

Michael Niederweis

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

129
papers

7,139
citations

47
h-index

82
g-index

141
ext. papers

8,260
ext. citations

7
avg, IF

5.9
L-index

#	Paper	IF	Citations
129	A periplasmic cinched protein is required for siderophore secretion and virulence of <i>Mycobacterium tuberculosis</i> . <i>Nature Communications</i> , 2022 , 13, 2255	17.4	1
128	Toxin secretion and trafficking by <i>Mycobacterium tuberculosis</i> . <i>Nature Communications</i> , 2021 , 12, 6592	17.4	2
127	Expression and purification of phage T7 ejection proteins for cryo-EM analysis. <i>STAR Protocols</i> , 2021 , 2, 100960	1.4	0
126	Stable polymer bilayers for protein channel recordings at high guanidinium chloride concentrations. <i>Biophysical Journal</i> , 2021 , 120, 1537-1541	2.9	4
125	Transporters Involved in the Biogenesis and Functionalization of the <i>Mycobacterium</i> Cell Envelope. <i>Chemical Reviews</i> , 2021 , 121, 5124-5157	68.1	14
124	Pore-forming Esx proteins mediate toxin secretion by <i>Mycobacterium tuberculosis</i> . <i>Nature Communications</i> , 2021 , 12, 394	17.4	5
123	Cryo-EM structure of the periplasmic tunnel of T7 DNA-ejectosome at 2.7Å resolution. <i>Molecular Cell</i> , 2021 , 81, 3145-3159.e7	17.6	4
122	A type VII secretion system in Group B <i>Streptococcus</i> mediates cytotoxicity and virulence. <i>PLoS Pathogens</i> , 2021 , 17, e1010121	7.6	3
121	Plasma membrane damage causes NLRP3 activation and pyroptosis during <i>Mycobacterium tuberculosis</i> infection. <i>Nature Communications</i> , 2020 , 11, 2270	17.4	54
120	Cryo-EM Structures and Regulation of Arabinofuranosyltransferase AftD from <i>Mycobacteria</i> . <i>Molecular Cell</i> , 2020 , 78, 683-699.e11	17.6	11
119	Cryo-EM structure of arabinosyltransferase EmbB from <i>Mycobacterium smegmatis</i> . <i>Nature Communications</i> , 2020 , 11, 3396	17.4	9
118	Comprehensive analysis of iron utilization by <i>Mycobacterium tuberculosis</i> . <i>PLoS Pathogens</i> , 2020 , 16, e1008337	7.6	27
117	Recognition of an Helical hairpin in P22 large terminase by a synthetic antibody fragment. <i>Acta Crystallographica Section D: Structural Biology</i> , 2020 , 76, 876-888	5.5	2
116	NAD hydrolysis by the tuberculosis necrotizing toxin induces lethal oxidative stress in macrophages. <i>Cellular Microbiology</i> , 2020 , 22, e13115	3.9	12
115	Photoactivatable Glycolipid Probes for Identifying Mycolate-Protein Interactions in Live <i>Mycobacteria</i> . <i>Journal of the American Chemical Society</i> , 2020 , 142, 7725-7731	16.4	21
114	Comprehensive analysis of iron utilization by <i>Mycobacterium tuberculosis</i> 2020 , 16, e1008337		
113	Comprehensive analysis of iron utilization by <i>Mycobacterium tuberculosis</i> 2020 , 16, e1008337		

