Michael A Mcdonough

List of Publications by Year in Descending Order

122 papers	8,658 citations	47 h-index	92 g-index
131 ext. papers	9,569 ext. citations	8.5 avg, IF	5.47 L-index

#	Paper	IF	Citations
122	Imitation of β-lactam binding enables broad-spectrum metallo-β-lactamase inhibitors.. *Nature Chemistry*, **2021**,	17.6	8
121	Structure-Based Design of Selective Fat Mass and Obesity Associated Protein (FTO) Inhibitors. *Journal of Medicinal Chemistry*, **2021**, 64, 16609-16625	8.3	2
120	Faropenem reacts with serine and metallo-β-lactamases to give multiple products. *European Journal of Medicinal Chemistry*, **2021**, 215, 113257	6.8	5
119	Structural Basis of Prolyl Hydroxylase Domain Inhibition by Molidustat. *ChemMedChem*, **2021**, 16, 2082-2088	3.7	6
118	Human Oxygenase Variants Employing a Single Protein FeII Ligand Are Catalytically Active. *Angewandte Chemie*, **2021**, 133, 14778-14784	3.6	
117	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	8.3	2
116	Human Oxygenase Variants Employing a Single Protein Fe Ligand Are Catalytically Active. *Angewandte Chemie - International Edition*, **2021**, 60, 14657-14663	16.4	3
115	The methyltransferase METTL9 mediates pervasive 1-methylhistidine modification in mammalian proteomes. *Nature Communications*, **2021**, 12, 891	17.4	17
114	X-ray free-electron laser studies reveal correlated motion during isopenicillin synthase catalysis. *Science Advances*, **2021**, 7,	14.3	4
113	Inhibition of JMJD6 by 2-Oxoglutarate Mimics. *ChemMedChem*, **2021**, 17, e202100398	3.7	1
112	MeLAD: an integrated resource for metalloenzyme-ligand associations. *Bioinformatics*, **2020**, 36, 904-909	7.2	4
111	A human protein hydroxylase that accepts D-residues. *Communications Chemistry*, **2020**, 3,	6.3	4
110	Aspartate/asparagine-β-hydroxylase: a high-throughput mass spectrometric assay for discovery of small molecule inhibitors. *Scientific Reports*, **2020**, 10, 8650	4.9	9
109	Anaerobic fixed-target serial crystallography. *IUCrJ*, **2020**, 7, 901-912	4.7	5
108	Broad Spectrum β-Lactamase Inhibition by a Thioether Substituted Bicyclic Boronate. *ACS Infectious Diseases*, **2020**, 6, 1398-1404	5.5	10
107	Structure-Activity Relationship and Crystallographic Studies on 4-Hydroxypyrimidine HIF Prolyl Hydroxylase Domain Inhibitors. *ChemMedChem*, **2020**, 15, 270-273	3.7	12
106	A small-molecule probe for monitoring binding to prolyl hydroxylase domain 2 by fluorescence polarisation. *Chemical Communications*, **2020**, 56, 14199-14202	5.8	2

