Ivo G Boneca

List of Publications by Citations

136 papers	16,933 citations	51 h-index	130 g-index
154 ext. papers	20,134 ext. citations	10.5 avg, IF	6.03 L-index

#	Paper	IF	Citations
136	Nod2 is a general sensor of peptidoglycan through muramyl dipeptide (MDP) detection. *Journal of Biological Chemistry*, **2003**, 278, 8869-72	5.4	1730
135	Anticancer immunotherapy by CTLA-4 blockade relies on the gut microbiota. *Science*, **2015**, 350, 1079-84	33.3	1689
134	Nod1 detects a unique muropeptide from gram-negative bacterial peptidoglycan. *Science*, **2003**, 300, 1584-7	33.3	1229
133	The intestinal microbiota modulates the anticancer immune effects of cyclophosphamide. *Science*, **2013**, 342, 971-6	33.3	1128
132	Nod1 responds to peptidoglycan delivered by the Helicobacter pylori cag pathogenicity island. *Nature Immunology*, **2004**, 5, 1166-74	19.1	982
131	Nod1 and Nod2 direct autophagy by recruiting ATG16L1 to the plasma membrane at the site of bacterial entry. *Nature Immunology*, **2010**, 11, 55-62	19.1	968
130	Lymphoid tissue genesis induced by commensals through NOD1 regulates intestinal homeostasis. *Nature*, **2008**, 456, 507-10	50.4	779
129	Resistance Mechanisms to Immune-Checkpoint Blockade in Cancer: Tumor-Intrinsic and -Extrinsic Factors. *Immunity*, **2016**, 44, 1255-69	32.3	554
128	Peptidoglycan molecular requirements allowing detection by Nod1 and Nod2. *Journal of Biological Chemistry*, **2003**, 278, 41702-8	5.4	498
127	MUCOSAL IMMUNOLOGY. The microbiota regulates type 2 immunity through RORγt+ T cells. *Science*, **2015**, 349, 989-93	33.3	494
126	Ly6C hi monocytes in the inflamed colon give rise to proinflammatory effector cells and migratory antigen-presenting cells. *Immunity*, **2012**, 37, 1076-90	32.3	481
125	Toll-like receptor 2-dependent bacterial sensing does not occur via peptidoglycan recognition. *EMBO Reports*, **2004**, 5, 1000-6	6.5	390
124	Enterococcus hirae and Barnesiella intestinihominis Facilitate Cyclophosphamide-Induced Therapeutic Immunomodulatory Effects. *Immunity*, **2016**, 45, 931-943	32.3	376
123	A critical role for peptidoglycan N-deacetylation in Listeria evasion from the host innate immune system. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 997-1002	11.5	291
122	Downregulation of the Drosophila immune response by peptidoglycan-recognition proteins SC1 and SC2. *PLoS Pathogens*, **2006**, 2, e14	7.6	242
121	New insights into the WalK/WalR (YycG/YycF) essential signal transduction pathway reveal a major role in controlling cell wall metabolism and biofilm formation in Staphylococcus aureus. *Journal of Bacteriology*, **2007**, 189, 8257-69	3.5	232
120	Anti-inflammatory capacity of selected lactobacilli in experimental colitis is driven by NOD2-mediated recognition of a specific peptidoglycan-derived muropeptide. *Gut*, **2011**, 60, 1050-9	19.2	228