112	Comprehensive analysis of iron utilization by Mycobacterium tuberculosis 2020 , 16, e1008337		
111	Comprehensive analysis of iron utilization by Mycobacterium tuberculosis 2020 , 16, e1008337		
110	Heme and hemoglobin utilization by Mycobacterium tuberculosis. <i>Nature Communications</i> , 2019 , 10, 4260	17.4	22
109	A Humanized Yeast Phenomic Model of Deoxycytidine Kinase to Predict Genetic Buffering of Nucleoside Analog Cytotoxicity. <i>Genes</i> , 2019 , 10,	4.2	1
108	The tuberculosis necrotizing toxin is an NAD and NADP glycohydrolase with distinct enzymatic properties. <i>Journal of Biological Chemistry</i> , 2019 , 294, 3024-3036	5.4	22
107	A Protein Complex from Human Milk Enhances the Activity of Antibiotics and Drugs against. <i>Antimicrobial Agents and Chemotherapy</i> , 2019 , 63,	5.9	10
106	NAD Depletion Triggers Macrophage Necroptosis, a Cell Death Pathway Exploited by Mycobacterium tuberculosis. <i>Cell Reports</i> , 2018 , 24, 429-440	10.6	70
105	PPE Surface Proteins Are Required for Heme Utilization by Mycobacterium tuberculosis. <i>MBio</i> , 2017 , 8,	7.8	39
104	Nutrient Uptake by Mycobacteria 2017 , 71-89		
103	Hetero-oligomeric MspA pores in Mycobacterium smegmatis. <i>FEMS Microbiology Letters</i> , 2016 , 363,	2.9	4
102	A Macrophage Infection Model to Predict Drug Efficacy Against Mycobacterium Tuberculosis. <i>Assay and Drug Development Technologies</i> , 2016 , 14, 345-54	2.1	12
101	Separable roles for Mycobacterium tuberculosis ESX-3 effectors in iron acquisition and virulence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E348-57	11.5	105
100	Protein phosphatase, Mg ²⁺ /Mn ²⁺ -dependent 1A controls the innate antiviral and antibacterial response of macrophages during HIV-1 and Mycobacterium tuberculosis infection. <i>Oncotarget</i> , 2016 , 7, 15394-409	3.3	17
99	Mycobacteria, metals, and the macrophage. <i>Immunological Reviews</i> , 2015 , 264, 249-63	11.3	114
98	The tuberculosis necrotizing toxin kills macrophages by hydrolyzing NAD. <i>Nature Structural and Molecular Biology</i> , 2015 , 22, 672-8	17.6	77
97	Surface hydrolysis of sphingomyelin by the outer membrane protein Rv0888 supports replication of Mycobacterium tuberculosis in macrophages. <i>Molecular Microbiology</i> , 2015 , 97, 881-97	4.1	47
96	Disulfiram and Copper Ions Kill Mycobacterium tuberculosis in a Synergistic Manner. <i>Antimicrobial Agents and Chemotherapy</i> , 2015 , 59, 4835-44	5.9	47
95	The Mycobacterium tuberculosis outer membrane channel protein CpnT confers susceptibility to toxic molecules. <i>Antimicrobial Agents and Chemotherapy</i> , 2015 , 59, 2328-36	5.9	27

