# Michael J Mcpherson

## List of Publications by Citations



| 119 | 4,925 | 36 | 68 |
|---|---|---|---|
| papers | citations | h-index | g-index |
| 127 | 5,428 | 6.6 | 4.99 |
| ext. papers | ext. citations | avg, IF | L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 119 | Novel thioether bond revealed by a 1.7 A crystal structure of galactose oxidase. *Nature*, **1991**, 350, 87-90 | 50.4 | 675 |
| 118 | Engineered oryzacystatin-I expressed in transgenic hairy roots confers resistance to Globodera pallida. *Plant Journal*, **1995**, 8, 121-31 | 6.9 | 210 |
| 117 | Crystal structure of a prokaryotic homologue of the mammalian oligopeptide-proton symporters, PepT1 and PepT2. *EMBO Journal*, **2011**, 30, 417-26 | 13 | 209 |
| 116 | Production of self-assembling biomaterials for tissue engineering. *Trends in Biotechnology*, **2009**, 27, 423-33 | 15.1 | 188 |
| 115 | Resistance to both cyst and root-knot nematodes conferred by transgenic Arabidopsis expressing a modified plant cystatin. *Plant Journal*, **1997**, 12, 455-61 | 6.9 | 160 |
| 114 | Visualization of dioxygen bound to copper during enzyme catalysis. *Science*, **1999**, 286, 1724-8 | 33.3 | 154 |
| 113 | Developmental expression and biochemical analysis of the Arabidopsis atao1 gene encoding an H2O2-generating diamine oxidase. *Plant Journal*, **1998**, 13, 781-91 | 6.9 | 151 |
| 112 | Catalytic mechanism of the quinoenzyme amine oxidase from Escherichia coli: exploring the reductive half-reaction. *Biochemistry*, **1997**, 36, 1608-20 | 3.2 | 144 |
| 111 | Enhanced transgenic plant resistance to nematodes by dual proteinase inhibitor constructs. *Planta*, **1998**, 204, 472-9 | 4.7 | 133 |
| 110 | Adhiron: a stable and versatile peptide display scaffold for molecular recognition applications. *Protein Engineering, Design and Selection*, **2014**, 27, 145-55 | 1.9 | 103 |
| 109 | Affimer proteins are versatile and renewable affinity reagents. *ELife*, **2017**, 6, | 8.9 | 103 |
| 108 | Cloning and molecular analysis of the pea seedling copper amine oxidase. *Journal of Biological Chemistry*, **1995**, 270, 16939-46 | 5.4 | 99 |
| 107 | Crystal structure of the precursor of galactose oxidase: an unusual self-processing enzyme. *Proceedings of the National Academy of Sciences of the United States of America*, **2001**, 98, 12932-7 | 11.5 | 97 |
| 106 | RNA interference of dual oxidase in the plant nematode Meloidogyne incognita. *Molecular Plant-Microbe Interactions*, **2005**, 18, 1099-106 | 3.6 | 92 |
| 105 | The glutamate dehydrogenase gene of Clostridium symbiosum. Cloning by polymerase chain reaction, sequence analysis and over-expression in Escherichia coli. *FEBS Journal*, **1992**, 206, 151-9 | | 89 |
| 104 | Engineering plants for nematode resistance. *Annual Review of Phytopathology*, **2003**, 41, 615-39 | 10.8 | 88 |
| 103 | Complete nucleotide sequence of the Escherichia coli gdhA gene. *Nucleic Acids Research*, **1983**, 11, 5257-66 | 2.1 | 88 |

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| 102 | Label-free electrochemical impedance biosensor to detect human interleukin-8 in serum with sub-pg/ml sensitivity. *Biosensors and Bioelectronics*, **2016**, 80, 607-613 | 11.8 | 87 |
| 101 | The stacking tryptophan of galactose oxidase: a second-coordination sphere residue that has profound effects on tyrosyl radical behavior and enzyme catalysis. *Biochemistry*, **2007**, 46, 4606-18 | 3.2 | 85 |
| 100 | Continual green-fluorescent protein monitoring of cauliflower mosaic virus 35S promoter activity in nematode-induced feeding cells in Arabidopsis thaliana. *Molecular Plant-Microbe Interactions*, **1997**, 10, 394-400 | 3.6 | 84 |
| 99 | The active site base controls cofactor reactivity in Escherichia coli amine oxidase: x-ray crystallographic studies with mutational variants. *Biochemistry*, **1999**, 38, 8217-27 | 3.2 | 84 |
| 98 | Recombinant self-assembling peptides as biomaterials for tissue engineering. *Biomaterials*, **2010**, 31, 9395-405 | 15.6 | 81 |
| 97 | Galactose Oxidase Pro-Sequence Cleavage and Cofactor Assembly Are Self-Processing Reactions. *Journal of the American Chemical Society*, **2000**, 122, 990-991 | 16.4 | 76 |
| 96 | RNA interference and plant parasitic nematodes. *Trends in Plant Science*, **2005**, 10, 362-7 | 13.1 | 75 |
| 95 | Designs for engineered resistance to root-parasitic nematodes. *Trends in Biotechnology*, **1995**, 13, 369-374 | 15.1 | 54 |
| 94 | Transgenic resistance to the nematode Rotylenchulus reniformis conferred by Arabidopsis thaliana plants expressing proteinase inhibitors. *Molecular Breeding*, **2000**, 6, 257-264 | 3.4 | 47 |
| 93 | Combinatorial microfluidic droplet engineering for biomimetic material synthesis. *Science Advances* , **2016**, 2, e1600567 | 14.3 | 44 |
| 92 | Additive effects of plant expressed double-stranded RNAs on root-knot nematode development. *International Journal for Parasitology*, **2010**, 40, 855-64 | 4.3 | 42 |
| 91 | Analysis of the distribution of copper amine oxidase in cell walls of legume seedlings. *Planta*, **2001**, 214, 37-45 | 4.7 | 42 |
| 90 | Rational molecular design of complementary self-assembling peptide hydrogels. *Advanced Healthcare Materials*, **2012**, 1, 640-5 | 10.1 | 41 |
| 89 | Cross-link formation of the cysteine 228-tyrosine 272 catalytic cofactor of galactose oxidase does not require dioxygen. *Biochemistry*, **2008**, 47, 10428-39 | 3.2 | 40 |
| 88 | Gene expression in nematode-infected plant roots. *Molecular Genetics and Genomics*, **1991**, 226, 361-6 | | 38 |
| 87 | Exploiting orientation-selective DEER: determining molecular structure in systems containing Cu(ii) centres. *Physical Chemistry Chemical Physics*, **2016**, 18, 5981-94 | 3.6 | 37 |
| 86 | A peptide inhibitor of vascular adhesion protein-1 (VAP-1) blocks leukocyte-endothelium interactions under shear stress. *European Journal of Immunology*, **2004**, 34, 2276-85 | 6.1 | 37 |
| 85 | Bioproduction and characterization of a pH responsive self-assembling peptide. *Biotechnology and Bioengineering*, **2009**, 103, 241-51 | 4.9 | 36 |

