Nathalie Juge

List of Publications by Year
in descending order

117 papers	10,954 citations	34105 52 h-index	31849 101 g-index
119 all docs	119 docs citations	119 times ranked	13644 citing authors

#	Article	IF	Citations
1	Introduction to the human gut microbiota. Biochemical Journal, 2017, 474, 1823-1836.	3.7	1,988
2	The composition of the gut microbiota throughout life, with an emphasis on early life. Microbial Ecology in Health and Disease, 2015, 26, 26050.	3.5	766
3	Molecular basis for chemoprevention by sulforaphane: a comprehensive review. Cellular and Molecular Life Sciences, 2007, 64, 1105-1127.	5.4	619
4	Mucin glycan foraging in the human gut microbiome. Frontiers in Genetics, 2015, 6, 81.	2.3	612
5	Deglycosylation by small intestinal epithelial cell ?-glucosidases is a critical step in the absorption and metabolism of dietary flavonoid glycosides in humans. European Journal of Nutrition, 2003, 42, 29-42.	3.9	579
6	The Evolution of Host Specialization in the Vertebrate Gut Symbiont Lactobacillus reuteri. PLoS Genetics, 2011, 7, e1001314.	3.5	270
7	Utilisation of Mucin Glycans by the Human Gut Symbiont Ruminococcus gnavus Is Strain-Dependent. PLoS ONE, 2013, 8, e76341.	2.5	250
8	Plant protein inhibitors of cell wall degrading enzymes. Trends in Plant Science, 2006, 11, 359-367.	8.8	229
9	Microbial adhesins to gastrointestinal mucus. Trends in Microbiology, 2012, 20, 30-39.	7.7	219
10	Hydrolytic fate of deoxynivalenol-3-glucoside during digestion. Toxicology Letters, 2011, 206, 264-267.	0.8	216
11	Molecular Characterization of Host-Specific Biofilm Formation in a Vertebrate Gut Symbiont. PLoS Genetics, 2013, 9, e1004057.	3.5	162
12	Strain-specific diversity of mucus-binding proteins in the adhesion and aggregation properties of Lactobacillus reuteri. Microbiology (United Kingdom), 2010, 156, 3368-3378.	1.8	157
13	Unique Organization of Extracellular Amylases into Amylosomes in the Resistant Starch-Utilizing Human Colonic <i>Firmicutes</i> Bacterium Ruminococcus bromii. MBio, 2015, 6, e01058-15.	4.1	145
14	Discovery of intramolecular trans-sialidases in human gut microbiota suggests novel mechanisms of mucosal adaptation. Nature Communications, 2015, 6, 7624.	12.8	143
15	The mucin-degradation strategy of<i>Ruminococcus gnavus</i>: The importance of intramolecular<i>trans</i>-sialidases. Gut Microbes, 2016, 7, 302-312.	9.8	127
16	Mechanistic Insights Into the Cross-Feeding of Ruminococcus gnavus and Ruminococcus bromii on Host and Dietary Carbohydrates. Frontiers in Microbiology, 2018, 9, 2558.	3.5	125
17	Sialidases from gut bacteria: a mini-review. Biochemical Society Transactions, 2016, 44, 166-175.	3.4	121
18	Experimental models to study intestinal microbesâ€“mucus interactions in health and disease. FEMS Microbiology Reviews, 2019, 43, 457-489.	8.6	114