119	Function of the drosophila pattern-recognition receptor PGRP-SD in the detection of Gram-positive bacteria. *Nature Immunology*, **2004**, 5, 1175-80	19.1	199
118	The immune receptor NOD1 and kinase RIP2 interact with bacterial peptidoglycan on early endosomes to promote autophagy and inflammatory signaling. *Cell Host and Microbe*, **2014**, 15, 623-35	23.4	158
117	The role of peptidoglycan in pathogenesis. *Current Opinion in Microbiology*, **2005**, 8, 46-53	7.9	148
116	Peptidoglycan sensing by the receptor PGRP-LE in the Drosophila gut induces immune responses to infectious bacteria and tolerance to microbiota. *Cell Host and Microbe*, **2012**, 12, 153-65	23.4	136
115	Helicobacter pylori versus the host: remodeling of the bacterial outer membrane is required for survival in the gastric mucosa. *PLoS Pathogens*, **2011**, 7, e1002454	7.6	130
114	Peptidoglycan molecular requirements allowing detection by the Drosophila immune deficiency pathway. *Journal of Immunology*, **2004**, 173, 7339-48	5.3	120
113	Nod1 participates in the innate immune response to Pseudomonas aeruginosa. *Journal of Biological Chemistry*, **2005**, 280, 36714-8	5.4	119
112	Functional analysis via standardized whole-blood stimulation systems defines the boundaries of a healthy immune response to complex stimuli. *Immunity*, **2014**, 40, 436-50	32.3	118
111	Natural variation in the parameters of innate immune cells is preferentially driven by genetic factors. *Nature Immunology*, **2018**, 19, 302-314	19.1	112
110	Distinctive roles of age, sex, and genetics in shaping transcriptional variation of human immune responses to microbial challenges. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E488-E497	11.5	107
109	Super-resolution microscopy reveals cell wall dynamics and peptidoglycan architecture in ovococcal bacteria. *Molecular Microbiology*, **2011**, 82, 1096-109	4.1	90
108	Role of AmiA in the morphological transition of Helicobacter pylori and in immune escape. *PLoS Pathogens*, **2006**, 2, e97	7.6	89
107	Characterization of Staphylococcus aureus cell wall glycan strands, evidence for a new beta-N-acetylglucosaminidase activity. *Journal of Biological Chemistry*, **2000**, 275, 9910-8	5.4	89
106	Gut microbiome and anticancer immune response: really hot Sh*t!. *Cell Death and Differentiation*, **2015**, 22, 199-214	12.7	84
105	Prediction, assessment and validation of protein interaction maps in bacteria. *Journal of Molecular Biology*, **2002**, 323, 763-70	6.5	80
104	The innate immune molecule, NOD1, regulates direct killing of Helicobacter pylori by antimicrobial peptides. *Cellular Microbiology*, **2010**, 12, 626-39	3.9	79
103	OatA, a peptidoglycan O-acetyltransferase involved in Listeria monocytogenes immune escape, is critical for virulence. *Journal of Infectious Diseases*, **2011**, 204, 731-40	7	75
102	Cross-reactivity between tumor MHC class I-restricted antigens and an enterococcal bacteriophage. *Science*, **2020**, 369, 936-942	33.3	74

101	A M23B family metallopeptidase of Helicobacter pylori required for cell shape, pole formation and virulence. *Molecular Microbiology*, **2010**, 78, 809-19	4.1	73
100	The lacdiNAc-specific adhesin LabA mediates adhesion of Helicobacter pylori to human gastric mucosa. *Journal of Infectious Diseases*, **2014**, 210, 1286-95	7	71
99	Fine-Tuning Cancer Immunotherapy: Optimizing the Gut Microbiome. *Cancer Research*, **2016**, 76, 4602-7	10.1	69
98	The frameshift mutation in Nod2 results in unresponsiveness not only to Nod2- but also Nod1-activating peptidoglycan agonists. *Journal of Biological Chemistry*, **2005**, 280, 35859-67	5.4	67
97	Almost all human gastric mucin O-glycans harbor blood group A, B or H antigens and are potential binding sites for Helicobacter pylori. *Glycobiology*, **2012**, 22, 1193-206	5.8	65
96	Peptidoglycan N-acetylglucosamine deacetylases from Bacillus cereus, highly conserved proteins in Bacillus anthracis. *Journal of Biological Chemistry*, **2005**, 280, 30856-63	5.4	65
95	Human genetic variants and age are the strongest predictors of humoral immune responses to common pathogens and vaccines. *Genome Medicine*, **2018**, 10, 59	14.4	64
94	Vancomycin resistance: occurrence, mechanisms and strategies to combat it. *Expert Opinion on Therapeutic Targets*, **2003**, 7, 311-28	6.4	64
93	A revised annotation and comparative analysis of Helicobacter pylori genomes. *Nucleic Acids Research*, **2003**, 31, 1704-14	20.1	63
92	Effect of gut microbiota on depressive-like behaviors in mice is mediated by the endocannabinoid system. *Nature Communications*, **2020**, 11, 6363	17.4	62
91	A novel metal transporter mediating manganese export (MntX) regulates the Mn to Fe intracellular ratio and Neisseria meningitidis virulence. *PLoS Pathogens*, **2011**, 7, e1002261	7.6	59
90	Downregulation of the Na/K-ATPase pump by leptospiral glycolipoprotein activates the NLRP3 inflammasome. *Journal of Immunology*, **2012**, 188, 2805-14	5.3	57
89	Peptidoglycan detection by mammals and flies. *Microbes and Infection*, **2007**, 9, 637-47	9.3	57
88	Chemotherapy-induced ileal crypt apoptosis and the ileal microbiome shape immunosurveillance and prognosis of proximal colon cancer. *Nature Medicine*, **2020**, 26, 919-931	50.5	55
87	Live imaging of bioluminescent leptospira interrogans in mice reveals renal colonization as a stealth escape from the blood defenses and antibiotics. *PLoS Neglected Tropical Diseases*, **2014**, 8, e3359	4.8	54
86	A comprehensive assessment of demographic, environmental, and host genetic associations with gut microbiome diversity in healthy individuals. *Microbiome*, **2019**, 7, 130	16.6	52
85	Lactobacillus paracasei feeding improves immune control of influenza infection in mice. *PLoS ONE*, **2017**, 12, e0184976	3.7	51
84	Mycolactone diffuses into the peripheral blood of Buruli ulcer patients--implications for diagnosis and disease monitoring. *PLoS Neglected Tropical Diseases*, **2011**, 5, e1237	4.8	51

