Elizabeth M. Nolan

List of Publications by Year
in descending order

82 papers	8,053 citations	94433 37 h-index	62596 80 g-index
84 all docs	84 docs citations	84 times ranked	8314 citing authors

#	Article	IF	Citations
1	Metal sequestration by S100 proteins in chemically diverse environments. Trends in Microbiology, 2022, 30, 654-664.	7.7	5
2	Zinc sequestration by human calprotectin facilitates manganese binding to the bacterial solute-binding proteins PsaA and MntC. Metallomics, 2022, 14, .	2.4	4
3	S100A12 promotes Mn(II) binding to pneumococcal PsaA and staphylococcal MntC by Zn(II) sequestration. Journal of Inorganic Biochemistry, 2022, , 111862.	3.5	1
4	Heavy-Metal Trojan Horse: Enterobactin-Directed Delivery of Platinum(IV) Prodrugs to<i>Escherichia coli</i>. Journal of the American Chemical Society, 2022, 144, 12756-12768.	13.7	26
5	Harnessing Iron Acquisition Machinery to Target <i>Enterobacteriaceae</i>. Journal of Infectious Diseases, 2021, 223, S307-S313.	4.0	16
6	Heme protects Pseudomonas aeruginosa and Staphylococcus aureus from calprotectin-induced iron starvation. Journal of Biological Chemistry, 2021, 296, 100160.	3.4	16
7	Enterobactin- and salmochelin-Î²-lactam conjugates induce cell morphologies consistent with inhibition of penicillin-binding proteins in uropathogenic <i>Escherichia coli</i> CFT073. Chemical Science, 2021, 12, 4041-4056.	7.4	18
8	Conjugation to Enterobactin and Salmochelin S4 Enhances the Antimicrobial Activity and Selectivity of Î²-Lactam Antibiotics against Nontyphoidal <i>Salmonella</i>. ACS Infectious Diseases, 2021, 7, 1248-1259.	3.8	17
9	The Human Innate Immune Protein Calprotectin Elicits a Multimetal Starvation Response in Pseudomonas aeruginosa. Microbiology Spectrum, 2021, 9, e0051921.	3.0	10
10	Molecular Basis of Ca(II)-Induced Tetramerization and Transition-Metal Sequestration in Human Calprotectin. Journal of the American Chemical Society, 2021, 143, 18073-18090.	13.7	7
11	Bacterial Responses to Iron Withholding by Calprotectin. Biochemistry, 2021, 60, 3337-3346.	2.5	9
12	Avian MRP126 Restricts Microbial Growth through Ca(II)-Dependent Zn(II) Sequestration. Biochemistry, 2020, 59, 802-817.	2.5	9
13	The Pneumococcal Iron Uptake Protein A (PiuA) Specifically Recognizes Tetradentate FeIIIbis- and Mono-Catechol Complexes. Journal of Molecular Biology, 2020, 432, 5390-5410.	4.2	13
14	Metal Sequestration and Antimicrobial Activity of Human Calprotectin Are pH-Dependent. Biochemistry, 2020, 59, 2468-2478.	2.5	20
15	Calcium Binding to the Innate Immune Protein Human Calprotectin Revealed by Integrated Mass Spectrometry. Journal of the American Chemical Society, 2020, 142, 13372-13383.	13.7	13
16	Exploring Iron Withholding by the Innate Immune Protein Human Calprotectin. Accounts of Chemical Research, 2019, 52, 2301-2308.	15.6	18
17	The human innate immune protein calprotectin induces iron starvation responses in Pseudomonas aeruginosa. Journal of Biological Chemistry, 2019, 294, 3549-3562.	3.4	61
18	Preparation and Iron Redox Speciation Study of the Fe(II)-Binding Antimicrobial Protein Calprotectin. Methods in Molecular Biology, 2019, 1929, 397-415.	0.9	5

