Michael A Mcdonough

List of Publications by Year
in descending order

122 papers	10,395 citations	44069 48 h-index	33894 99 g-index
131 all docs	131 docs citations	131 times ranked	11304 citing authors

#	Article	IF	Citations
1	Inhibition of JMJD6 by 2â€Oxoglutarate Mimics. ChemMedChem, 2022, 17, e202100398.	3.2	5
2	Imitation of Î²-lactam binding enables broad-spectrum metallo-Î²-lactamase inhibitors. Nature Chemistry, 2022, 14, 15-24.	13.6	39
3	Mechanisms of substrate recognition and N6-methyladenosine demethylation revealed by crystal structures of ALKBH5â€“RNA complexes. Nucleic Acids Research, 2022, 50, 4148-4160.	14.5	26
4	Studies on the Reactions of Biapenem with VIM Metallo Î²-Lactamases and the Serine Î²-Lactamase KPC-2. Antibiotics, 2022, 11, 396.	3.7	8
5	An LNA-amide modification that enhances the cell uptake and activity of phosphorothioate exon-skipping oligonucleotides. Nature Communications, 2022, 13, .	12.8	16
6	The methyltransferase METTL9 mediates pervasive 1-methylhistidine modification in mammalian proteomes. Nature Communications, 2021, 12, 891.	12.8	54
7	Faropenem reacts with serine and metallo-Î²-lactamases to give multiple products. European Journal of Medicinal Chemistry, 2021, 215, 113257.	5.5	14
8	Structural Basis of Prolyl Hydroxylase Domain Inhibition by Molidustat. ChemMedChem, 2021, 16, 2082-2088.	3.2	22
9	Human Oxygenase Variants Employing a Single Protein Fe II Ligand Are Catalytically Active. Angewandte Chemie, 2021, 133, 14778-14784.	2.0	0
10	Inhibition of the Oxygen-Sensing Asparaginyl Hydroxylase Factor Inhibiting Hypoxia-Inducible Factor: A Potential Hypoxia Response Modulating Strategy. Journal of Medicinal Chemistry, 2021, 64, 7189-7209.	6.4	17
11	Human Oxygenase Variants Employing a Single Protein Fe^{II} Ligand Are Catalytically Active. Angewandte Chemie - International Edition, 2021, 60, 14657-14663.	13.8	10
12	X-ray free-electron laser studies reveal correlated motion during isopenicillin N synthase catalysis. Science Advances, 2021, 7, .	10.3	23
13	Structure-Based Design of Selective Fat Mass and Obesity Associated Protein (FTO) Inhibitors. Journal of Medicinal Chemistry, 2021, 64, 16609-16625.	6.4	9
14	MeLAD: an integrated resource for metalloenzyme-ligand associations. Bioinformatics, 2020, 36, 904-909.	4.1	23
15	Broad Spectrum Î²-Lactamase Inhibition by a Thioether Substituted Bicyclic Boronate. ACS Infectious Diseases, 2020, 6, 1398-1404.	3.8	15
16	Structureâ€Activity Relationship and Crystallographic Studies on 4â€Hydroxypyrimidine HIF Prolyl Hydroxylase Domain Inhibitors. ChemMedChem, 2020, 15, 270-273.	3.2	21
17	A small-molecule probe for monitoring binding to prolyl hydroxylase domain 2 by fluorescence polarisation. Chemical Communications, 2020, 56, 14199-14202.	4.1	7
18	Biochemical and biophysical analyses of hypoxia sensing prolyl hydroxylases from Dictyostelium discoideum and Toxoplasma gondii. Journal of Biological Chemistry, 2020, 295, 16545-16561.	3.4	10

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19	Structures of Arabidopsis thaliana oxygen-sensing plant cysteine oxidases 4 and 5 enable targeted manipulation of their activity. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 23140-23147.	7.1	31
20	A human protein hydroxylase that accepts D-residues. Communications Chemistry, 2020, 3, .	4.5	6