83	Development of inducible systems to engineer conditional mutants of essential genes of Helicobacter pylori. *Applied and Environmental Microbiology*, **2008**, 74, 2095-102	4.8	50
82	Correlation between alterations of the penicillin-binding protein 2 and modifications of the peptidoglycan structure in Neisseria meningitidis with reduced susceptibility to penicillin G. *Journal of Biological Chemistry*, **2003**, 278, 31529-35	5.4	50
81	Listeria monocytogenes multidrug resistance transporters and cyclic di-AMP, which contribute to type I interferon induction, play a role in cell wall stress. *Journal of Bacteriology*, **2013**, 195, 5250-61	3.5	49
80	Listeria monocytogenes is resistant to lysozyme through the regulation, not the acquisition, of cell wall-modifying enzymes. *Journal of Bacteriology*, **2014**, 196, 3756-67	3.5	48
79	Leptospira Interrogans induces fibrosis in the mouse kidney through Inos-dependent, TLR- and NLR-independent signaling pathways. *PLoS Neglected Tropical Diseases*, **2014**, 8, e2664	4.8	48
78	Detailed structural analysis of the peptidoglycan of the human pathogen Neisseria meningitidis. *Journal of Biological Chemistry*, **2003**, 278, 31521-8	5.4	47
77	Selective cleavage of D-Ala-D-Lac by small molecules: re-sensitizing resistant bacteria to vancomycin. *Science*, **2001**, 293, 1484-7	33.3	47
76	From array-based hybridization of Helicobacter pylori isolates to the complete genome sequence of an isolate associated with MALT lymphoma. *BMC Genomics*, **2010**, 11, 368	4.5	44
75	Standardized Whole-Blood Transcriptional Profiling Enables the Deconvolution of Complex Induced Immune Responses. *Cell Reports*, **2016**, 16, 2777-2791	10.6	43
74	Characterization of Helicobacter pylori lytic transglycosylases Slt and MltD. *Journal of Bacteriology*, **2007**, 189, 422-9	3.5	43
73	The biology of bacterial peptidoglycans and their impact on host immunity and physiology. *Cellular Microbiology*, **2014**, 16, 1014-23	3.9	41
72	HobA--a novel protein involved in initiation of chromosomal replication in Helicobacter pylori. *Molecular Microbiology*, **2007**, 65, 979-94	4.1	41
71	Expression and functional importance of innate immune receptors by intestinal epithelial cells. *Cellular and Molecular Life Sciences*, **2011**, 68, 3661-73	10.3	40
70	Peptidoglycan maturation enzymes affect flagellar functionality in bacteria. *Molecular Microbiology*, **2012**, 86, 845-56	4.1	39
69	Regulation of bone mass by the gut microbiota is dependent on NOD1 and NOD2 signaling. *Cellular Immunology*, **2017**, 317, 55-58	4.4	37
68	Molecular architecture of the PBP2-MreC core bacterial cell wall synthesis complex. *Nature Communications*, **2017**, 8, 776	17.4	36
67	N-glycolylated peptidoglycan contributes to the immunogenicity but not pathogenicity of Mycobacterium tuberculosis. *Journal of Infectious Diseases*, **2014**, 209, 1045-54	7	35
66	The Milieu Intﾭieur study - an integrative approach for study of human immunological variance. *Clinical Immunology*, **2015**, 157, 277-93	9	35