94	An outer membrane channel protein of <i>Mycobacterium tuberculosis</i> with exotoxin activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 6750-5	11.5	79
93	Role of the Mce1 transporter in the lipid homeostasis of <i>Mycobacterium tuberculosis</i> . <i>Tuberculosis</i> , 2014 , 94, 170-7	2.6	69
92	Organ pathology in the absence of bacteria?. <i>Journal of Infectious Diseases</i> , 2014 , 209, 971	7	2
91	Self-poisoning of <i>Mycobacterium tuberculosis</i> by interrupting siderophore recycling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 1945-50	11.5	71
90	The progression of cell death affects the rejection of allogeneic tumors in immune-competent mice - implications for cancer therapy. <i>Frontiers in Immunology</i> , 2014 , 5, 560	8.4	17
89	<i>Mycobacterium tuberculosis</i> is resistant to streptolydigin. <i>Tuberculosis</i> , 2013 , 93, 401-4	2.6	2
88	Updating and curating metabolic pathways of TB. <i>Tuberculosis</i> , 2013 , 93, 47-59	2.6	22
87	Discovery of a siderophore export system essential for virulence of <i>Mycobacterium tuberculosis</i> . <i>PLoS Pathogens</i> , 2013 , 9, e1003120	7.6	148
86	Copper-boosting compounds: a novel concept for antimycobacterial drug discovery. <i>Antimicrobial Agents and Chemotherapy</i> , 2013 , 57, 1089-91	5.9	48
85	Porins increase copper susceptibility of <i>Mycobacterium tuberculosis</i> . <i>Journal of Bacteriology</i> , 2013 , 195, 5133-40	3.5	34
84	A multicopper oxidase is required for copper resistance in <i>Mycobacterium tuberculosis</i> . <i>Journal of Bacteriology</i> , 2013 , 195, 3724-33	3.5	61
83	Resistance mechanisms of <i>Mycobacterium tuberculosis</i> against phagosomal copper overload. <i>Tuberculosis</i> , 2012 , 92, 202-10	2.6	89
82	Cathepsin G and neutrophil elastase contribute to lung-protective immunity against mycobacterial infections in mice. <i>Journal of Immunology</i> , 2012 , 188, 4476-87	5.3	43
81	Molecular structure and peptidoglycan recognition of <i>Mycobacterium tuberculosis</i> ArfA (Rv0899). <i>Journal of Molecular Biology</i> , 2012 , 416, 208-20	6.5	12
80	MspA nanopores from subunit dimers. <i>PLoS ONE</i> , 2012 , 7, e38726	3.7	11
79	Reading DNA at single-nucleotide resolution with a mutant MspA nanopore and phi29 DNA polymerase. <i>Nature Biotechnology</i> , 2012 , 30, 349-53	44.5	609
78	Molecular dynamics study of MspA arginine mutants predicts slow DNA translocations and ion current blockades indicative of DNA sequence. <i>ACS Nano</i> , 2012 , 6, 6960-8	16.7	58
77	Ectoine biosynthesis in <i>Mycobacterium smegmatis</i> . <i>Applied and Environmental Microbiology</i> , 2012 , 78, 7483-6	4.8	29

76	Uptake of sulfate but not phosphate by Mycobacterium tuberculosis is slower than that for Mycobacterium smegmatis. <i>Journal of Bacteriology</i> , 2012 , 194, 956-64	3.5	24
75	Elucidation and chemical modulation of sulfolipid-1 biosynthesis in Mycobacterium tuberculosis. <i>Journal of Biological Chemistry</i> , 2012 , 287, 7990-8000	5.4	62
74	Expression of the ompATb operon accelerates ammonia secretion and adaptation of Mycobacterium tuberculosis to acidic environments. <i>Molecular Microbiology</i> , 2011 , 80, 900-18	4.1	37
73	Importance of porins for biocide efficacy against Mycobacterium smegmatis. <i>Applied and Environmental Microbiology</i> , 2011 , 77, 3068-73	4.8	19
72	Mycobacterium tuberculosis can utilize heme as an iron source. <i>Journal of Bacteriology</i> , 2011 , 193, 1767-70	3.9	66
71	Copper resistance is essential for virulence of Mycobacterium tuberculosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 1621-6	11.5	236
70	Nucleotide discrimination with DNA immobilized in the MspA nanopore. <i>PLoS ONE</i> , 2011 , 6, e25723	3.7	118
69	Rapid evaluation of the mycobactericidal efficacy of disinfectants in the quantitative carrier test EN 14563 by using fluorescent Mycobacterium terrae. <i>Applied and Environmental Microbiology</i> , 2010 , 76, 546-54	4.8	24
68	Role of porins in iron uptake by Mycobacterium smegmatis. <i>Journal of Bacteriology</i> , 2010 , 192, 6411-7	3.5	44
67	Hit-and-run stimulation: a novel concept to reactivate latent HIV-1 infection without cytokine gene induction. <i>Journal of Virology</i> , 2010 , 84, 8712-20	6.6	21
66	Mycobacterium tuberculosis Rv0899 adopts a mixed alpha/beta-structure and does not form a transmembrane beta-barrel. <i>Biochemistry</i> , 2010 , 49, 2768-77	3.2	25
65	Taking phage integration to the next level as a genetic tool for mycobacteria. <i>Gene</i> , 2010 , 468, 8-19	3.8	45
64	Mycobacterial outer membranes: in search of proteins. <i>Trends in Microbiology</i> , 2010 , 18, 109-16	12.4	164
63	Nanopore DNA sequencing with MspA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 16060-5	11.5	384
62	Antimycobacterial activity in vitro of pigments isolated from Antarctic bacteria. <i>Antonie Van Leeuwenhoek</i> , 2010 , 98, 531-40	2.1	47
61	Role of porins in the susceptibility of Mycobacterium smegmatis and Mycobacterium chelonae to aldehyde-based disinfectants and drugs. <i>Antimicrobial Agents and Chemotherapy</i> , 2009 , 53, 4015-8	5.9	48
60	Functions of the periplasmic loop of the porin MspA from Mycobacterium smegmatis. <i>Journal of Biological Chemistry</i> , 2009 , 284, 10223-31	5.4	6
59	Decreased outer membrane permeability protects mycobacteria from killing by ubiquitin-derived peptides. <i>Molecular Microbiology</i> , 2009 , 73, 844-57	4.1	55