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19	The Dual Nature of the Wheat Xylanase Protein Inhibitor XIP-I. Journal of Biological Chemistry, 2004, 279, 36029-36037.	3.4	111
20	The Crystal Structure of Feruloyl Esterase A from Aspergillus niger Suggests Evolutive Functional Convergence in Feruloyl Esterase Family. Journal of Molecular Biology, 2004, 338, 495-506.	4.2	110
21	Understanding the Structural Basis for Substrate and Inhibitor Recognition in Eukaryotic GH11 Xylanases. Journal of Molecular Biology, 2008, 375, 1293-1305.	4.2	108
22	Purification and biochemical characterization of a novel Î±-amylase from Bacillus licheniformis NH1. Process Biochemistry, 2008, 43, 499-510.	3.7	107
23	Interactions defining the specificity between fungal xylanases and the xylanase-inhibiting protein XIP-I from wheat. Biochemical Journal, 2002, 365, 773-781.	3.7	105
24	Structural basis for adaptation of lactobacilli to gastrointestinal mucus. Environmental Microbiology, 2014, 16, 888-903.	3.8	102
25	XIP-I, a xylanase inhibitor protein from wheat: a novel protein function. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1696, 203-211.	2.3	91
26	Effects of Human Milk Oligosaccharides on the Adult Gut Microbiota and Barrier Function. Nutrients, 2020, 12, 2808.	4.1	86
27	Structural insights into bacterial recognition of intestinal mucins. Current Opinion in Structural Biology, 2014, 28, 23-31.	5.7	83
28	Elucidation of a sialic acid metabolism pathway in mucus-foraging Ruminococcus gnavus unravels mechanisms of bacterial adaptation to the gut. Nature Microbiology, 2019, 4, 2393-2404.	13.3	83
29	Overexpression, Purification, and Characterization of Recombinant Barley Î±-Amylases 1 and 2 Secreted by the Methylotrophic YeastPichia pastoris. Protein Expression and Purification, 1996, 8, 204-214.	1.3	79
30	Both binding sites of the starch-binding domain of Aspergillus niger glucoamylase are essential for inducing a conformational change in amylose 1 1Edited by R. Huber. Journal of Molecular Biology, 2001, 313, 1149-1159.	4.2	79
31	Sporulation capability and amylosome conservation among diverse human colonic and rumen isolates of the keystone starchâ€degrader <i>Ruminococcus bromii</i>. Environmental Microbiology, 2018, 20, 324-336.	3.8	79
32	Comparative Characterization of Complete and Truncated Forms of Lactobacillus amylovorus Î±-Amylase and Role of the C-Terminal Direct Repeats in Raw-Starch Binding. Applied and Environmental Microbiology, 2000, 66, 3350-3356.	3.1	78
33	High-Level Production of Recombinant Fungal Endo-Î²-1,4-xylanase in the Methylotrophic Yeast Pichia pastoris. Protein Expression and Purification, 2000, 19, 179-187.	1.3	75
34	Potential role of glycosidase inhibitors in industrial biotechnological applications. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1696, 275-287.	2.3	74
35	Emergence of a subfamily of xylanase inhibitors within glycoside hydrolase family 18. FEBS Journal, 2005, 272, 1745-1755.	4.7	74
36	Unravelling the specificity and mechanism of sialic acid recognition by the gut symbiont Ruminococcus gnavus. Nature Communications, 2017, 8, 2196.	12.8	74

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37	Occurrence of proteinaceous endoxylanase inhibitors in cereals. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1696, 193-202.	2.3	73
38	Factors affecting xylanase functionality in the degradation of arabinoxylans. Biotechnology Letters, 2008, 30, 1139-1150.	2.2	72
39	High-level production of recombinantAspergillus nigercinnamoyl esterase (FAEA) in the methylotrophic yeastPichia pastoris. FEMS Yeast Research, 2001, 1, 127-132.	2.3	71
40	Differential Epitope Mapping by STD NMR Spectroscopy To Reveal the Nature of Proteinâ€“Ligand Contacts. Angewandte Chemie - International Edition, 2017, 56, 15289-15293.	13.8	71
41	Functional expression of human liver cytosolic Î²-glucosidase in Pichia pastoris. FEBS Journal, 2002, 269, 249-258.	0.2	70
42	Substrate (aglycone) specificity of human cytosolic beta-glucosidase. Biochemical Journal, 2003, 373, 41-48.	3.7	70
43	Crystal Structure of a Mucus-binding Protein Repeat Reveals an Unexpected Functional Immunoglobulin Binding Activity. Journal of Biological Chemistry, 2009, 284, 32444-32453.	3.4	70
44	Lactobacillus reuteri Inhibition of Enteropathogenic Escherichia coli Adherence to Human Intestinal Epithelium. Frontiers in Microbiology, 2016, 7, 244.	3.5	69
45	Specific Characterization of Substrate and Inhibitor Binding Sites of a Glycosyl Hydrolase Family 11 Xylanase fromAspergillus niger. Journal of Biological Chemistry, 2002, 277, 44035-44043.	3.4	67
46	Structural analysis of xylanase inhibitor protein I (XIP-I), a proteinaceous xylanase inhibitor from wheat (Triticum aestivum, var. Soisson). Biochemical Journal, 2003, 372, 399-405.	3.7	65
47	Potential physiological role of plant glycosidase inhibitors. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1696, 265-274.	2.3	64
48	The pan-genome of Lactobacillus reuteri strains originating from the pig gastrointestinal tract. BMC Genomics, 2015, 16, 1023.	2.8	64
49	Specificity of feruloyl esterases for water-extractable and water-unextractable feruloylated polysaccharides: influence of xylanase. Journal of Cereal Science, 2003, 38, 281-288.	3.7	63
50	Surfactant-mediated solubilisation of amylose and visualisation by atomic force microscopy. Carbohydrate Polymers, 2003, 51, 177-182.	10.2	61
51	Probing the determinants of substrate specificity of a feruloyl esterase, AnFaeA, from Aspergillus niger. FEBS Journal, 2005, 272, 4362-4371.	4.7	59
52	The StcE metalloprotease of enterohaemorrhagic<i>Escherichia coli</i>reduces the inner mucus layer and promotes adherence to human colonic epithelium<i>ex vivo</i>. Cellular Microbiology, 2017, 19, e12717.	2.1	58
53	Formate crossâ€feeding and cooperative metabolic interactions revealed by transcriptomics in coâ€cultures of acetogenic and amylolytic human colonic bacteria. Environmental Microbiology, 2019, 21, 259-271.	3.8	58
54	Mucosal glycan degradation of the host by the gut microbiota. Glycobiology, 2021, 31, 691-696.	2.5	53