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19	Murine Calprotectin Coordinates Mn(II) at a Hexahistidine Site with Ca(II)-Dependent Affinity. Inorganic Chemistry, 2019, 58, 13578-13590.	4.0	11
20	High-Field EPR Spectroscopic Characterization of Mn(II) Bound to the Bacterial Solute-Binding Proteins MntC and PsaA. Journal of Physical Chemistry B, 2019, 123, 4929-4934.	2.6	7
21	Preparation of the Oxidized and Reduced Forms of Psoriasin (S100A7). Methods in Molecular Biology, 2019, 1929, 379-395.	0.9	1
22	Initial Biochemical and Functional Evaluation of Murine Calprotectin Reveals Ca(II)-Dependence and Its Ability to Chelate Multiple Nutrient Transition Metal Ions. Biochemistry, 2018, 57, 2846-2856.	2.5	15
23	Design, solid-phase synthesis and evaluation of enterobactin analogs for iron delivery into the human pathogen Campylobacter jejuni. Bioorganic and Medicinal Chemistry, 2018, 26, 5314-5321.	3.0	5
24	Bioinorganic Explorations of Zn(II) Sequestration by Human S100 Host-Defense Proteins. Biochemistry, 2018, 57, 1673-1680.	2.5	21
25	A Method for Selective Depletion of Zn(II) Ions from Complex Biological Media and Evaluation of Cellular Consequences of Zn(II) Deficiency. Journal of the American Chemical Society, 2018, 140, 2413-2416.	13.7	19
26	Esterase-Catalyzed Siderophore Hydrolysis Activates an Enterobactinâ€“Ciprofloxacin Conjugate and Confers Targeted Antibacterial Activity. Journal of the American Chemical Society, 2018, 140, 5193-5201.	13.7	101
27	Biochemical and Spectroscopic Observation of Mn(II) Sequestration from Bacterial Mn(II) Transport Machinery by Calprotectin. Journal of the American Chemical Society, 2018, 140, 110-113.	13.7	19
28	A Sensitive, Nonradioactive Assay for Zn(II) Uptake into Metazoan Cells. Biochemistry, 2018, 57, 6807-6815.	2.5	4
29	Oxidative Post-translational Modifications Accelerate Proteolytic Degradation of Calprotectin. Journal of the American Chemical Society, 2018, 140, 17444-17455.	13.7	20
30	Evaluation of a reducible disulfide linker for siderophore-mediated delivery of antibiotics. Journal of Biological Inorganic Chemistry, 2018, 23, 1025-1036.	2.6	40
31	Transition Metal Sequestration by the Host-Defense Protein Calprotectin. Annual Review of Biochemistry, 2018, 87, 621-643.	11.1	138
32	Calprotectin influences the aggregation of metal-free and metal-bound amyloid-Î² by direct interaction. Metallomics, 2018, 10, 1116-1127.	2.4	10
33	Biophysical Examination of the Calcium-Modulated Nickel-Binding Properties of Human Calprotectin Reveals Conformational Change in the EF-Hand Domains and His₃Asp Site. Biochemistry, 2018, 57, 4155-4164.	2.5	13
34	Human calprotectin affects the redox speciation of iron. Metallomics, 2017, 9, 1086-1095.	2.4	23
35	Nickel Sequestration by the Host-Defense Protein Human Calprotectin. Journal of the American Chemical Society, 2017, 139, 8828-8836.	13.7	99
36	Human Î±-Defensin 6: A Small Peptide That Self-Assembles and Protects the Host by Entangling Microbes. Accounts of Chemical Research, 2017, 50, 960-967.	15.6	57

