

Pedro Garca

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112
papers

3,970
citations

35
h-index

59
g-index

112
ext. papers

4,411
ext. citations

5.2
avg. IF

4.95
L-index

#	Paper	IF	Citations
112	Taking aim on bacterial pathogens: from phage therapy to enzybiotics. <i>Current Opinion in Microbiology</i> , 2007 , 10, 461-72	7.9	175
111	Nucleotide sequence and expression of the pneumococcal autolysin gene from its own promoter in <i>Escherichia coli</i> . <i>Gene</i> , 1986 , 43, 265-72	3.8	165
110	Modular organization of the lytic enzymes of <i>Streptococcus pneumoniae</i> and its bacteriophages. <i>Gene</i> , 1990 , 86, 81-8	3.8	159
109	Molecular evolution of lytic enzymes of <i>Streptococcus pneumoniae</i> and its bacteriophages. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1988 , 85, 914-8	11.5	151
108	Phage lytic enzymes as therapy for antibiotic-resistant <i>Streptococcus pneumoniae</i> infection in a murine sepsis model. <i>Journal of Antimicrobial Chemotherapy</i> , 2003 , 52, 967-73	5.1	148
107	The <i>recA</i> gene of <i>Streptococcus pneumoniae</i> is part of a competence-induced operon and controls lysogenic induction. <i>Molecular Microbiology</i> , 1995 , 15, 367-79	4.1	147
106	Structural basis for selective recognition of pneumococcal cell wall by modular endolysin from phage Cp-1. <i>Structure</i> , 2003 , 11, 1239-49	5.2	135
105	LytB, a novel pneumococcal murein hydrolase essential for cell separation. <i>Molecular Microbiology</i> , 1999 , 31, 1275-81	4.1	126
104	Searching for autolysin functions. Characterization of a pneumococcal mutant deleted in the <i>lytA</i> gene. <i>FEBS Journal</i> , 1986 , 158, 289-93		115
103	Biochemical Changes in Phenolic Compounds during Spanish-Style Green Olive Processing. <i>Journal of Agricultural and Food Chemistry</i> , 1995 , 43, 2702-2706	5.7	111
102	The molecular characterization of the first autolytic lysozyme of <i>Streptococcus pneumoniae</i> reveals evolutionary mobile domains. <i>Molecular Microbiology</i> , 1999 , 33, 128-38	4.1	109
101	The pneumococcal cell wall degrading enzymes: a modular design to create new lysins?. <i>Microbial Drug Resistance</i> , 1997 , 3, 199-211	2.9	105
100	Purification and polar localization of pneumococcal LytB, a putative endo-beta-N-acetylglucosaminidase: the chain-dispersing murein hydrolase. <i>Journal of Bacteriology</i> , 2002 , 184, 4988-5000	3.5	97
99	In vivo immobilization of fusion proteins on bioplastics by the novel tag BioF. <i>Applied and Environmental Microbiology</i> , 2004 , 70, 3205-12	4.8	82
98	The lytic enzyme of the pneumococcal phage Dp-1: a chimeric lysin of intergeneric origin. <i>Molecular Microbiology</i> , 1997 , 25, 717-25	4.1	75
97	Insights into pneumococcal pathogenesis from the crystal structure of the modular teichoic acid phosphorylcholine esterase Pce. <i>Nature Structural and Molecular Biology</i> , 2005 , 12, 533-8	17.6	75
96	A novel chimeric phage lysin with high in vitro and in vivo bactericidal activity against <i>Streptococcus pneumoniae</i> . <i>Journal of Antimicrobial Chemotherapy</i> , 2015 , 70, 1763-73	5.1	70

