric form of recombinant severe acute respiratory syndrome coronavirus spike glycoprotein. *Journal of Virology*, **2004**, 78, 10328-35	6.6	94
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459	Expression and immunological properties of the five subunits of pertussis toxin. *Infection and Immunity*, **1987**, 55, 963-7	3.7	93
458	Subunit S1 of pertussis toxin: mapping of the regions essential for ADP-ribosyltransferase activity. *Proceedings of the National Academy of Sciences of the United States of America*, **1988**, 85, 7521-5	11.5	92
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