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55	Fucosidases from the human gut symbiont Ruminococcus gnavus. Cellular and Molecular Life Sciences, 2021, 78, 675-693.	5.4	52
56	The Crystal Structure of Human Cytosolic Î²-Glucosidase Unravels the Substrate Aglycone Specificity of a Family 1 Glycoside Hydrolase. Journal of Molecular Biology, 2007, 370, 964-975.	4.2	51
57	Substrate and product hydrolysis specificity in family 11 glycoside hydrolases: an analysis of Penicillium funiculosum and Penicillium griseofulvum xylanases. Applied Microbiology and Biotechnology, 2007, 74, 1001-1010.	3.6	47
58	Domain B protruding at the third beta strand of the alpha/beta barrel in barley alpha-amylase confers distinct isozyme-specific properties. FEBS Journal, 1994, 221, 277-284.	0.2	43
59	A family 11 xylanase from the pathogen Botrytis cinerea is inhibited by plant endoxylanase inhibitors XIP-I and TAXI-I. Biochemical and Biophysical Research Communications, 2005, 337, 160-166.	2.1	43
60	Functional Analysis of Family GH36 Î±-Galactosidases from Ruminococcus gnavus E1: Insights into the Metabolism of a Plant Oligosaccharide by a Human Gut Symbiont. Applied and Environmental Microbiology, 2012, 78, 7720-7732.	3.1	43
61	Lactobacillus reuteri Surface Mucus Adhesins Upregulate Inflammatory Responses Through Interactions With Innate C-Type Lectin Receptors. Frontiers in Microbiology, 2017, 8, 321.	3.5	43
62	Functional identification of the cDNA coding for a wheat endo-1,4-Î²-D-xylanase inhibitor1. FEBS Letters, 2002, 519, 66-70.	2.8	42
63	Involvement of Individual Subsites and Secondary Substrate Binding Sites in Multiple Attack on Amylose by Barley Î±-Amylase. Biochemistry, 2005, 44, 1824-1832.	2.5	42
64	The activity of barley Î±-amylase on starch granules is enhanced by fusion of a starch binding domain from Aspergillus niger glucoamylase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 275-284.	2.3	42
65	Proteinaceous inhibitors of carbohydrate-active enzymes in cereals: implication in agriculture, cereal processing and nutrition. Journal of the Science of Food and Agriculture, 2006, 86, 1573-1586.	3.5	41
66	Use of Atomic Force Microscopy to Study the Multi-Modular Interaction of Bacterial Adhesins to Mucins. International Journal of Molecular Sciences, 2016, 17, 1854.	4.1	39
67	Isozyme hybrids within the protruding third loop domain of the barley Î±-amylase (Î²/Î±)8-barrel implication for BASI sensitivity and substrate affinity. FEBS Letters, 1995, 363, 299-303.	2.8	37
68	Specific inhibition of barley Î±-amylaseâ€ƒ2 by barley Î±-amylase/subtilisin inhibitor depends on charge interactions and can be conferred to isozymeâ€ƒ1 by mutation. FEBS Journal, 2000, 267, 1019-1029.	0.2	37
69	How Sweet Are Our Gut Beneficial Bacteria? A Focus on Protein Glycosylation in Lactobacillus. International Journal of Molecular Sciences, 2018, 19, 136.	4.1	37
70	Variation in the levels of the different xylanase inhibitors in grain and flour of 20 French wheat cultivars. Journal of Cereal Science, 2005, 41, 375-379.	3.7	35
71	Structural basis for the role of serine-rich repeat proteins from <i>Lactobacillus reuteri</i> in gut microbeâ€“host interactions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E2706-E2715.	7.1	35
72	Molecular determinants of substrate and inhibitor specificities of the Penicillium griseofulvum family 11 xylanases. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2009, 1794, 438-445.	2.3	32