58	Porins facilitate nitric oxide-mediated killing of mycobacteria. <i>Microbes and Infection</i> , 2009 , 11, 868-75	9.3	18
57	Direct observation of gold nanoparticle assemblies with the porin MspA on mica. <i>ACS Nano</i> , 2009 , 3, 462-6	16.7	10
56	Poly-N-Isopropylacrylamide/acrylic Acid Copolymers for the Generation of Nanostructures at Mica Surfaces and as Hydrophobic Host Systems for the Porin MspA from Mycobacterium smegmatis. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 16485-16494	3.8	3
55	Physiology of mycobacteria. <i>Advances in Microbial Physiology</i> , 2009 , 55, 81-182, 318-9	4.4	100
54	Construction of unmarked deletion mutants in mycobacteria. <i>Methods in Molecular Biology</i> , 2009 , 465, 279-95	1.4	10
53	Identification of outer membrane proteins of Mycobacterium tuberculosis. <i>Tuberculosis</i> , 2008 , 88, 526-44.6	4.6	129
52	Role of porins for uptake of antibiotics by Mycobacterium smegmatis. <i>Antimicrobial Agents and Chemotherapy</i> , 2008 , 52, 3127-34	5.9	91
51	Single-molecule DNA detection with an engineered MspA protein nanopore. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 20647-52	11.5	326
50	Disclosure of the mycobacterial outer membrane: cryo-electron tomography and vitreous sections reveal the lipid bilayer structure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 3963-7	11.5	436
49	Nutrient acquisition by mycobacteria. <i>Microbiology (United Kingdom)</i> , 2008 , 154, 679-692	2.9	104
48	Identification of a novel multidrug efflux pump of Mycobacterium tuberculosis. <i>Antimicrobial Agents and Chemotherapy</i> , 2008 , 52, 2503-11	5.9	112
47	Rv1698 of Mycobacterium tuberculosis represents a new class of channel-forming outer membrane proteins. <i>Journal of Biological Chemistry</i> , 2008 , 283, 17827-37	5.4	57
46	Characterization of the Outer Membrane of M. Tuberculosis with Atomic Force Microscopy Methods. <i>ACS Symposium Series</i> , 2008 , 199-215	0.4	1
45	Experimental Strategies Toward the Use of the Porin MspA as a Nanotemplate and for Biosensors 2008 , 19-39		
44	Characterization of nanostructured surfaces generated by reconstitution of the porin MspA from Mycobacterium smegmatis. <i>Small</i> , 2007 , 3, 1084-97	11	18
43	Identification of two Mycobacterium smegmatis lipoproteins exported by a SecA2-dependent pathway. <i>Journal of Bacteriology</i> , 2007 , 189, 5090-100	3.5	57
42	Porins are required for uptake of phosphates by Mycobacterium smegmatis. <i>Journal of Bacteriology</i> , 2007 , 189, 2435-42	3.5	35
41	A genomic view of sugar transport in Mycobacterium smegmatis and Mycobacterium tuberculosis. <i>Journal of Bacteriology</i> , 2007 , 189, 5903-15	3.5	73