105	Biochemical and biophysical analyses of hypoxia sensing prolyl hydroxylases from and. *Journal of Biological Chemistry*, **2020**, 295, 16545-16561	5.4	3
104	Structures of 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	11.5	14
103	Biochemical and structural investigations clarify the substrate selectivity of the 2-oxoglutarate oxygenase JMJD6. *Journal of Biological Chemistry*, **2019**, 294, 11637-11652	5.4	13
102	Studies on spiro[4.5]decanone prolyl hydroxylase domain inhibitors. *MedChemComm*, **2019**, 10, 500-504	5	5
101	Studies on the inhibition of AmpC and other ß-lactamases by cyclic boronates. *Biochimica Et Biophysica Acta - General Subjects*, **2019**, 1863, 742-748	4	24
100	Aspartate/asparagine-ß-hydroxylase crystal structures reveal an unexpected epidermal growth factor-like domain substrate disulfide pattern. *Nature Communications*, **2019**, 10, 4910	17.4	19
99	Crystal structures of VIM-1 complexes explain active site heterogeneity in VIM-class metallo-ß-lactamases. *FEBS Journal*, **2019**, 286, 169-183	5.7	21
98	Structure activity relationship studies on rhodanines and derived enethiol inhibitors of metallo-ß-lactamases. *Bioorganic and Medicinal Chemistry*, **2018**, 26, 2928-2936	3.4	16
97	Rh(III)-Catalyzed directed C–H carbenoid coupling reveals aromatic bisphosphonates inhibiting metallo- and Serine-ß-lactamases. *Organic Chemistry Frontiers*, **2018**, 5, 1288-1292	5.2	17
96	In Silico Fragment-Based Design Identifies Subfamily B1 Metallo-ß-lactamase Inhibitors. *Journal of Medicinal Chemistry*, **2018**, 61, 1255-1260	8.3	32
95	YcfD is a thermophilic oxygen-dependent ribosomal protein uL16 oxygenase. *Extremophiles*, **2018**, 22, 553-562	3	5
94	Biosynthesis of histone messenger RNA employs a specific 3' end endonuclease. *ELife*, **2018**, 7,	8.9	9
93	Born to sense: biophysical analyses of the oxygen sensing prolyl hydroxylase from the simplest animal. *Hypoxia (Auckland, N Z)*, **2018**, 6, 57-71	2.1	7
92	Cyclic Boronates Inhibit All Classes of ß-Lactamases. *Antimicrobial Agents and Chemotherapy*, **2017**, 61,	5.9	75
91	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	11.5	33
90	Crystallographic analyses of isoquinoline complexes reveal a new mode of metallo-ß-lactamase inhibition. *Chemical Communications*, **2017**, 53, 5806-5809	5.8	24
89	NMR-filtered virtual screening leads to non-metal chelating metallo-ß-lactamase inhibitors. *Chemical Science*, **2017**, 8, 928-937	9.4	52
88	To Cross-Seed or Not To Cross-Seed: A Pilot Study Using Metallo-ß-lactamases. *Crystal Growth and Design*, **2017**, 17, 913-924	3.5	6

87	C-Carbamylation as a mechanistic probe for the inhibition of class D β-lactamases by avibactam and halide ions. *Organic and Biomolecular Chemistry*, **2017**, 15, 6024-6032	3.9	12
86	Structural Basis of Metallo-β-Lactamase Inhibition by Captopril Stereoisomers. *Antimicrobial Agents and Chemotherapy*, **2016**, 60, 142-50	5.9	98
85	Use of ferrous iron by metallo-β-lactamases. *Journal of Inorganic Biochemistry*, **2016**, 163, 185-193	4.2	13
84	Structural basis of metallo-β-lactamase, serine-β-lactamase and penicillin-binding protein inhibition by cyclic boronates. *Nature Communications*, **2016**, 7, 12406	17.4	162
83	Development and application of ligand-based NMR screening assays for γ-butyrobetaine hydroxylase. *MedChemComm*, **2016**, 7, 873-880	5	5
82	Identification of a pathogenic FTO mutation by next-generation sequencing in a newborn with growth retardation and developmental delay. *Journal of Medical Genetics*, **2016**, 53, 200-7	5.8	36
81	Cation-π Interactions Contribute to Substrate Recognition in γ-Butyrobetaine Hydroxylase Catalysis. *Chemistry - A European Journal*, **2016**, 22, 1270-6	4.8	19
80	Structure of the ribosomal oxygenase OGFOD1 provides insights into the regio- and stereoselectivity of prolyl hydroxylases. *Structure*, **2015**, 23, 639-52	5.2	24
79	Studying the active-site loop movement of the São Paolo metallo-β-lactamase-1: Electronic supplementary information (ESI) available: Procedures for protein expression and purification, F-labelling, crystallisation, data collection, and structure determination, table of crystallographic data, table of crystallographic parameters and refinement statistics, figures showing binding mode	9.4	34
78	Comparison of Verona Integron-Borne Metallo-β-Lactamase (VIM) Variants Reveals Differences in Stability and Inhibition Profiles. *Antimicrobial Agents and Chemotherapy*, **2015**, 60, 1377-84	5.9	30
77	Crystal structure of human persulfide dioxygenase: structural basis of ethylmalonic encephalopathy. *Human Molecular Genetics*, **2015**, 24, 2458-69	5.6	36
76	Pharmacological inhibition of FTO. *PLoS ONE*, **2015**, 10, e0121829	3.7	25
75	CHAPTER 2:Introduction to Structural Studies on 2-Oxoglutarate-Dependent Oxygenases and Related Enzymes. *2-Oxoglutarate-Dependent Oxygenases*, **2015**, 59-94	1.8	24
74	Structural insights into how 5-hydroxymethylation influences transcription factor binding. *Chemical Communications*, **2014**, 50, 1794-6	5.8	51
73	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, 4019-24	11.5	91
72	Rhodanine hydrolysis leads to potent thioenolate mediated metallo-β-lactamase inhibition. *Nature Chemistry*, **2014**, 6, 1084-90	17.6	94
71	Oxygenase-catalyzed desymmetrization of N,N-dialkyl-piperidine-4-carboxylic acids. *Angewandte Chemie - International Edition*, **2014**, 53, 10925-7	16.4	11
70	Modulating carnitine levels by targeting its biosynthesis pathway - selective inhibition of γ-butyrobetaine hydroxylase. *Chemical Science*, **2014**, 5, 1765-1771	9.4	19