95	Improving the lethal effect of cpl-7, a pneumococcal phage lysozyme with broad bactericidal activity, by inverting the net charge of its cell wall-binding module. <i>Antimicrobial Agents and Chemotherapy</i> , 2013 , 57, 5355-65	5.9	70
94	Biochemical evidence that phaZ gene encodes a specific intracellular medium chain length polyhydroxyalkanoate depolymerase in <i>Pseudomonas putida</i> KT2442: characterization of a paradigmatic enzyme. <i>Journal of Biological Chemistry</i> , 2007 , 282, 4951-4962	5.4	66
93	Controlled autolysis facilitates the polyhydroxyalkanoate recovery in <i>Pseudomonas putida</i> KT2440. <i>Microbial Biotechnology</i> , 2011 , 4, 533-47	6.3	64
92	Disposable magnetic DNA sensors for the determination at the attomolar level of a specific enterobacteriaceae family gene. <i>Analytical Chemistry</i> , 2008 , 80, 8239-45	7.8	61
91	Insights into pneumococcal fratricide from the crystal structures of the modular killing factor LytC. <i>Nature Structural and Molecular Biology</i> , 2010 , 17, 576-81	17.6	53
90	Elucidation of the molecular recognition of bacterial cell wall by modular pneumococcal phage endolysin CPL-1. <i>Journal of Biological Chemistry</i> , 2007 , 282, 24990-9	5.4	53
89	Phage Lysins for Fighting Bacterial Respiratory Infections: A New Generation of Antimicrobials. <i>Frontiers in Immunology</i> , 2018 , 9, 2252	8.4	48
88	Genome organization and molecular analysis of the temperate bacteriophage MM1 of <i>Streptococcus pneumoniae</i> . <i>Journal of Bacteriology</i> , 2003 , 185, 2362-8	3.5	44
87	Molecular peculiarities of the lytA gene isolated from clinical pneumococcal strains that are bile insoluble. <i>Journal of Clinical Microbiology</i> , 2002 , 40, 2545-54	9.7	44
86	Nasopharyngeal colonization and invasive disease are enhanced by the cell wall hydrolases LytB and LytC of <i>Streptococcus pneumoniae</i> . <i>PLoS ONE</i> , 2011 , 6, e23626	3.7	44
85	Crystal structure of CbpF, a bifunctional choline-binding protein and autolysis regulator from <i>Streptococcus pneumoniae</i> . <i>EMBO Reports</i> , 2009 , 10, 246-51	6.5	43
84	Auranofin efficacy against MDR <i>Streptococcus pneumoniae</i> and <i>Staphylococcus aureus</i> infections. <i>Journal of Antimicrobial Chemotherapy</i> , 2015 , 70, 2608-17	5.1	42
83	<i>Streptococcus pneumoniae</i> -Induced Oxidative Stress in Lung Epithelial Cells Depends on Pneumococcal Autolysis and Is Reversible by Resveratrol. <i>Journal of Infectious Diseases</i> , 2015 , 211, 1822-30	7.0	37
82	Analysis of the catalytic domain of the lysin of the lactococcal bacteriophage Tuc2009 by chimeric gene assembling. <i>FEMS Microbiology Letters</i> , 1996 , 140, 23-8	2.9	37
81	Study of phenolic compounds in virgin olive oils of the Picual variety. <i>European Food Research and Technology</i> , 2002 , 215, 407-412	3.4	36
80	Cloning and sequencing of a gene involved in the synthesis of the capsular polysaccharide of <i>Streptococcus pneumoniae</i> type 3. <i>Molecular Genetics and Genomics</i> , 1993 , 239, 188-95		36
79	Disposable amperometric magnetoimmunosensors for the specific detection of <i>Streptococcus pneumoniae</i> . <i>Biosensors and Bioelectronics</i> , 2010 , 26, 1225-30	11.8	35
78	Biological roles of two new murein hydrolases of <i>Streptococcus pneumoniae</i> representing examples of module shuffling. <i>Research in Microbiology</i> , 2000 , 151, 437-43	4	35

