

# Gerald L Newton

## List of Publications by Year in descending order

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65  
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5,439  
citations

76326

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102487

66  
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66  
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66  
docs citations

66  
times ranked

3826  
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis of biological thiols: Derivatization with monobromobimane and separation by reverse-phase high-performance liquid chromatography. <i>Analytical Biochemistry</i> , 1981, 114, 383-387.	2.4	448
2	Determination of low-molecular-weight thiols using monobromobimane fluorescent labeling and high-performance liquid chromatography. <i>Methods in Enzymology</i> , 1987, 143, 85-96.	1.0	338
3	Biosynthesis and Functions of Mycothiol, the Unique Protective Thiol of <i>Actinobacteria</i> . <i>Microbiology and Molecular Biology Reviews</i> , 2008, 72, 471-494.	6.6	316
4	Bacillithiol is an antioxidant thiol produced in Bacilli. <i>Nature Chemical Biology</i> , 2009, 5, 625-627.	8.0	240
5	Biosynthesis and functions of bacillithiol, a major low-molecular-weight thiol in Bacilli. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 6482-6486.	7.1	214
6	Assembly of a nucleus-like structure during viral replication in bacteria. <i>Science</i> , 2017, 355, 194-197.	12.6	207
7	Analysis of biological thiols: Quantitative determination of thiols at the picomole level based upon derivatization with monobromobimanes and separation by cation-exchange chromatography. <i>Analytical Biochemistry</i> , 1981, 111, 357-365.	2.4	193
8	Mycothiol-Deficient <i>Mycobacterium smegmatis</i> Mutants Are Hypersensitive to Alkylating Agents, Free Radicals, and Antibiotics. <i>Antimicrobial Agents and Chemotherapy</i> , 2002, 46, 3348-3355.	3.2	175
9	A Novel Mycothiol-Dependent Detoxification Pathway in Mycobacteria Involving Mycothiol S-Conjugate Amidase. <i>Biochemistry</i> , 2000, 39, 10739-10746.	2.5	158
10	Mycothiol biochemistry. <i>Archives of Microbiology</i> , 2002, 178, 388-394.	2.2	157
11	Association of mycothiol with protection of <i>Mycobacterium tuberculosis</i> from toxic oxidants and antibiotics. <i>Molecular Microbiology</i> , 2003, 47, 1723-1732.	2.5	156
12	A possible prebiotic synthesis of pantetheine, a precursor to coenzyme A. <i>Nature</i> , 1995, 373, 683-685.	27.8	128
13	Mycothiol Is Essential for Growth of <i>Mycobacterium tuberculosis</i> Erdman. <i>Journal of Bacteriology</i> , 2003, 185, 6736-6740.	2.2	128
14	The Structure of U17 Isolated from <i>Streptomyces clavuligerus</i> and its Properties as an Antioxidant Thiol. <i>FEBS Journal</i> , 1995, 230, 821-825.	0.2	115
15	[ <sup>13</sup> C] Determination of biothiols by bromobimane labeling and high-performance liquid chromatography. <i>Methods in Enzymology</i> , 1995, 251, 148-166.	1.0	111
16	N-Acetyl-1-d-myo-Inositol-2-Amino-2-Deoxy- $\beta$ -D-Glucopyranoside Deacetylase (MshB) Is a Key Enzyme in Mycothiol Biosynthesis. <i>Journal of Bacteriology</i> , 2000, 182, 6958-6963.	2.2	105
17	Coenzyme A Disulfide Reductase, the Primary Low Molecular Weight Disulfide Reductase from <i>Staphylococcus aureus</i> . <i>Journal of Biological Chemistry</i> , 1998, 273, 5744-5751.	3.4	98
18	ATP-Dependent Cysteine:1-d-myo-Inositol 2-Amino-2-deoxy- $\beta$ -D-glucopyranoside Ligase, Mycothiol Biosynthesis Enzyme MshC, Is Related to Class I CysteinyI-tRNA Synthetases. <i>Biochemistry</i> , 2002, 41, 6885-6890.	2.5	98