21	Aspartate/asparagine-Î²-hydroxylase: a high-throughput mass spectrometric assay for discovery of small molecule inhibitors. Scientific Reports, 2020, 10, 8650.	3.3	18
22	Anaerobic fixed-target serial crystallography. IUCrJ, 2020, 7, 901-912.	2.2	12
23	Aspartate/asparagine-Î²-hydroxylase crystal structures reveal an unexpected epidermal growth factor-like domain substrate disulfide pattern. Nature Communications, 2019, 10, 4910.	12.8	34
24	Biochemical and structural investigations clarify the substrate selectivity of the 2-oxoglutarate oxygenase JMJD6. Journal of Biological Chemistry, 2019, 294, 11637-11652.	3.4	25
25	Studies on spiro[4.5]decanone prolyl hydroxylase domain inhibitors. MedChemComm, 2019, 10, 500-504.	3.4	8
26	Studies on the inhibition of AmpC and other Î²-lactamases by cyclic boronates. Biochimica Et Biophysica Acta - General Subjects, 2019, 1863, 742-748.	2.4	28
27	Crystal structures of VIMâ€1 complexes explain active site heterogeneity in VIMâ€class metalloâ€Î²â€lactamases. FEBS Journal, 2019, 286, 169-183.	4.7	30
28	Structure activity relationship studies on rhodanines and derived enethiol inhibitors of metallo-Î²-lactamases. Bioorganic and Medicinal Chemistry, 2018, 26, 2928-2936.	3.0	17
29	Rh(<scp>iii</scp>)-Catalyzed directed Câ€“H carbenoid coupling reveals aromatic bisphosphonates inhibiting metallo- and Serine-Î²-lactamases. Organic Chemistry Frontiers, 2018, 5, 1288-1292.	4.5	21
30	In Silico Fragment-Based Design Identifies Subfamily B1 Metallo-Î²-lactamase Inhibitors. Journal of Medicinal Chemistry, 2018, 61, 1255-1260.	6.4	40
31	YcfDRM is a thermophilic oxygen-dependent ribosomal protein uL16 oxygenase. Extremophiles, 2018, 22, 553-562.	2.3	6
32	Born to sense: biophysical analyses of the oxygen sensing prolyl hydroxylase from the simplest animal Trichoplax adhaerens. Hypoxia (Auckland, N Z), 2018, Volume 6, 57-71.	1.9	12
33	Biosynthesis of histone messenger RNA employs a specific 3' end endonuclease. ELife, 2018, 7, .	6.0	14
34	Cyclic Boronates Inhibit All Classes of Î²-Lactamases. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	94
35	Structural and stereoelectronic insights into oxygenase-catalyzed formation of ethylene from 2-oxoglutarate. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4667-4672.	7.1	45
36	Crystallographic analyses of isoquinoline complexes reveal a new mode of metallo-Î²-lactamase inhibition. Chemical Communications, 2017, 53, 5806-5809.	4.1	29

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37	NMR-filtered virtual screening leads to non-metal chelating metallo-Î²-lactamase inhibitors. Chemical Science, 2017, 8, 928-937.	7.4	63
38	â€œTo Cross-Seed or Not To Cross-Seedâ€: A Pilot Study Using Metallo-Î²-lactamases. Crystal Growth and Design, 2017, 17, 913-924.	3.0	8
39	¹³C-Carbamylation as a mechanistic probe for the inhibition of class D Î²-lactamases by avibactam and halide ions. Organic and Biomolecular Chemistry, 2017, 15, 6024-6032.	2.8	19
40	Cationâ€“Ï€ Interactions Contribute to Substrate Recognition in Î³â€Butyrobetaine Hydroxylase Catalysis. Chemistry - A European Journal, 2016, 22, 1270-1276.	3.3	24
41	Use of ferrous iron by metallo-Î²-lactamases. Journal of Inorganic Biochemistry, 2016, 163, 185-193.	3.5	20