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37	Human Î±-Defensin 6 Self-Assembly Prevents Adhesion and Suppresses Virulence Traits of <i>Candida albicans</i>. Biochemistry, 2017, 56, 1033-1041.	2.5	25
38	Metal homeostasis in infectious disease: recent advances in bacterial metallophores and the human metal-withholding response. Current Opinion in Chemical Biology, 2017, 37, 10-18.	6.1	33
39	Biochemical and Functional Evaluation of the Intramolecular Disulfide Bonds in the Zinc-Chelating Antimicrobial Protein Human S100A7 (Psoriasin). Biochemistry, 2017, 56, 5726-5738.	2.5	25
40	Determination of the Molecular Structures of Ferric Enterobactin and Ferric Enantioenterobactin Using Racemic Crystallography. Journal of the American Chemical Society, 2017, 139, 15245-15250.	13.7	22
41	A Noncanonical Role for Yersiniabactin in Bacterial Copper Acquisition. Biochemistry, 2017, 56, 6073-6074.	2.5	7
42	Defensins, lectins, mucins, and secretory immunoglobulin A: microbe-binding biomolecules that contribute to mucosal immunity in the human gut. Critical Reviews in Biochemistry and Molecular Biology, 2017, 52, 45-56.	5.2	84
43	Magnetic circular dichroism studies of iron(<scp>ii</scp>) binding to human calprotectin. Chemical Science, 2017, 8, 1369-1377.	7.4	22
44	Transition metals at the hostâ€"pathogen interface: how<i>Neisseria</i>exploit human metalloproteins for acquiring iron and zinc. Essays in Biochemistry, 2017, 61, 211-223.	4.7	24
45	A metal shuttle keeps pathogens well fed. Science, 2016, 352, 1055-1056.	12.6	6
46	Membrane anchoring stabilizes and favors secretion of New Delhi metallo-Î²-lactamase. Nature Chemical Biology, 2016, 12, 516-522.	8.0	138
47	The Hexahistidine Motif of Host-Defense Protein Human Calprotectin Contributes to Zinc Withholding and Its Functional Versatility. Journal of the American Chemical Society, 2016, 138, 12243-12251.	13.7	47
48	Disulfide cross-linking influences symbiotic activities of nodule peptide NCR247. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10157-10162.	7.1	35
49	Siderophore-based immunization strategy to inhibit growth of enteric pathogens. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13462-13467.	7.1	56
50	Proteolysis triggers self-assembly and unmasks innate immune function of a human Î±-defensin peptide. Chemical Science, 2016, 7, 1738-1752.	7.4	31
51	Calcium-induced tetramerization and zinc chelation shield human calprotectin from degradation by host and bacterial extracellular proteases. Chemical Science, 2016, 7, 1962-1975.	7.4	44
52	Calcium ions tune the zinc-sequestering properties and antimicrobial activity of human S100A12. Chemical Science, 2016, 7, 1338-1348.	7.4	57
53	Manganese Binding Properties of Human Calprotectin under Conditions of High and Low Calcium: X-ray Crystallographic and Advanced Electron Paramagnetic Resonance Spectroscopic Analysis. Journal of the American Chemical Society, 2015, 137, 3004-3016.	13.7	65
54	Visualizing Attack of <i>Escherichia coli</i> by the Antimicrobial Peptide Human Defensin 5. Biochemistry, 2015, 54, 1767-1777.	2.5	80