69	Oxygenase-Catalyzed Desymmetrization of N,N-Dialkyl-piperidine-4-carboxylic Acids. *Angewandte Chemie*, **2014**, 126, 11105-11107	3.6	4
68	Ribosomal oxygenases are structurally conserved from prokaryotes to humans. *Nature*, **2014**, 510, 422-426	36.4	71
67	Structure of human RNA N6-methyladenine demethylase ALKBH5 provides insights into its mechanisms of nucleic acid recognition and demethylation. *Nucleic Acids Research*, **2014**, 42, 4741-54	20.1	117
66	Comparison of the substrate selectivity and biochemical properties of human and bacterial γ-butyrobetaine hydroxylase. *Organic and Biomolecular Chemistry*, **2014**, 12, 6354-8	3.9	13
65	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, 13331-6	11.5	52
64	Structural and mechanistic studies of the orf12 gene product from the clavulanic acid biosynthesis pathway. *Acta Crystallographica Section D: Biological Crystallography*, **2013**, 69, 1567-79		6
63	5-Carboxy-8-hydroxyquinoline is a Broad Spectrum 2-Oxoglutarate Oxygenase Inhibitor which Causes Iron Translocation. *Chemical Science*, **2013**, 4, 3110-3117	9.4	113
62	The enzymes of β-lactam biosynthesis. *Natural Product Reports*, **2013**, 30, 21-107	15.1	172
61	Selective small molecule probes for the hypoxia inducible factor (HIF) prolyl hydroxylases. *ACS Chemical Biology*, **2013**, 8, 1488-96	4.9	84
60	Substrate selectivity analyses of factor inhibiting hypoxia-inducible factor. *Angewandte Chemie - International Edition*, **2013**, 52, 1700-4	16.4	25
59	Structural basis for inhibition of the fat mass and obesity associated protein (FTO). *Journal of Medicinal Chemistry*, **2013**, 56, 3680-8	8.3	108
58	An unusual mode of iron-sulfur-cluster coordination in a teleost glutaredoxin. *Biochemical and Biophysical Research Communications*, **2013**, 436, 491-6	3.4	12
57	Binding of (5S)-penicilloic acid to penicillin binding protein 3. *ACS Chemical Biology*, **2013**, 8, 2112-6	4.9	18
56	Structure of arylamine N-acetyltransferase from Mycobacterium tuberculosis determined by cross-seeding with the homologous protein from M. marinum: triumph over adversity. *Acta Crystallographica Section D: Biological Crystallography*, **2013**, 69, 1433-46		19
55	Substrate Selectivity Analyses of Factor Inhibiting Hypoxia-Inducible Factor. *Angewandte Chemie*, **2013**, 125, 1744-1748	3.6	0
54	Autocatalysed oxidative modifications to 2-oxoglutarate dependent oxygenases. *FEBS Journal*, **2012**, 279, 1563-75	5.7	47
53	Linking of 2-oxoglutarate and substrate binding sites enables potent and highly selective inhibition of JmjC histone demethylases. *Angewandte Chemie - International Edition*, **2012**, 51, 1631-4	16.4	59
52	Plant growth regulator daminozide is a selective inhibitor of human KDM2/7 histone demethylases. *Journal of Medicinal Chemistry*, **2012**, 55, 6639-43	8.3	102