42	Structural basis of metallo-Î²-lactamase, serine-Î²-lactamase and penicillin-binding protein inhibition by cyclic boronates. Nature Communications, 2016, 7, 12406.	12.8	202
43	Frontispiece: Cationâ€“Ï€ Interactions Contribute to Substrate Recognition in Î³â€Butyrobetaine Hydroxylase Catalysis. Chemistry - A European Journal, 2016, 22, .	3.3	0
44	Comparison of Verona Integron-Borne Metallo-Î²-Lactamase (VIM) Variants Reveals Differences in Stability and Inhibition Profiles. Antimicrobial Agents and Chemotherapy, 2016, 60, 1377-1384.	3.2	38
45	Development and application of ligand-based NMR screening assays for Î³-butyrobetaine hydroxylase. MedChemComm, 2016, 7, 873-880.	3.4	8
46	Identification of a pathogenicFTOmutation by next-generation sequencing in a newborn with growth retardation and developmental delay. Journal of Medical Genetics, 2016, 53, 200-207.	3.2	50
47	Structural Basis of Metallo-Î²-Lactamase Inhibition by Captopril Stereoisomers. Antimicrobial Agents and Chemotherapy, 2016, 60, 142-150.	3.2	134
48	Crystal structure of human persulfide dioxygenase: structural basis of ethylmalonic encephalopathy. Human Molecular Genetics, 2015, 24, 2458-2469.	2.9	48
49	Structure of the Ribosomal Oxygenase OGFOD1 Provides Insights into the Regio- and Stereoselectivity of Prolyl Hydroxylases. Structure, 2015, 23, 639-652.	3.3	32
50	Studying the active-site loop movement of the SÃ£o Paolo metallo-Î²-lactamase-1. Chemical Science, 2015, 6, 956-963.	7.4	36
51	Introduction to Structural Studies on 2-Oxoglutarate-Dependent Oxygenases and Related Enzymes. 2-Oxoglutarate-Dependent Oxygenases, 2015, , 59-94.	0.8	30
52	Pharmacological Inhibition of FTO. PLoS ONE, 2015, 10, e0121829.	2.5	33
53	Structure of human RNA N6-methyladenine demethylase ALKBH5 provides insights into its mechanisms of nucleic acid recognition and demethylation. Nucleic Acids Research, 2014, 42, 4741-4754.	14.5	162
54	Comparison of the substrate selectivity and biochemical properties of human and bacterial Î³-butyrobetaine hydroxylase. Organic and Biomolecular Chemistry, 2014, 12, 6354-6358.	2.8	20

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55	Human oxygen sensing may have origins in prokaryotic elongation factor Tu prolyl-hydroxylation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13331-13336.	7.1	60
56	Structural insights into how 5-hydroxymethylation influences transcription factor binding. Chemical Communications, 2014, 50, 1794-1796.	4.1	71
57	Hydroxylation of the eukaryotic ribosomal decoding center affects translational accuracy. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 4019-4024.	7.1	111
58	Rhodanine hydrolysis leads to potent thioenolate mediated metallo-Î²-lactamase inhibition. Nature Chemistry, 2014, 6, 1084-1090.	13.6	110
59	Oxygenaseâ€Catalyzed Desymmetrization of N,Nâ€Dialkylâ€piperidineâ€4â€carboxylic Acids. Angewandte Chemie - International Edition, 2014, 53, 10925-10927.	13.8	13
60	Modulating carnitine levels by targeting its biosynthesis â€“ selective inhibition of Î³-butyrobetaine hydroxylase. Chemical Science, 2014, 5, 1765-1771.	7.4	23
61	Ribosomal oxygenases are structurally conserved from prokaryotes to humans. Nature, 2014, 510, 422-426.	27.8	87