77	Cpl-7, a lysozyme encoded by a pneumococcal bacteriophage with a novel cell wall-binding motif. <i>Journal of Biological Chemistry</i> , 2010 , 285, 33184-33196	5.4	34
76	Purification and characterization of the autolytic glycosidase of <i>Streptococcus pneumoniae</i> . <i>Biochemical and Biophysical Research Communications</i> , 1989 , 158, 251-6	3.4	32
75	Bacteriophages of <i>Streptococcus pneumoniae</i> : a molecular approach. <i>Microbial Drug Resistance</i> , 1997 , 3, 165-76	2.9	31
74	High-resolution structural insights on the sugar-recognition and fusion tag properties of a versatile Erefoil lectin domain from the mushroom <i>Laetiporus sulphureus</i> . <i>Glycobiology</i> , 2011 , 21, 1349-61	5.8	30
73	Structural and thermodynamic characterization of Pal, a phage natural chimeric lysin active against pneumococci. <i>Journal of Biological Chemistry</i> , 2004 , 279, 43697-707	5.4	30
72	In vitro interactions of LytA, the major pneumococcal autolysin, with two bacteriophage lytic enzymes (Cpl-1 and Pal), cefotaxime and moxifloxacin against antibiotic-susceptible and -resistant <i>Streptococcus pneumoniae</i> strains. <i>Journal of Antimicrobial Chemotherapy</i> , 2007 , 60, 1159-62	5.1	29
71	Development of amperometric magnetosensors coupled to asymmetric PCR for the specific detection of <i>Streptococcus pneumoniae</i> . <i>Analytical and Bioanalytical Chemistry</i> , 2011 , 399, 2413-20	4.4	28
70	Molecular characterization of the pneumococcal teichoic acid phosphorylcholine esterase. <i>Microbial Drug Resistance</i> , 2001 , 7, 213-22	2.9	28
69	Bactericidal synergism between antibiotics and phage endolysin Cpl-711 to kill multidrug-resistant pneumococcus. <i>Future Microbiology</i> , 2018 , 13, 1215-1223	2.9	28
68	Restriction cleavage maps of the DNAs of <i>Streptococcus pneumoniae</i> bacteriophages containing protein covalently bound to their 5Sends. <i>Molecular Genetics and Genomics</i> , 1984 , 197, 67-74		27
67	Inhibition of pneumococcal choline-binding proteins and cell growth by esters of bicyclic amines. <i>FEBS Journal</i> , 2007 , 274, 364-76	5.7	26
66	PL3 Amidase, a Tailor-made Lysin Constructed by Domain Shuŕing with Potent Killing Activity against Pneumococci and Related Species. <i>Frontiers in Microbiology</i> , 2016 , 7, 1156	5.7	26
65	Auranofin-loaded nanoparticles as a new therapeutic tool to fight streptococcal infections. <i>Scientific Reports</i> , 2016 , 6, 19525	4.9	25
64	Pneumococcal LytA autolysin, a potent therapeutic agent in experimental peritonitis-sepsis caused by highly beta-lactam-resistant <i>Streptococcus pneumoniae</i> . <i>Antimicrobial Agents and Chemotherapy</i> , 2007 , 51, 3371-3	5.9	24
63	Substrate recognition and catalysis by LytB, a pneumococcal peptidoglycan hydrolase involved in virulence. <i>Scientific Reports</i> , 2015 , 5, 16198	4.9	23
62	The puzzle of zmpB and extensive chain formation, autolysis defect and non-translocation of choline-binding proteins in <i>Streptococcus pneumoniae</i> . <i>Molecular Microbiology</i> , 2001 , 39, 1651-60	4.1	23
61	Multivalent choline dendrimers as potent inhibitors of pneumococcal cell-wall hydrolysis. <i>Angewandte Chemie - International Edition</i> , 2009 , 48, 948-51	16.4	22
60	MM1, a temperate bacteriophage of the type 23F Spanish/USA multiresistant epidemic clone of <i>Streptococcus pneumoniae</i> : structural analysis of the site-specific integration system. <i>Journal of Virology</i> , 2000 , 74, 7803-13	6.6	22