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73	Cross-inhibitory activity of cereal protein inhibitors against Î±-amylases and xylanases. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2003, 1650, 136-144.	2.3	31
74	Secretion, purification, and characterisation of barley Î±-amylase produced by heterologous gene expression in Aspergillus niger. Applied Microbiology and Biotechnology, 1998, 49, 385-392.	3.6	30
75	Structural and molecular insights into novel surfaceâ€exposed mucus adhesins from <scp><i>L</i></scp><i>actobacillus reuteri</i> human strains. Molecular Microbiology, 2014, 92, 543-556.	2.5	29
76	Î³Î´ T-cell-deficient mice show alterations in mucin expression, glycosylation, and goblet cells but maintain an intact mucus layer. American Journal of Physiology - Renal Physiology, 2014, 306, G582-G593.	3.4	27
77	The inhibition specificity of recombinant Penicillium funiculosum xylanase B towards wheat proteinaceous inhibitors. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1701, 121-128.	2.3	26
78	Mining the â€œglycocodeâ€â€”exploring the spatial distribution of glycans in gastrointestinal mucin using force spectroscopy. FASEB Journal, 2013, 27, 2342-2354.	0.5	26
79	Uncovering a novel molecular mechanism for scavenging sialic acids in bacteria. Journal of Biological Chemistry, 2020, 295, 13724-13736.	3.4	26
80	Molecular cloning and primary structure analysis of porcine pancreatic Î±-amylase. BBA - Proteins and Proteomics, 1999, 1430, 281-289.	2.1	24
81	Comparison of barley malt Î±-amylase isozymes 1 and 2: construction of cDNA hybrids by in vivo recombination and their expression in yeast. Gene, 1993, 130, 159-166.	2.2	23
82	Behaviour of family 10 and 11 xylanases towards arabinoxylans with varying structure. Journal of the Science of Food and Agriculture, 2006, 86, 1618-1622.	3.5	22
83	Molecular basis for intestinal mucin recognition by galectinâ€3 and Câ€type lectins. FASEB Journal, 2018, 32, 3301-3320.	0.5	21
84	Functional importance of Asp37 from a family 11 xylanase in the binding to two proteinaceous xylanase inhibitors from wheat. FEMS Microbiology Letters, 2004, 239, 9-15.	1.8	19
85	Genome Sequence of the Vertebrate Gut Symbiont Lactobacillus reuteri ATCC 53608. Journal of Bacteriology, 2011, 193, 4015-4016.	2.2	18
86	The Immunomodulatory Properties of Î²-2,6 Fructans: A Comprehensive Review. Nutrients, 2021, 13, 1309.	4.1	18
87	The Effects of Human Milk Oligosaccharides on Gut Microbiota, Metabolite Profiles and Host Mucosal Response in Patients with Irritable Bowel Syndrome. Nutrients, 2021, 13, 3836.	4.1	17
88	Differential Epitope Mapping by STD NMR Spectroscopy To Reveal the Nature of Proteinâ€“Ligand Contacts. Angewandte Chemie, 2017, 129, 15491-15495.	2.0	16
89	Serine-rich repeat protein adhesins from<i>Lactobacillus reuteri</i>display strain specific glycosylation profiles. Glycobiology, 2019, 29, 45-58.	2.5	15
90	Serine-rich repeat proteins from gut microbes. Gut Microbes, 2020, 11, 102-117.	9.8	15