65	Distinct functions of polysaccharide deacetylases in cell shape, neutral polysaccharide synthesis and virulence of Bacillus anthracis. *Molecular Microbiology*, **2013**, 87, 867-83	4.1	33
64	Innate immune memory through TLR2 and NOD2 contributes to the control of Leptospira interrogans infection. *PLoS Pathogens*, **2019**, 15, e1007811	7.6	32
63	Harnessing the intestinal microbiome for optimal therapeutic immunomodulation. *Cancer Research*, **2014**, 74, 4217-21	10.1	32
62	The functional vanGCd cluster of Clostridium difficile does not confer vancomycin resistance. *Molecular Microbiology*, **2013**, 89, 612-25	4.1	30
61	Characterization of the elongasome core PBP2 : MreC complex of Helicobacter pylori. *Molecular Microbiology*, **2011**, 82, 68-86	4.1	29
60	Enhancing the clinical coverage and anticancer efficacy of immune checkpoint blockade through manipulation of the gut microbiota. *OncoImmunology*, **2017**, 6, e1132137	7.2	28
59	LipL21 lipoprotein binding to peptidoglycan enables Leptospira interrogans to escape NOD1 and NOD2 recognition. *PLoS Pathogens*, **2017**, 13, e1006725	7.6	26
58	De-O-acetylation of peptidoglycan regulates glycan chain extension and affects in vivo survival of Neisseria meningitidis. *Molecular Microbiology*, **2013**, 87, 1100-12	4.1	25
57	Bacteria and MAMP-induced morphogenesis of the immune system. *Current Opinion in Immunology*, **2010**, 22, 448-54	7.8	24
56	Structural characterization of an abnormally cross-linked muropeptide dimer that is accumulated in the peptidoglycan of methicillin- and cefotaxime-resistant mutants of Staphylococcus aureus. *Journal of Biological Chemistry*, **1997**, 272, 29053-9	5.4	23
55	Chemokines and antimicrobial peptides have a cag-dependent early response to Helicobacter pylori infection in primary human gastric epithelial cells. *Infection and Immunity*, **2014**, 82, 2881-9	3.7	22
54	A commensal Helicobacter sp. of the rodent intestinal flora activates TLR2 and NOD1 responses in epithelial cells. *PLoS ONE*, **2009**, 4, e5396	3.7	22
53	Bulgecin´A:´The´Key´to´a´Broad-Spectrum´Inhibitor´That´Targets´Lytic´Transglycosylases. *Antibiotics*, **2017**, 6,	4.9	21
52	Common Cell Shape Evolution of Two Nasopharyngeal Pathogens. *PLoS Genetics*, **2015**, 11, e1005338	6	21
51	Penicillin resistance compromises Nod1-dependent proinflammatory activity and virulence fitness of neisseria meningitidis. *Cell Host and Microbe*, **2013**, 13, 735-45	23.4	20
50	Inheritance of the lysozyme inhibitor Ivy was an important evolutionary step by Yersinia pestis to avoid the host innate immune response. *Journal of Infectious Diseases*, **2013**, 207, 1535-43	7	20
49	CCL17 production by dendritic cells is required for NOD1-mediated exacerbation of allergic asthma. *American Journal of Respiratory and Critical Care Medicine*, **2014**, 189, 899-908	10.2	19
48	Crosstalk between Helicobacter pylori and gastric epithelial cells is impaired by docosahexaenoic acid. *PLoS ONE*, **2013**, 8, e60657	3.7	19