59	Isolation, characterization and physiological properties of an autolytic-deficient mutant of <i>Streptococcus pneumoniae</i> . <i>Molecular Genetics and Genomics</i> , 1986 , 204, 237-42		22
58	Inhibition of lysis by antibody against phage-associated lysin and requirement of choline residues in the cell wall for progeny phage release in <i>Streptococcus pneumoniae</i> . <i>Current Microbiology</i> , 1983 , 8, 137-140		22
57	Ultrasensitive detection of coliforms by means of direct asymmetric PCR combined with disposable magnetic amperometric genosensors. <i>Analyst, The</i> , 2009 , 134, 34-7	5	21
56	New tool for spreading proteins to the environment: Cry1Ab toxin immobilized to bioplastics. <i>Applied Microbiology and Biotechnology</i> , 2006 , 72, 88-93	5.7	21
55	Synergy Between Two Chimeric Lysins to Kill. <i>Frontiers in Microbiology</i> , 2019 , 10, 1251	5.7	20
54	VO1, a temperate bacteriophage of the type 19A multiresistant epidemic 8249 strain of <i>Streptococcus pneumoniae</i> : analysis of variability of lytic and putative C5 methyltransferase genes. <i>Microbial Drug Resistance</i> , 2003 , 9, 7-15	2.9	20
53	Role of Asp-9 and Glu-36 in the active site of the pneumococcal CPL1 lysozyme: an evolutionary perspective of lysozyme mechanism. <i>Biochemistry</i> , 1992 , 31, 8495-9	3.2	20
52	Csl2, a novel chimeric bacteriophage lysin to fight infections caused by <i>Streptococcus suis</i> , an emerging zoonotic pathogen. <i>Scientific Reports</i> , 2017 , 7, 16506	4.9	19
51	Enzymes for anti-infective therapy: phage lysins. <i>Drug Discovery Today: Therapeutic Strategies</i> , 2004 , 1, 469-474		19
50	Inverted terminal repeats and terminal proteins of the genomes of pneumococcal phages. <i>Gene</i> , 1985 , 36, 341-8	3.8	19
49	Chemotherapy with Phage Lysins Reduces Pneumococcal Colonization of the Respiratory Tract. <i>Antimicrobial Agents and Chemotherapy</i> , 2018 , 62,	5.9	18
48	Insights into the structure-function relationships of pneumococcal cell wall lysozymes, LytC and Cpl-1. <i>Journal of Biological Chemistry</i> , 2008 , 283, 28618-28	5.4	18
47	Molecular characterization of an autolysin-defective mutant of <i>Streptococcus pneumoniae</i> . <i>Biochemical and Biophysical Research Communications</i> , 1986 , 137, 614-9	3.4	18
46	Initiation of translation at AUC, AUA and AUU codons in <i>Escherichia coli</i> . <i>FEMS Microbiology Letters</i> , 1991 , 68, 325-30	2.9	18
45	Deciphering how Cpl-7 cell wall-binding repeats recognize the bacterial peptidoglycan. <i>Scientific Reports</i> , 2017 , 7, 16494	4.9	17
44	Mutations in the <i>tacF</i> gene of clinical strains and laboratory transformants of <i>Streptococcus pneumoniae</i> : impact on choline auxotrophy and growth rate. <i>Journal of Bacteriology</i> , 2008 , 190, 4129-38 ³⁻⁵		15
43	Comparative Analysis of the Physiological and Structural Properties of a Medium Chain Length Polyhydroxyalkanoate Depolymerase from <i>Pseudomonas putida</i> KT2442. <i>Engineering in Life Sciences</i> , 2008 , 8, 260-267	3.4	15
42	Clinical evaluation of a disposable amperometric magneto-genosensor for the detection and identification of <i>Streptococcus pneumoniae</i> . <i>Journal of Microbiological Methods</i> , 2014 , 103, 25-8	2.8	14