62	Structural and mechanistic studies of theorf12gene product from the clavulanic acid biosynthesis pathway. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 1567-1579.	2.5	8
63	5-Carboxy-8-hydroxyquinoline is a broad spectrum 2-oxoglutarate oxygenase inhibitor which causes iron translocation. Chemical Science, 2013, 4, 3110.	7.4	142
64	The enzymes of Î²-lactam biosynthesis. Natural Product Reports, 2013, 30, 21-107.	10.3	208
65	Selective Small Molecule Probes for the Hypoxia Inducible Factor (HIF) Prolyl Hydroxylases. ACS Chemical Biology, 2013, 8, 1488-1496.	3.4	105
66	Substrate Selectivity Analyses of Factor Inhibiting Hypoxiaâ€Inducible Factor. Angewandte Chemie - International Edition, 2013, 52, 1700-1704.	13.8	30
67	Structural Basis for Inhibition of the Fat Mass and Obesity Associated Protein (FTO). Journal of Medicinal Chemistry, 2013, 56, 3680-3688.	6.4	128
68	An unusual mode of ironâ€“sulfur-cluster coordination in a teleost glutaredoxin. Biochemical and Biophysical Research Communications, 2013, 436, 491-496.	2.1	15
69	Binding of (5S)-Penicilloic Acid to Penicillin Binding Protein 3. ACS Chemical Biology, 2013, 8, 2112-2116.	3.4	23
70	Structure of arylamineN-acetyltransferase fromMycobacterium tuberculosisdetermined by cross-seeding with the homologous protein fromM. marinum: triumph over adversity. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 1433-1446.	2.5	24
71	Plant Growth Regulator Daminozide Is a Selective Inhibitor of Human KDM2/7 Histone Demethylases. Journal of Medicinal Chemistry, 2012, 55, 6639-6643.	6.4	125
72	Self-hydroxylation of the splicing factor lysyl hydroxylase, JMJD6. MedChemComm, 2012, 3, 80-85.	3.4	15

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73	Role of the jelly-roll fold in substrate binding by 2-oxoglutarate oxygenases. Current Opinion in Structural Biology, 2012, 22, 691-700.	5.7	171
74	Dynamic Combinatorial Mass Spectrometry Leads to Inhibitors of a 2-Oxoglutarate-Dependent Nucleic Acid Demethylase. Journal of Medicinal Chemistry, 2012, 55, 2173-2184.	6.4	49
75	Dynamic Combinatorial Chemistry Employing Boronic Acids/Boronate Esters Leads to Potent Oxygenase Inhibitors. Angewandte Chemie - International Edition, 2012, 51, 6672-6675.	13.8	82
76	Autocatalysed oxidative modifications to 2â€oxoglutarate dependent oxygenases. FEBS Journal, 2012, 279, 1563-1575.	4.7	55
77	Linking of 2â€Oxoglutarate and Substrate Binding Sites Enables Potent and Highly Selective Inhibition of JmjC Histone Demethylases. Angewandte Chemie - International Edition, 2012, 51, 1631-1634.	13.8	64
78	Inhibition of 2-oxoglutarate dependent oxygenases. Chemical Society Reviews, 2011, 40, 4364.	38.1	336
79	Crystal structure of PHYHD1A, a 2OG oxygenase related to phytanoyl-CoA hydroxylase. Biochemical and Biophysical Research Communications, 2011, 408, 553-558.	2.1	20
80	Studies on the Reaction of Nitric Oxide with the Hypoxia-Inducible Factor Prolyl Hydroxylase Domain 2 (EGLN1). Journal of Molecular Biology, 2011, 410, 268-279.	4.2	54
81	Factorâ€inhibiting hypoxiaâ€inducible factor (FIH) catalyses the postâ€translational hydroxylation of histidinyl residues within ankyrin repeat domains. FEBS Journal, 2011, 278, 1086-1097.	4.7	68
82	The oncometabolite 2â€hydroxyglutarate inhibits histone lysine demethylases. EMBO Reports, 2011, 12, 463-469.	4.5	851