51	Self-hydroxylation of the splicing factor lysyl hydroxylase, JMJD6. *MedChemComm*, **2012**, 3, 80-85	5	15
50	Role of the jelly-roll fold in substrate binding by 2-oxoglutarate oxygenases. *Current Opinion in Structural Biology*, **2012**, 22, 691-700	8.1	146
49	Dynamic combinatorial mass spectrometry leads to inhibitors of a 2-oxoglutarate-dependent nucleic acid demethylase. *Journal of Medicinal Chemistry*, **2012**, 55, 2173-84	8.3	43
48	Linking of 2-Oxoglutarate and Substrate Binding Sites Enables Potent and Highly Selective Inhibition of JmjC Histone Demethylases. *Angewandte Chemie*, **2012**, 124, 1663-1666	3.6	8
47	Dynamic Combinatorial Chemistry Employing Boronic Acids/Boronate Esters Leads to Potent Oxygenase Inhibitors. *Angewandte Chemie*, **2012**, 124, 6776-6779	3.6	24
46	Dynamic combinatorial chemistry employing boronic acids/boronate esters leads to potent oxygenase inhibitors. *Angewandte Chemie - International Edition*, **2012**, 51, 6672-5	16.4	71
45	Inhibition of 2-oxoglutarate dependent oxygenases. *Chemical Society Reviews*, **2011**, 40, 4364-97	58.5	295
44	Crystal structure of PHYHD1A, a 2OG oxygenase related to phytanoyl-CoA hydroxylase. *Biochemical and Biophysical Research Communications*, **2011**, 408, 553-8	3.4	13
43	Studies on the reaction of nitric oxide with the hypoxia-inducible factor prolyl hydroxylase domain 2 (EGLN1). *Journal of Molecular Biology*, **2011**, 410, 268-79	6.5	47
42	Factor-inhibiting hypoxia-inducible factor (FIH) catalyses the post-translational hydroxylation of histidinyl residues within ankyrin repeat domains. *FEBS Journal*, **2011**, 278, 1086-97	5.7	60
41	The oncometabolite 2-hydroxyglutarate inhibits histone lysine demethylases. *EMBO Reports*, **2011**, 12, 463-9	6.5	719
40	Inhibition of histone demethylases by 4-carboxy-2,2'-bipyridyl compounds. *ChemMedChem*, **2011**, 6, 759-764	3.7	69
39	Mutation analysis of HIF prolyl hydroxylases (PHD/EGLN) in individuals with features of phaeochromocytoma and renal cell carcinoma susceptibility. *Endocrine-Related Cancer*, **2011**, 18, 73-83	5.7	45
38	Asparagine and aspartate hydroxylation of the cytoskeletal ankyrin family is catalyzed by factor-inhibiting hypoxia-inducible factor. *Journal of Biological Chemistry*, **2011**, 286, 7648-60	5.4	57
37	Selective inhibitors of the JMJD2 histone demethylases: combined nondenaturing mass spectrometric screening and crystallographic approaches. *Journal of Medicinal Chemistry*, **2010**, 53, 1810-8	8.3	139
36	Crystal Structure of the 2-Oxoglutarate- and Fe(II)-Dependent Lysyl Hydroxylase JMJD6. *Journal of Molecular Biology*, **2010**,	6.5	74
35	Structural studies on human 2-oxoglutarate dependent oxygenases. *Current Opinion in Structural Biology*, **2010**, 20, 659-72	8.1	210
34	Crystal structure of the PHF8 Jumonji domain, an Nepsilon-methyl lysine demethylase. *FEBS Letters* , **2010**, 584, 825-30	3.8	34