40	Expression of the major porin gene mspA is regulated in Mycobacterium smegmatis. <i>Journal of Bacteriology</i> , 2007 , 189, 958-67	3.5	16
39	Functional expression of the Flp recombinase in Mycobacterium bovis BCG. <i>Gene</i> , 2007 , 399, 112-9	3.8	25
38	Nanoarray-Surfaces by Reconstitution of the Porin MspA into Stabilized Long-Chain-Lipid-Monolayers at a Gold-Surface. <i>Electroanalysis</i> , 2006 , 18, 1859-1870	3	7
37	Topology of the porin MspA in the outer membrane of Mycobacterium smegmatis. <i>Journal of Biological Chemistry</i> , 2006 , 281, 5908-15	5.4	38
36	MspA provides the main hydrophilic pathway through the cell wall of Mycobacterium smegmatis. <i>Molecular Microbiology</i> , 2005 , 57, 1509-1509	4.1	2
35	The growth rate of Mycobacterium smegmatis depends on sufficient porin-mediated influx of nutrients. <i>Molecular Microbiology</i> , 2005 , 58, 714-30	4.1	89
34	Porins limit the intracellular persistence of Mycobacterium smegmatis. <i>Microbiology (United Kingdom)</i> , 2005 , 151, 2403-2410	2.9	30
33	The MspA porin promotes growth and increases antibiotic susceptibility of both Mycobacterium bovis BCG and Mycobacterium tuberculosis. <i>Microbiology (United Kingdom)</i> , 2004 , 150, 853-864	2.9	89
32	Multidrug resistance of a porin deletion mutant of Mycobacterium smegmatis. <i>Antimicrobial Agents and Chemotherapy</i> , 2004 , 48, 4163-70	5.9	92
31	A recombinant bispecific single-chain Fv antibody against HLA class II and FcγRIII (CD16) triggers effective lysis of lymphoma cells. <i>British Journal of Haematology</i> , 2004 , 125, 167-79	4.5	44
30	Efficient eukaryotic expression of fluorescent scFv fusion proteins directed against CD antigens for FACS applications. <i>Journal of Immunological Methods</i> , 2004 , 285, 265-80	2.5	37
29	DNA-free RNA preparations from mycobacteria. <i>BMC Microbiology</i> , 2004 , 4, 45	4.5	3
28	Reconstitution of a Porin from Mycobacterium smegmatis at HOPG covered with hydrophobic host layers. <i>Surface and Interface Analysis</i> , 2004 , 36, 127-134	1.5	8
27	The structure of a mycobacterial outer-membrane channel. <i>Science</i> , 2004 , 303, 1189-92	33.3	275
26	Consecutive gene deletions in Mycobacterium smegmatis using the yeast FLP recombinase. <i>Gene</i> , 2004 , 343, 181-90	3.8	35
25	Identification and semi-quantitative analysis of Mycobacterium tuberculosis H37Rv ftsZ gene-specific promoter activity-containing regions. <i>Research in Microbiology</i> , 2004 , 155, 817-26	4	9
24	The phosphotransferase system of Streptomyces coelicolor is biased for N-acetylglucosamine metabolism. <i>Journal of Bacteriology</i> , 2003 , 185, 7019-23	3.5	63
23	Purification of porins from Mycobacterium smegmatis. <i>Methods in Molecular Biology</i> , 2003 , 228, 139-50	1.4	12