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91	Deriving Ligand Orientation in Weak Proteinâ€“Ligand Complexes by DEEPâ€STD NMR Spectroscopy in the Absence of Protein Chemicalâ€Shift Assignment. ChemBioChem, 2019, 20, 340-344.	2.6	14
92	Structureâ€based mutagenesis of <i>Penicillium griseofulvum</i> xylanase using computational design. Proteins: Structure, Function and Bioinformatics, 2008, 72, 1298-1307.	2.6	13
93	The role of the mucin-glycan foraging <i>Ruminococcus gnavus</i> in the communication between the gut and the brain. Gut Microbes, 2022, 14, 2073784.	9.8	13
94	Multiple evolutionary origins reflect the importance of sialic acid transporters in the colonization potential of bacterial pathogens and commensals. Microbial Genomics, 2021, 7, .	2.0	12
95	Proteinaceous Xylanase Inhibitors: Structure, Function and Evolution. Current Enzyme Inhibition, 2006, 2, 29-35.	0.4	11
96	Mucinâ€“lectin interactions assessed by flow cytometry. Carbohydrate Research, 2010, 345, 1486-1491.	2.3	10
97	Interlaboratory evaluation of plasma N-glycan antennary fucosylation as a clinical biomarker for HNF1A-MODY using liquid chromatography methods. Glycoconjugate Journal, 2021, 38, 375-386.	2.7	10
98	Siglec-7 Mediates Immunomodulation by Colorectal Cancer-Associated Fusobacterium nucleatum ssp. animalis. Frontiers in Immunology, 2021, 12, 744184.	4.8	10
99	The human gut symbiont Ruminococcus gnavus shows specificity to blood group A antigen during mucin glycan foraging: Implication for niche colonisation in the gastrointestinal tract. PLoS Biology, 2021, 19, e3001498.	5.6	10
100	Functional characterization of Penicillium occitanis Pol6 and Penicillium funiculosum GH11 xylanases. Protein Expression and Purification, 2013, 90, 195-201.	1.3	9
101	Structural properties of porcine intestine acylpeptide hydrolase. The Protein Journal, 2003, 22, 183-191.	1.1	8
102	Cloning, sequencing and functional expression of a cDNA encoding porcine pancreatic preprocarboxypeptidase A1. FEBS Journal, 1999, 259, 719-726.	0.2	8
103	Mice deficient in intestinal Î³Î´ intraepithelial lymphocytes display an altered intestinal O-glycan profile compared with wild-type littermates. Glycobiology, 2015, 25, 42-54.	2.5	7
104	Membrane-enclosed multienzyme (MEME) synthesis of 2,7-anhydro-sialic acid derivatives. Carbohydrate Research, 2017, 451, 110-117.	2.3	7
105	Structure of the Oâ€Antigen and the Lipidâ€…A from the Lipopolysaccharide of <i>Fusobacterium nucleatum</i> ATCC 51191. ChemBioChem, 2021, 22, 1252-1260.	2.6	7
106	Biochemical Basis of Xylooligosaccharide Utilisation by Gut Bacteria. International Journal of Molecular Sciences, 2022, 23, 2992.	4.1	7
107	Isolation and characterisation of a xylanase inhibitor Xip-II gene from durum wheat. Journal of Cereal Science, 2009, 50, 324-331.	3.7	6
108	Development of a novel human intestinal model to elucidate the effect of anaerobic commensals on <i>Escherichia coli</i> infection. DMM Disease Models and Mechanisms, 2022, 15, .	2.4	5

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109	Ascertaining the biochemical function of an essential pectin methylesterase in the gut microbe Bacteroides thetaiotaomicron. Journal of Biological Chemistry, 2020, 295, 18625-18637.	3.4	4
110	Plant proteinaceous inhibitors of carbohydrate-active enzymes. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2004, 1696, 141.	2.3	3
111	Quantification of xylanase inhibitors by immunodetection: the way forward?. Journal of the Science of Food and Agriculture, 2006, 86, 1737-1740.	3.5	3
112	High-level production of recombinant Aspergillus niger cinnamoyl esterase (FAEA) in the methylotrophic yeast Pichia pastoris. FEMS Yeast Research, 2001, 1, 127-132.	2.3	3
113	Development of an exoglycosidase plate-based assay for detecting Î±1-3,4 fucosylation biomarker in individuals with HNF1A-MODY. Glycobiology, 2022, 32, 230-238.	2.5	3
114	Interactions of barley Î±-amylase isozymes with Ca2â€Š+â€Š, substrates and proteinaceous inhibitors. Biocatalysis and Biotransformation, 2006, 24, 83-93.	2.0	1
115	Enzymes in grain processing. Journal of Cereal Science, 2009, 50, 305.	3.7	0
116	Glycobiology of Hostâ€Microbe Interactions in the Gut. FASEB Journal, 2019, 33, 216.4.	0.5	0
117	Glycans and the Gut Microbiota. , 2022, , .		0