83	Inhibition of Histone Demethylases by 4â€Carboxyâ€2,2â€²â€Bipyridyl Compounds. ChemMedChem, 2011, 6, 759-764.	3.7	76
84	Asparagine and Aspartate Hydroxylation of the Cytoskeletal Ankyrin Family Is Catalyzed by Factor-inhibiting Hypoxia-inducible Factor. Journal of Biological Chemistry, 2011, 286, 7648-7660.	3.4	63
85	Structural studies on human 2-oxoglutarate dependent oxygenases. Current Opinion in Structural Biology, 2010, 20, 659-672.	5.7	238
86	Crystal structure of the PHF8 Jumonji domain, an N^{Îµ}â€methyl lysine demethylase. FEBS Letters, 2010, 584, 825-830.	2.8	35
87	Structural and Mechanistic Studies on Î³-Butyrobetaine Hydroxylase. Chemistry and Biology, 2010, 17, 1316-1324.	6.0	78
88	Structural basis for binding of cyclic 2-oxoglutarate analogues to factor-inhibiting hypoxia-inducible factor. Bioorganic and Medicinal Chemistry Letters, 2010, 20, 6125-6128.	2.2	22
89	Crystallographic and mass spectrometric analyses of a tandem GNAT protein from the clavulanic acid biosynthesis pathway. Proteins: Structure, Function and Bioinformatics, 2010, 78, 1398-1407.	2.6	16
90	Mutation analysis of HIF prolyl hydroxylases (PHD/EGLN) in individuals with features of phaeochromocytoma and renal cell carcinoma susceptibility. Endocrine-Related Cancer, 2010, 18, 73-83.	3.1	49

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91	Selective Inhibitors of the JMJD2 Histone Demethylases: Combined Nondenaturing Mass Spectrometric Screening and Crystallographic Approaches. Journal of Medicinal Chemistry, 2010, 53, 1810-1818.	6.4	146
92	Crystal Structure of the 2-Oxoglutarate- and Fe(II)-Dependent Lysyl Hydroxylase JMJD6. Journal of Molecular Biology, 2010, 401, 211-222.	4.2	85
93	Crystal structure of the 2-oxoglutarate- and Fe(II)-dependent lysyl hydroxylase JMJD6. Journal of Molecular Biology, 2010, 401, 211-22.	4.2	46
94	Structural Basis for Binding of Hypoxia-Inducible Factor to the Oxygen-Sensing Prolyl Hydroxylases. Structure, 2009, 17, 981-989.	3.3	205
95	Asparagine Î²-hydroxylation stabilizes the ankyrin repeat domain fold. Molecular BioSystems, 2009, 5, 52-58.	2.9	49
96	Inhibitor Scaffolds for 2-Oxoglutarate-Dependent Histone Lysine Demethylases. Journal of Medicinal Chemistry, 2008, 51, 7053-7056.	6.4	221
97	Kinetic Rationale for Selectivity toward N- and C-terminal Oxygen-dependent Degradation Domain Substrates Mediated by a Loop Region of Hypoxia-Inducible Factor Prolyl Hydroxylases. Journal of Biological Chemistry, 2008, 283, 3808-3815.	3.4	72
98	Regulation of Jumonji-domain-containing histone demethylases by hypoxia-inducible factor (HIF)-1Î±. Biochemical Journal, 2008, 416, 387-394.	3.7	278
99	Evidence That Two Enzyme-derived Histidine Ligands Are Sufficient for Iron Binding and Catalysis by Factor Inhibiting HIF (FIH). Journal of Biological Chemistry, 2008, 283, 25971-25978.	3.4	46
100	Asparaginyl Hydroxylation of the Notch Ankyrin Repeat Domain by Factor Inhibiting Hypoxia-inducible Factor. Journal of Biological Chemistry, 2007, 282, 24027-24038.	3.4	189
101	Structural and Mechanistic Studies on the Inhibition of the Hypoxia-inducible Transcription Factor Hydroxylases by Tricarboxylic Acid Cycle Intermediates. Journal of Biological Chemistry, 2007, 282, 3293-3301.	3.4	194
102	Structural and mechanistic studies on the peroxisomal oxygenase phytanoyl-CoA 2-hydroxylase (PhyH). Biochemical Society Transactions, 2007, 35, 870-875.	3.4	22