41	Macrolides and β -lactam antibiotics enhance C3b deposition on the surface of multidrug-resistant <i>Streptococcus pneumoniae</i> strains by a LytA autolysin-dependent mechanism. <i>Antimicrobial Agents and Chemotherapy</i> , 2012 , 56, 5534-40	5.9	14
40	Thermal stability of Cpl-7 endolysin from the streptococcus pneumoniae bacteriophage Cp-7; cell wall-targeting of its CW_7 motifs. <i>PLoS ONE</i> , 2012 , 7, e46654	3.7	14
39	Structure and Function of Choline-Binding Proteins 2015 , 207-230		13
38	Cell Wall Hydrolases 2014 , 75-88		13
37	Unravelling the structure of the pneumococcal autolytic lysozyme. <i>Biochemical Journal</i> , 2005 , 391, 41-9	3.8	13
36	Nucleotide sequence and transcription of the left early region of <i>Streptococcus pneumoniae</i> bacteriophage Cp-1 coding for the terminal protein and the DNA polymerase. <i>Virology</i> , 1995 , 211, 21-32	3.6	12
35	Cloning, expression, and characterization of a peculiar choline-binding beta-galactosidase from <i>Streptococcus mitis</i> . <i>Applied and Environmental Microbiology</i> , 2009 , 75, 5972-80	4.8	10
34	Pneumococcal phosphorylcholine esterase, Pce, contains a metal binuclear center that is essential for substrate binding and catalysis. <i>Protein Science</i> , 2005 , 14, 3013-24	6.3	10
33	Crystallization and preliminary X-ray diffraction studies of the pneumococcal teichoic acid phosphorylcholine esterase Pce. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2005 , 61, 221-4		10
32	DNA-release by <i>Streptococcus pneumoniae</i> autolysin LytA induced Krueppel-like factor 4 expression in macrophages. <i>Scientific Reports</i> , 2018 , 8, 5723	4.9	9
31	Lytic action of cloned pneumococcal phage lysis genes in <i>Streptococcus pneumoniae</i> . <i>FEMS Microbiology Letters</i> , 1993 , 108, 87-92	2.9	9
30	Role of Pneumococcal Autolysin for KLF4 Expression and Chemokine Secretion in Lung Epithelium. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2015 , 53, 544-54	5.7	8
29	Immunization with LytB protein of <i>Streptococcus pneumoniae</i> activates complement-mediated phagocytosis and induces protection against pneumonia and sepsis. <i>Vaccine</i> , 2016 , 34, 6148-6157	4.1	8
28	Evidence of localized prophage-host recombination in the lytA gene, encoding the major pneumococcal autolysin. <i>Journal of Bacteriology</i> , 2010 , 192, 2624-32	3.5	8
27	Construction of a chimeric thermostable pyrophosphatase to facilitate its purification and immobilization by using the choline-binding tag. <i>Applied and Environmental Microbiology</i> , 2004 , 70, 4642-7	4.8	8
26	Construction of a multifunctional pneumococcal murein hydrolase by module assembly. <i>FEBS Journal</i> , 1996 , 235, 601-5		8
25	Crystal structures of CbpF complexed with atropine and ipratropium reveal clues for the design of novel antimicrobials against <i>Streptococcus pneumoniae</i> . <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2014 , 1840, 129-35	4	7
24	Crystallization and preliminary crystallographic analysis of the catalytic module of endolysin from Cp-7, a phage infecting <i>Streptococcus pneumoniae</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2010 , 66, 670-3		7