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19	Characterization of <i>Mycobacterium smegmatis</i> Mutants Defective in 1-d-myo-Inosityl-2-amino-2-deoxy- $\beta$ -D-glucopyranoside and Mycothiol Biosynthesis. <i>Biochemical and Biophysical Research Communications</i> , 1999, 255, 239-244.	2.1	96
20	Thiol and disulfide metabolites of the radiation protector and potential chemopreventive agent WR-2721 are linked to both its anti-cytotoxic and anti-mutagenic mechanisms of action. <i>Carcinogenesis</i> , 1995, 16, 767-774.	2.8	94
21	A Mycothiol Synthase Mutant of <i>Mycobacterium tuberculosis</i> Has an Altered Thiol-Disulfide Content and Limited Tolerance to Stress. <i>Journal of Bacteriology</i> , 2006, 188, 6245-6252.	2.2	94
22	Pharmacokinetics of WR-1065 in mouse tissue following treatment with WR-2721. <i>International Journal of Radiation Oncology Biology Physics</i> , 1984, 10, 1525-1528.	0.8	89
23	Inhibition and kinetics of <i>mycobacterium tuberculosis</i> and <i>mycobacterium smegmatis</i> mycothiol-S-conjugate amidase by natural product inhibitors. <i>Bioorganic and Medicinal Chemistry</i> , 2003, 11, 601-608.	3.0	84
24	Identification of the mycothiol synthase gene ( <i>mshD</i> ) encoding the acetyltransferase producing mycothiol in actinomycetes. <i>Archives of Microbiology</i> , 2002, 178, 331-337.	2.2	80
25	The Glycosyltransferase Gene Encoding the Enzyme Catalyzing the First Step of Mycothiol Biosynthesis ( <i>mshA</i> ). <i>Journal of Bacteriology</i> , 2003, 185, 3476-3479.	2.2	79
26	Novel Bromotyrosine Alkaloids: Inhibitors of Mycothiol-S-Conjugate Amidase. <i>Organic Letters</i> , 2001, 3, 1543-1545.	4.6	78
27	A Mycothiol Synthase Mutant of <i>Mycobacterium smegmatis</i> Produces Novel Thiols and Has an Altered Thiol Redox Status. <i>Journal of Bacteriology</i> , 2005, 187, 7309-7316.	2.2	78
28	Organic Hydroperoxide Resistance Protein and Ergothioneine Compensate for Loss of Mycothiol in <i>Mycobacterium smegmatis</i> Mutants. <i>Journal of Bacteriology</i> , 2011, 193, 1981-1990.	2.2	72
29	Biochemistry of the Initial Steps of Mycothiol Biosynthesis*. <i>Journal of Biological Chemistry</i> , 2006, 281, 33910-33920.	3.4	70
30	Mycothiol Biosynthesis and Metabolism. <i>Journal of Biological Chemistry</i> , 1998, 273, 30391-30397.	3.4	66
31	The evolution of glutathione metabolism in phototrophic microorganisms. <i>Journal of Molecular Evolution</i> , 1987, 25, 81-88.	1.8	62
32	Characterization of <i>Mycobacterium tuberculosis</i> Mycothiol-S-Conjugate Amidase. <i>Biochemistry</i> , 2003, 42, 12067-12076.	2.5	62
33	The DinB Superfamily Includes Novel Mycothiol, Bacillithiol, and Glutathione S-Transferases. <i>Biochemistry</i> , 2011, 50, 10751-10760.	2.5	59
34	Detoxification of toxins by bacillithiol in <i>Staphylococcus aureus</i> . <i>Microbiology (United Kingdom)</i> , 2012, 158, 1117-1126.	1.8	59
35	Characterization of the N-Acetyl- $\beta$ -D-glucosaminyl-Malate Synthase and Deacetylase Functions for Bacillithiol Biosynthesis in <i>Bacillus anthracis</i> . <i>Biochemistry</i> , 2010, 49, 8398-8414.	2.5	53
36	Analysis of biological thiols: Derivatization with monobromotrimethylammoniumbimane and characterization by electrophoresis and chromatography. <i>Analytical Biochemistry</i> , 1980, 107, 1-10.	2.4	52