22	Mycobacterial porins--new channel proteins in unique outer membranes. <i>Molecular Microbiology</i> , 2003 , 49, 1167-77	4.1	150
21	High-level expression of the mycobacterial porin MspA in Escherichia coli and purification of the recombinant protein. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2003 , 790, 337-48	3.2	14
20	The core of the tetrameric mycobacterial porin MspA is an extremely stable beta-sheet domain. <i>Journal of Biological Chemistry</i> , 2003 , 278, 8678-85	5.4	45
19	A tetrameric porin limits the cell wall permeability of Mycobacterium smegmatis. <i>Journal of Biological Chemistry</i> , 2002 , 277, 37567-72	5.4	60
18	Nanostructuring by Deposition of Protein Channels Formed on Carbon Surfaces. <i>Nano Letters</i> , 2002 , 2, 1263-1268	11.5	6
17	MspA provides the main hydrophilic pathway through the cell wall of Mycobacterium smegmatis. <i>Molecular Microbiology</i> , 2001 , 40, 451-64	4.1	124
16	Characterization of four members of a multigene family encoding outer membrane proteins of Helicobacter pylori and their potential for vaccination. <i>Microbes and Infection</i> , 2001 , 3, 171-9	9.3	16
15	Energy transfer between fluorescent proteins using a co-expression system in Mycobacterium smegmatis. <i>Gene</i> , 2001 , 278, 115-24	3.8	54
14	Nanostructuring of Carbon Surfaces by Deposition of a Channel-Forming Protein and Subsequent Polymerization of Methyl Methacrylate Prepolymers. <i>Nano Letters</i> , 2001 , 1, 169-174	11.5	10
13	Selective extraction and purification of a mycobacterial outer membrane protein. <i>Analytical Biochemistry</i> , 2000 , 285, 113-20	3.1	43
12	Permeation of tetracyclines through membranes of liposomes and Escherichia coli. <i>FEBS Journal</i> , 2000 , 267, 527-34		41
11	Quantitative analysis of gene expression with an improved green fluorescent protein. p6. <i>FEBS Journal</i> , 2000 , 267, 1565-70		160
10	The FtsH protein accumulates at the septum of Bacillus subtilis during cell division and sporulation. <i>Journal of Bacteriology</i> , 2000 , 182, 3870-3	3.5	63
9	Cloning of the mspA gene encoding a porin from Mycobacterium smegmatis. <i>Molecular Microbiology</i> , 1999 , 33, 933-45	4.1	126
8	Porins in the cell wall of Mycobacterium tuberculosis. <i>Journal of Bacteriology</i> , 1999 , 181, 6543-6	3.5	52
7	Biochemical and biophysical characterization of the cell wall porin of Corynebacterium glutamicum: the channel is formed by a low molecular mass polypeptide. <i>Biochemistry</i> , 1998 , 37, 15024-32	3.2	65
6	Oligo[d(C).(G)] runs exhibit a helical repeat of 11.1 bp in solution and cause slight DNA curvature when properly phased. <i>Nucleic Acids Research</i> , 1994 , 22, 1562-6	20.1	14
5	Synthesis of 8-Bromo- and 8-Azido-2'-deoxyadenosine-5'-O-(1-thiotriphosphate). <i>Nucleosides & Nucleotides</i> , 1993 , 12, 757-771		5

4	Electrophoretic analysis of protein-induced DNA bending and twist changes. <i>Electrophoresis</i> , 1993 , 14, 693-8	3.6	7
3	An accurate method for determining the helical repeat of DNA in solution reveals differences to the crystal structures of two B-DNA decamers. <i>Journal of Molecular Biology</i> , 1992 , 228, 322-6	6.5	8
2	Mycobacterial Porins 153-165		3
1	Cryo-EM Structures and Regulation of Arabinofuranosyltransferase AftD from Mycobacteria		1