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55	Manganese and Microbial Pathogenesis: Sequestration by the Mammalian Immune System and Utilization by Microorganisms. ACS Chemical Biology, 2015, 10, 641-651.	3.4	78
56	Evaluation of (acyloxy)alkyl ester linkers for antibiotic release from siderophoreâ€“antibiotic conjugates. Bioorganic and Medicinal Chemistry Letters, 2015, 25, 4987-4991.	2.2	32
57	Chemical Synthesis of Staphyloferrin B Affords Insight into the Molecular Structure, Iron Chelation, and Biological Activity of a Polycarboxylate Siderophore Deployed by the Human Pathogen <i>Staphylococcus aureus</i>. Journal of the American Chemical Society, 2015, 137, 9117-9127.	13.7	33
58	Beyond iron: non-classical biological functions of bacterial siderophores. Dalton Transactions, 2015, 44, 6320-6339.	3.3	332
59	Human calprotectin is an iron-sequestering host-defense protein. Nature Chemical Biology, 2015, 11, 765-771.	8.0	218
60	Targeting virulence: salmochelin modification tunes the antibacterial activity spectrum of Î²-lactams for pathogen-selective killing of Escherichia coli. Chemical Science, 2015, 6, 4458-4471.	7.4	67
61	Impaired cholecystokinin-induced gallbladder emptying incriminated in spontaneous â€œblackâ€•pigment gallstone formation in germfree Swiss Webster mice. American Journal of Physiology - Renal Physiology, 2015, 308, G335-G349.	3.4	10
62	A Bacterial Mutant Library as a Tool to Study the Attack of a Defensin Peptide. ChemBioChem, 2014, 15, 2684-2688.	2.6	11
63	Editorial overview: Bioinorganic chemistry: Recent advances in bioinorganic chemistry. Current Opinion in Chemical Biology, 2014, 19, vii-ix.	6.1	0
64	Molecular Basis for Self-Assembly of a Human Host-Defense Peptide That Entraps Bacterial Pathogens. Journal of the American Chemical Society, 2014, 136, 13267-13276.	13.7	79
65	Enterobactin-Mediated Delivery of Î²-Lactam Antibiotics Enhances Antibacterial Activity against Pathogenic<i>Escherichia coli</i>. Journal of the American Chemical Society, 2014, 136, 9677-9691.	13.7	129
66	Reduction of Human Defensin 5 Affords a High-Affinity Zinc-Chelating Peptide. ACS Chemical Biology, 2013, 8, 1907-1911.	3.4	41
67	Contributions of the S100A9 C-Terminal Tail to High-Affinity Mn(II) Chelation by the Host-Defense Protein Human Calprotectin. Journal of the American Chemical Society, 2013, 135, 17804-17817.	13.7	71
68	High-Affinity Manganese Coordination by Human Calprotectin Is Calcium-Dependent and Requires the Histidine-Rich Site Formed at the Dimer Interface. Journal of the American Chemical Society, 2013, 135, 775-787.	13.7	121
69	Siderophore-Mediated Cargo Delivery to the Cytoplasm of <i>Escherichia coli</i> and <i>Pseudomonas aeruginosa</i>: Syntheses of Monofunctionalized Enterobactin Scaffolds and Evaluation of Enterobactinâ€“Cargo Conjugate Uptake. Journal of the American Chemical Society, 2012, 134, 18388-18400.	13.7	92
70	Calcium Ion Gradients Modulate the Zinc Affinity and Antibacterial Activity of Human Calprotectin. Journal of the American Chemical Society, 2012, 134, 18089-18100.	13.7	146
71	Human Defensin 5 Disulfide Array Mutants: Disulfide Bond Deletion Attenuates Antibacterial Activity against <i>Staphylococcus aureus</i>. Biochemistry, 2011, 50, 8005-8017.	2.5	57
72	Small-Molecule Fluorescent Sensors for Investigating Zinc Metalloneurochemistry. Accounts of Chemical Research, 2009, 42, 193-203.	15.6	587

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73	Tools and Tactics for the Optical Detection of Mercuric Ion. Chemical Reviews, 2008, 108, 3443-3480.	47.7	2,188
74	Turn-On and Ratiometric Mercury Sensing in Water with a Red-Emitting Probe. Journal of the American Chemical Society, 2007, 129, 5910-5918.	13.7	412
75	Selective Hg(II) Detection in Aqueous Solution with Thiol Derivatized Fluoresceins. Inorganic Chemistry, 2006, 45, 2742-2749.	4.0	162
76	Midrange Affinity Fluorescent Zn(II) Sensors of the Zinpyr Family:Â Syntheses, Characterization, and Biological Imaging Applications. Inorganic Chemistry, 2006, 45, 9748-9757.	4.0	66
77	Zinspy Sensors with Enhanced Dynamic Range for Imaging Neuronal Cell Zinc Uptake and Mobilization. Journal of the American Chemical Society, 2006, 128, 15517-15528.	13.7	232
78	QZ1 and QZ2:Â Rapid, Reversible Quinoline-Derivatized Fluoresceins for Sensing Biological Zn(II). Journal of the American Chemical Society, 2005, 127, 16812-16823.	13.7	251
79	MS4, a seminaphthofluorescein-based chemosensor for the ratiometric detection of Hg(ii). Journal of Materials Chemistry, 2005, 15, 2778.	6.7	103
80	The Zinspy Family of Fluorescent Zinc Sensors:Â Syntheses and Spectroscopic Investigations. Inorganic Chemistry, 2004, 43, 8310-8317.	4.0	106
81	Synthesis and Characterization of Zinc Sensors Based on a Monosubstituted Fluorescein Platform. Inorganic Chemistry, 2004, 43, 2624-2635.	4.0	132
82	A â€œTurn-Onâ€•Fluorescent Sensor for the Selective Detection of Mercuric Ion in Aqueous Media. Journal of the American Chemical Society, 2003, 125, 14270-14271.	13.7	625