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37	Bimane fluorescent labels. <i>Biochimica Et Biophysica Acta (BBA) - Protein Structure</i> , 1980, 622, 201-209.	1.7	52
38	Application of bacterial cytological profiling to crude natural product extracts reveals the antibacterial arsenal of <i>Bacillus subtilis</i> . <i>Journal of Antibiotics</i> , 2016, 69, 353-361.	2.0	52
39	Structure of the Type III Pantothenate Kinase from <i>Bacillus anthracis</i> at 2.0 Å... Resolution: Implications for Coenzyme A-Dependent Redox Biology. <i>Biochemistry</i> , 2007, 46, 3234-3245.	2.5	50
40	Purification and characterization of <i>Mycobacterium tuberculosis</i> 1d-myo-inosityl-2-acetamido-2-deoxy-1- $\beta$ -d-glucopyranoside deacetylase, MshB, a mycothiol biosynthetic enzyme. <i>Protein Expression and Purification</i> , 2006, 47, 542-550.	1.3	47
41	Chemical and Chemoenzymatic Syntheses of Bacillithiol: A Unique Low Molecular Weight Thiol amongst Low G+C Gram Positive Bacteria. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 7101-7104.	13.8	45
42	Bacillithiol: a key protective thiol in <i>Staphylococcus aureus</i> . <i>Expert Review of Anti-Infective Therapy</i> , 2015, 13, 1089-1107.	4.4	41
43	Mycothiol Import by <i>Mycobacterium smegmatis</i> and Function as a Resource for Metabolic Precursors and Energy Production. <i>Journal of Bacteriology</i> , 2007, 189, 6796-6805.	2.2	29
44	Evaluation of NTF1836 as an inhibitor of the mycothiol biosynthetic enzyme MshC in growing and non-replicating <i>Mycobacterium tuberculosis</i> . <i>Bioorganic and Medicinal Chemistry</i> , 2011, 19, 3956-3964.	3.0	28
45	An immunoassay for the detection and quantitative determination of mycothiol. <i>Journal of Immunological Methods</i> , 1998, 214, 29-39.	1.4	27
46	Thiol Uptake by Chinese Hamster V79 Cells and Aerobic Radioprotection as a Function of the Net Charge on the Thiol. <i>Radiation Research</i> , 1992, 130, 194.	1.5	26
47	Binding of Radioprotective Thiols and Disulfides in Chinese Hamster V79 Cell Nuclei. <i>Radiation Research</i> , 1996, 146, 298.	1.5	24
48	Transport of Aminothiols Radioprotectors into Mammalian Cells: Passive Diffusion versus Mediated Uptake. <i>Radiation Research</i> , 1996, 146, 206.	1.5	24
49	A coupled spectrophotometric assay for l-cysteine:1-d-myo-inosityl 2-amino-2-deoxy-1- $\beta$ -d-glucopyranoside ligase and its application for inhibitor screening. <i>Analytical Biochemistry</i> , 2006, 353, 167-173.	2.4	23
50	An N-acyl homolog of mycothiol is produced in marine actinomycetes. <i>Archives of Microbiology</i> , 2008, 190, 547-557.	2.2	23
51	Unusual production of glutathione in Actinobacteria. <i>Archives of Microbiology</i> , 2009, 191, 89-93.	2.2	23
52	Measurement of WR-2721, WR-1065, and WR-33278 in plasma. <i>International Journal of Radiation Oncology Biology Physics</i> , 1985, 11, 1193-1197.	0.8	22
53	WR-2721 (amifostine) infusion in patients with Ewing's sarcoma receiving ifosfamide and cyclophosphamide with mesna: drug and thiol levels in plasma and blood cells, a Pediatric Oncology Group study. <i>Cancer Chemotherapy and Pharmacology</i> , 1999, 44, 498-504.	2.3	20
54	Regulation of mycothiol metabolism by the thiol redox sensor anti-sigma factor RsrA. <i>Molecular Microbiology</i> , 2008, 68, 805-809.	2.5	20

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55	Determination of the cytoprotective agent WR-2721 (Amifostine, Ethyl $\hat{A}$ ) and its metabolites in human blood using monobromobimane fluorescent labeling and high-performance liquid chromatography. <i>Cancer Chemotherapy and Pharmacology</i> , 1998, 42, 400-406.	2.3	19
56	Characterization of BshA, bacillithiol glycosyltransferase from <i>Staphylococcus aureus</i> and <i>Bacillus subtilis</i> . <i>FEBS Letters</i> , 2012, 586, 1004-1008.	2.8	18
57	Purification of thiols from biological samples. <i>Methods in Enzymology</i> , 1987, 143, 96-101.	1.0	17
58	Purification and characterization of the <i>Staphylococcus aureus</i> bacillithiol transferase BstA. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2014, 1840, 2851-2861.	2.4	17
59	Improved Methods for Immunoassay of Mycothiol. <i>Journal of Clinical Microbiology</i> , 1999, 37, 2153-2157.	3.9	14
60	para-Sulfobenzoyloxybromobimane: A new membrane-impermeable reagent useful for the analysis of thiols and their export from cells. <i>Analytical Biochemistry</i> , 1992, 201, 30-42.	2.4	13
61	Cloning, expression and rapid purification of active recombinant mycothiol ligase as B1 immunoglobulin binding domain of streptococcal protein G, glutathione-S-transferase and maltose binding protein fusion proteins in <i>Mycobacterium smegmatis</i> . <i>Protein Expression and Purification</i> , 2006, 50, 128-136.	1.3	12
62	Characterization of a mycothiol ligase mutant of <i>Rhodococcus jostii</i> RHA1. <i>Research in Microbiology</i> , 2008, 159, 643-650.	2.1	12
63	The <i>Mycobacterium tuberculosis</i> CysQ phosphatase modulates the biosynthesis of sulfated glycolipids and bacterial growth. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2011, 21, 4956-4959.	2.2	9
64	Identification of the S-transferase like superfamily bacillithiol transferases encoded by <i>Bacillus subtilis</i> . <i>PLoS ONE</i> , 2018, 13, e0192977.	2.5	8
65	N-methyl-bacillithiol, a Novel Thiol from Anaerobic Bacteria. <i>MBio</i> , 2019, 10, .	4.1	7