103	The Obesity-AssociatedFTOGene Encodes a 2-Oxoglutarate-Dependent Nucleic Acid Demethylase. Science, 2007, 318, 1469-1472.	12.6	1,305
104	Crystal structures of histone demethylase JMJD2A reveal basis for substrate specificity. Nature, 2007, 448, 87-91.	27.8	297
105	Structural studies on 2-oxoglutarate oxygenases and related double-stranded Î²-helix fold proteins. Journal of Inorganic Biochemistry, 2006, 100, 644-669.	3.5	390
106	Cellular oxygen sensing: Crystal structure of hypoxia-inducible factor prolyl hydroxylase (PHD2). Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9814-9819.	7.1	310
107	Posttranslational hydroxylation of ankyrin repeats in IÂB proteins by the hypoxia-inducible factor (HIF) asparaginyl hydroxylase, factor inhibiting HIF (FIH). Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14767-14772.	7.1	258
108	Oxidation by 2-oxoglutarate oxygenases: non-haem iron systems in catalysis and signalling. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2005, 363, 807-828.	3.4	56

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109	Structural and Mechanistic Studies on Carboxymethylproline Synthase (CarB), a Unique Member of the Crotonase Superfamily Catalyzing the First Step in Carbapenem Biosynthesis*. Journal of Biological Chemistry, 2005, 280, 34956-34965.	3.4	31
110	Structure of Human Phytanoyl-CoA 2-Hydroxylase Identifies Molecular Mechanisms of Refsum Disease*. Journal of Biological Chemistry, 2005, 280, 41101-41110.	3.4	78
111	Selective Inhibition of Factor Inhibiting Hypoxia-Inducible Factor. Journal of the American Chemical Society, 2005, 127, 7680-7681.	13.7	128
112	OS-9. Molecular Cell, 2005, 17, 472-473.	9.7	8
113	The inhibition of factor inhibiting hypoxia-inducible factor (FIH) by Î²-oxocarboxylic acids. Chemical Communications, 2005, , 5438.	4.1	30
114	Rhamnogalacturonan lyase reveals a unique three-domain modular structure for polysaccharide lyase family 4. FEBS Letters, 2004, 565, 188-194.	2.8	41
115	Clinical features and management of gamma-hydroxybutyrate (GHB) withdrawal: a review. Drug and Alcohol Dependence, 2004, 75, 3-9.	3.2	157
116	Disruption of dimerization and substrate phosphorylation inhibit factor inhibiting hypoxia-inducible factor (FIH) activity. Biochemical Journal, 2004, 383, 429-437.	3.7	71
117	Factor inhibiting hypoxia-inducible factor (FIH) and other asparaginyl hydroxylases. Biochemical Society Transactions, 2004, 32, 943-945.	3.4	31
118	New Structural Insights into the Inhibition of Serine Proteases by Cyclic Peptides from Bacteria. Chemistry and Biology, 2003, 10, 898-900.	6.0	16
119	Structures of Two Kinetic Intermediates Reveal Species Specificity of Penicillin-binding Proteins. Journal of Molecular Biology, 2002, 322, 111-122.	4.2	83
120	Crystallization and preliminary X-ray characterization of a thermostable pectate lyase fromThermotoga maritima. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 709-711.	2.5	4
121	A 1.2-A snapshot of the final step of bacterial cell wall biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 1427-1431.	7.1	115
122	Crystal structure of penicillin G acylase from the bro1 mutant strain of providencia rettgeri. Protein Science, 1999, 8, 1971-1981.	7.6	46