47	Helicobacter pylori has an unprecedented nitric oxide detoxifying system. *Antioxidants and Redox Signaling*, **2012**, 17, 1190-200	8.4	18
46	The effect of bulgecin A on peptidoglycan metabolism and physiology of Helicobacter pylori. *Microbial Drug Resistance*, **2012**, 18, 230-9	2.9	17
45	Unusual Carbon Hydroxylation of Proline Promotes Active-Site Maturation. *Journal of the American Chemical Society*, **2017**, 139, 5330-5337	16.4	16
44	N-acetylglucosamine deacetylases modulate the anchoring of the gamma-glutamyl capsule to the cell wall of Bacillus anthracis. *Microbial Drug Resistance*, **2014**, 20, 222-30	2.9	15
43	Paenibacillus faecis sp. nov., isolated from human faeces. *International Journal of Systematic and Evolutionary Microbiology*, **2015**, 65, 4621-4626	2.2	15
42	Role of the N-Acetylmuramoyl-l-Alanyl Amidase, AmiA, of Helicobacter pylori in Peptidoglycan Metabolism, Daughter Cell Separation, and Virulence. *Microbial Drug Resistance*, **2016**, 22, 477-86	2.9	14
41	Why should we need the gut microbiota to respond to cancer therapies?. *OncoImmunology*, **2014**, 3, e27574	7.4	14
40	Mammalian PGRPs in the spotlight. *Cell Host and Microbe*, **2009**, 5, 109-11	23.4	13
39	Mycolactone toxin induces an inflammatory response by targeting the IL-1 pathway: Mechanistic insight into Buruli ulcer pathophysiology. *PLoS Pathogens*, **2020**, 16, e1009107	7.6	13
38	Leptospiral LPS escapes mouse TLR4 internalization and TRIF-associated antimicrobial responses through O antigen and associated lipoproteins. *PLoS Pathogens*, **2020**, 16, e1008639	7.6	12
37	A step-by-step guide to bond cleavage and 1,6-anhydro-sugar product synthesis by a peptidoglycan-degrading lytic transglycosylase. *Journal of Biological Chemistry*, **2018**, 293, 6000-6010	5.4	11
36	Visualization of a substrate-induced productive conformation of the catalytic triad of the Neisseria meningitidis peptidoglycan O-acetylesterase reveals mechanistic conservation in SGNH esterase family members. *Acta Crystallographica Section D: Biological Crystallography*, **2014**, 70, 2631-9		11
35	-Deacetylases required for muramic-lactam production are involved in sporulation, germination, and heat resistance. *Journal of Biological Chemistry*, **2018**, 293, 18040-18054	5.4	11
34	Penicillin binding proteins as danger signals: meningococcal penicillin binding protein 2 activates dendritic cells through Toll-like receptor 4. *PLoS ONE*, **2011**, 6, e23995	3.7	10
33	Escape of TLR5 Recognition by spp.: A Rationale for Atypical Endoflagella. *Frontiers in Immunology*, **2020**, 11, 2007	8.4	10
32	Cellular stress promotes NOD1/2-dependent inflammation via the endogenous metabolite sphingosine-1-phosphate. *EMBO Journal*, **2021**, 40, e106272	13	10
31	Multifaceted modes of action of the anticancer probiotic Enterococcus hirae. *Cell Death and Differentiation*, **2021**, 28, 2276-2295	12.7	9
30	FrxA is an S-nitrosoglutathione reductase enzyme that contributes to Helicobacter pylori pathogenicity. *FEBS Journal*, **2014**, 281, 4495-505	5.7	8