33	Structural and mechanistic studies on Ebutyrobetaine hydroxylase. *Chemistry and Biology*, **2010**, 17, 1316-24		70
32	Structural basis for binding of cyclic 2-oxoglutarate analogues to factor-inhibiting hypoxia-inducible factor. *Bioorganic and Medicinal Chemistry Letters*, **2010**, 20, 6125-8	2.9	18
31	Crystallographic and mass spectrometric analyses of a tandem GNAT protein from the clavulanic acid biosynthesis pathway. *Proteins: Structure, Function and Bioinformatics*, **2010**, 78, 1398-407	4.2	12
30	Crystal structure of the 2-oxoglutarate- and Fe(II)-dependent lysyl hydroxylase JMJD6. *Journal of Molecular Biology*, **2010**, 401, 211-22	6.5	42
29	Structural basis for binding of hypoxia-inducible factor to the oxygen-sensing prolyl hydroxylases. *Structure*, **2009**, 17, 981-9	5.2	174
28	Asparagine beta-hydroxylation stabilizes the ankyrin repeat domain fold. *Molecular BioSystems*, **2009**, 5, 52-8		44
27	Inhibitor scaffolds for 2-oxoglutarate-dependent histone lysine demethylases. *Journal of Medicinal Chemistry*, **2008**, 51, 7053-6	8.3	202
26	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, 3808-15	5.4	64
25	Regulation of Jumonji-domain-containing histone demethylases by hypoxia-inducible factor (HIF)-1alpha. *Biochemical Journal*, **2008**, 416, 387-94	3.8	245
24	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, 25971-8	5.4	43
23	Crystal structures of histone demethylase JMJD2A reveal basis for substrate specificity. *Nature*, **2007**, 448, 87-91	50.4	266
22	Asparaginyl hydroxylation of the Notch ankyrin repeat domain by factor inhibiting hypoxia-inducible factor. *Journal of Biological Chemistry*, **2007**, 282, 24027-38	5.4	167
21	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, 3293-301	5.4	164
20	Structural and mechanistic studies on the peroxisomal oxygenase phytanoyl-CoA 2-hydroxylase (PhyH). *Biochemical Society Transactions*, **2007**, 35, 870-5	5.1	15
19	The obesity-associated FTO gene encodes a 2-oxoglutarate-dependent nucleic acid demethylase. *Science*, **2007**, 318, 1469-72	33.3	1119
18	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, 9814-9	11.5	278
17	Posttranslational hydroxylation of ankyrin repeats in IkappaB 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, 14767-72	11.5	235
16	Structural studies on 2-oxoglutarate oxygenases and related double-stranded beta-helix fold proteins. *Journal of Inorganic Biochemistry*, **2006**, 100, 644-69	4.2	348

15	Selective inhibition of factor inhibiting hypoxia-inducible factor. *Journal of the American Chemical Society*, **2005**, 127, 7680-1	16.4	113
14	OS-9: another piece in the HIF complex story. *Molecular Cell*, **2005**, 17, 472-3	17.6	8
13	The inhibition of factor inhibiting hypoxia-inducible factor (FIH) by beta-oxocarboxylic acids. *Chemical Communications*, **2005**, 5438-40	5.8	28
12	Oxidation by 2-oxoglutarate oxygenases: non-haem iron systems in catalysis and signalling. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2005**, 363, 807-28; discussion 1035-40	3	53
11	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, 34956-65	5.4	29
10	Structure of human phytanoyl-CoA 2-hydroxylase identifies molecular mechanisms of Refsum disease. *Journal of Biological Chemistry*, **2005**, 280, 41101-10	5.4	73
9	Rhamnogalacturonan lyase reveals a unique three-domain modular structure for polysaccharide lyase family 4. *FEBS Letters*, **2004**, 565, 188-94	3.8	35
8	Clinical features and management of gamma-hydroxybutyrate (GHB) withdrawal: a review. *Drug and Alcohol Dependence*, **2004**, 75, 3-9	4.9	129
7	Disruption of dimerization and substrate phosphorylation inhibit factor inhibiting hypoxia-inducible factor (FIH) activity. *Biochemical Journal*, **2004**, 383, 429-37	3.8	62
6	Factor inhibiting hypoxia-inducible factor (FIH) and other asparaginyl hydroxylases. *Biochemical Society Transactions*, **2004**, 32, 943-5	5.1	25
5	New structural insights into the inhibition of serine proteases by cyclic peptides from bacteria. *Chemistry and Biology*, **2003**, 10, 898-900		16
4	Crystallization and preliminary X-ray characterization of a thermostable pectate lyase from Thermotoga maritima. *Acta Crystallographica Section D: Biological Crystallography*, **2002**, 58, 709-11		4
3	Structures of two kinetic intermediates reveal species specificity of penicillin-binding proteins. *Journal of Molecular Biology*, **2002**, 322, 111-22	6.5	78
2	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, 1427-31	11.5	105
1	Crystal structure of penicillin G acylase from the Bro1 mutant strain of Providencia rettgeri. *Protein Science*, **1999**, 8, 1971-81	6.3	45