23	Crystallization and preliminary X-ray diffraction studies of choline-binding protein F from <i>Streptococcus pneumoniae</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2007 , 63, 742-5		7
22	Colour improvement in ripe olive processing by manganese cations: industrial performance. <i>Journal of Food Engineering</i> , 2001 , 48, 75-81	6	7
21	Structural analysis and biological significance of the cell wall lytic enzymes of <i>Streptococcus pneumoniae</i> and its bacteriophage. <i>FEMS Microbiology Letters</i> , 1992 , 100, 439-447	2.9	7
20	Aromatic Esters of Bicyclic Amines as Antimicrobials against <i>Streptococcus pneumoniae</i> . <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 13673-7	16.4	6
19	<i>Streptococcus pneumoniae</i> : from molecular biology to host-pathogen interactions. <i>Journal of Applied Biomedicine</i> , 2010 , 8, 131-140	0.6	6
18	Molecular and biochemical analysis of the system regulating the lytic/lysogenic cycle in the pneumococcal temperate phage MM1. <i>FEMS Microbiology Letters</i> , 2003 , 222, 193-7	2.9	6
17	Sequence-Function Relationships in Phage-Encoded Bacterial Cell Wall Lytic Enzymes and Their Implications for Phage-Derived Product Design. <i>Journal of Virology</i> , 2021 , 95, e0032121	6.6	6
16	Pneumococcal Phages335-P1		5
15	Widening the antimicrobial spectrum of esters of bicyclic amines: In vitro effect on gram-positive <i>Streptococcus pneumoniae</i> and gram-negative non-typeable <i>Haemophilus influenzae</i> biofilms. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2019 , 1863, 96-104	4	5
14	Crystallization of the pneumococcal autolysin LytC: in-house phasing using novel lanthanide complexes. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2010 , 66, 448-51		3
13	Mining of Gram-Negative Surface-Active Enzybiotic Candidates by Sequence-Based Calculation of Physicochemical Properties. <i>Frontiers in Microbiology</i> , 2021 , 12, 660403	5.7	3
12	Multivalent Choline Dendrimers as Potent Inhibitors of Pneumococcal Cell-Wall Hydrolysis. <i>Angewandte Chemie</i> , 2009 , 121, 966-969	3.6	2
11	Crystal structure of CbpF, a bifunctional choline-binding protein and autolysis regulator from <i>Streptococcus pneumoniae</i> . <i>EMBO Reports</i> , 2009 , 10, 413-413	6.5	2
10	Crystallization and preliminary X-ray diffraction studies of the complete modular endolysin from Cp-1, a phage infecting <i>Streptococcus pneumoniae</i> . <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2002 , 58, 1487-9		2
9	Induction of Kröppel-Like Factor 4 Mediates Polymorphonuclear Neutrophil Activation in Infection. <i>Frontiers in Microbiology</i> , 2020 , 11, 582070	5.7	2
8	Essential Topics for the Regulatory Consideration of Phages as Clinically Valuable Therapeutic Agents: A Perspective from Spain.. <i>Microorganisms</i> , 2022 , 10,	4.9	2
7	Sequence-function Relationships in Phage-encoded Bacterial Cell Wall Lytic Enzymes and their Implications for Phage-derived Products Design		1
6	Structural and Functional Insights Into Skl and Pal Endolysins, Two Cysteine-Amidases With Anti-pneumococcal Activity. Dithiothreitol (DTT) Effect on Lytic Activity. <i>Frontiers in Microbiology</i> , 2021 , 12, 740914	5.7	0

- 5 DEAE-chitosan nanoparticles as a pneumococcus-biomimetic material for the development of antipneumococcal therapeutics. *Carbohydrate Polymers*, **2021**, 273, 118605 10.3 ○
- 4 Monomodular *Pseudomonas aeruginosa* phage JG004 lysozyme (Pae87) contains a bacterial surface-active antimicrobial peptide-like region and a possible substrate-binding subdomain.. *Acta Crystallographica Section D: Structural Biology*, **2022**, 78, 435-454 5.5 ○
- 3 Aromatic Esters of Bicyclic Amines as Antimicrobials against *Streptococcus pneumoniae*. *Angewandte Chemie*, **2015**, 127, 13877-13881 3.6
- 2 Molecular Characteristics of the Cell Wall Lytic Enzymes Coded by Pneumococcal Phages **1993**, 261-268
- 1 Searching for the Evolutionary Design of the Pneumococcal Cell Wall Lytic Enzymes **1993**, 253-259