29	A peptide of a type I toxin-antitoxin system induces morphological transformation from spiral shape to coccoids. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 31398-31409	11.5	8
28	Uptake, recognition and responses to peptidoglycan in the mammalian host. *FEMS Microbiology Reviews*, **2021**, 45,	15.1	8
27	HupA, the main undecaprenyl pyrophosphate and phosphatidylglycerol phosphate phosphatase in Helicobacter pylori is essential for colonization of the stomach. *PLoS Pathogens*, **2019**, 15, e1007972	7.6	6
26	Draft Genome Sequence of Strain X47-2AL, a Feline Helicobacter pylori Isolate. *Genome Announcements*, **2013**, 1,		6
25	Bacterial sensing via neuronal Nod2 regulates appetite and body temperature.. *Science*, **2022**, 376, eabj3986	9.9	6
24	Nitrosative stress defences of the enterohepatic pathogenic bacterium Helicobacter pullorum. *Scientific Reports*, **2017**, 7, 9909	4.9	5
23	Peptidoglycan and Nod Receptor **2015**, 737-747		5
22	Peptidoglycan analysis reveals that synergistic deacetylase activity in vegetative impacts the host response. *Journal of Biological Chemistry*, **2020**, 295, 16785-16796	5.4	5
21	Anti-Leptospira immunoglobulin profiling in mice reveals strain specific IgG and persistent IgM responses associated with virulence and renal colonization. *PLoS Neglected Tropical Diseases*, **2021**, 15, e0008970	4.8	5
20	Mode of action of lipoprotein modification enzymes-Novel antibacterial targets. *Molecular Microbiology*, **2021**, 115, 356-365	4.1	4
19	Spatiotemporal analysis of mycolactone distribution in vivo reveals partial diffusion in the central nervous system. *PLoS Neglected Tropical Diseases*, **2020**, 14, e0008878	4.8	3
18	Peptidoglycan and Nod Receptor **2014**, 1-10		3
17	Leptospiral LPS escapes mouse TLR4 internalization and TRIF-associated antimicrobial responses through O antigen and associated lipoproteins		3
16	D-alanylation of Teichoic Acids in Bacilli impedes the immune sensing of peptidoglycan in Drosophila		3
15	Acute monoarthritis in young children: comparing the characteristics of patients with juvenile idiopathic arthritis versus septic and undifferentiated arthritis. *Scientific Reports*, **2021**, 11, 3422	4.9	3
14	Nod1-dependent proinflammatory responses to Helicobacter pylori infection in gastric epithelial cells. *Gastroenterology*, **2003**, 124, A43	13.3	2
13	Defective lytic transglycosylase disrupts cell morphogenesis by hindering cell wall de--acetylation in. *ELife*, **2020**, 9,	8.9	2
12	Ileal immune tonus is a prognosis marker of proximal colon cancer in mice and patients. *Cell Death and Differentiation*, **2021**, 28, 1532-1547	12.7	2

List of Publications

11	LpxT-Dependent Phosphorylation of Lipid A in Increases Resistance to Deoxycholate and Enhances Gut Colonization. *Frontiers in Microbiology*, **2021**, 12, 676596	5.7	1
10	PGFinder, a novel analysis pipeline for the consistent, reproducible, and high-resolution structural analysis of bacterial peptidoglycans. *ELife*, **2021**, 10,	8.9	1
9	NOD1 sensing of house dust mite-derived microbiota promotes allergic experimental asthma. *Journal of Allergy and Clinical Immunology*, **2021**, 148, 394-406	11.5	0
8	Study of the Operon Coding a Two-Component System and a Putative L,D-Carboxypeptidase in. *Frontiers in Microbiology*, **2020**, 11, 156	5.7	
7	Peptidoglycan maturation enzymes affect flagellar functionality in bacteria. *Molecular Microbiology*, **2013**, 88, 456-457	4.1	
6	NOD receptor recognition of peptidoglycan **2010**, 637-653		
5	Clivage sélectif de la liaison D-Ala-D-Lac : nouvelle stratégie pour combattre la résistance à la vancomycine. *Medecine/Sciences*, **2002**, 18, 9-12		
4	Leptospiral LPS escapes mouse TLR4 internalization and TRIF-associated antimicrobial responses through O antigen and associated lipoproteins **2020**, 16, e1008639		
3	Leptospiral LPS escapes mouse TLR4 internalization and TRIF-associated antimicrobial responses through O antigen and associated lipoproteins **2020**, 16, e1008639		
2	Leptospiral LPS escapes mouse TLR4 internalization and TRIF-associated antimicrobial responses through O antigen and associated lipoproteins **2020**, 16, e1008639		
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