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| 84 | Kinetic Studies on the Redox Interconversion of GOase(semi) and GOase(ox) Forms of Galactose Oxidase with Inorganic Complexes as Redox Partners. *Inorganic Chemistry*, **1997**, 36, 4520-4525 | 5.1 | 36 |
| 83 | Purification, characterization, and identification of a novel bifunctional catalase-phenol oxidase from Scytalidium thermophilum. *Applied Microbiology and Biotechnology*, **2008**, 79, 407-15 | 5.7 | 36 |
| 82 | Cellulose-triggered sporulation in the galactose oxidase-producing fungus Cladobotryum (Dactylium) dendroides NRRL 2903 and its re-identification as a species of Fusarium. *Mycological Research*, **1994**, 98, 474-480 | | 35 |
| 81 | Three-dimensional structure of galactose oxidase: an enzyme with a built-in secondary cofactor. *Faraday Discussions*, **1992**, 75-84 | 3.6 | 35 |
| 80 | Localisation of a strongly conserved section of coding sequence in glutamate dehydrogenase genes. *FEBS Letters*, **1982**, 147, 21-5 | 3.8 | 35 |
| 79 | Characterization of cDNAs encoding serine proteinases from the soybean cyst nematode Heterodera glycines. *Molecular and Biochemical Parasitology*, **1997**, 89, 195-207 | 1.9 | 34 |
| 78 | Structure and mechanism of galactose oxidase: catalytic role of tyrosine 495. *Journal of Biological Inorganic Chemistry*, **1997**, 2, 327-335 | 3.7 | 34 |
| 77 | Role of the interactions between the active site base and the substrate Schiff base in amine oxidase catalysis. Evidence from structural and spectroscopic studies of the 2-hydrazinopyridine adduct of Escherichia coli amine oxidase. *Biochemistry*, **2005**, 44, 1568-82 | 3.2 | 31 |
| 76 | Generation of specific inhibitors of SUMO-1- and SUMO-2/3-mediated protein-protein interactions using Affimer (Adhiron) technology. *Science Signaling*, **2017**, 10, | 8.8 | 30 |
| 75 | Enhanced fructose oxidase activity in a galactose oxidase variant. *ChemBioChem*, **2004**, 5, 972-9 | 3.8 | 29 |
| 74 | Ultraefficient Cap-Exchange Protocol To Compact Biofunctional Quantum Dots for Sensitive Ratiometric Biosensing and Cell Imaging. *ACS Applied Materials & Interfaces*, **2017**, 9, 15232-15244 | 9.5 | 28 |
| 73 | Phage display selected magnetite interacting Adhirons for shape controlled nanoparticle synthesis. *Chemical Science*, **2015**, 6, 5586-5594 | 9.4 | 28 |
| 72 | Respiratory nitrate reductase of Escherichia coli. Sequence identification of the large subunit gene. *FEBS Letters*, **1984**, 177, 260-4 | 3.8 | 28 |
| 71 | Affimer proteins inhibit immune complex binding to FcRIIIa with high specificity through competitive and allosteric modes of action. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E72-E81 | 11.5 | 27 |
| 70 | Exploring the roles of the metal ions in Escherichia coli copper amine oxidase. *Biochemistry*, **2010**, 49, 1268-80 | 3.2 | 26 |
| 69 | Structural and kinetic studies of a series of mutants of galactose oxidase identified by directed evolution. *Protein Engineering, Design and Selection*, **2004**, 17, 141-8 | 1.9 | 25 |
| 68 | Galactose oxidase: molecular analysis and mutagenesis studies. *Biochemical Society Transactions*, **1993**, 21 ( Pt 3), 752-6 | 5.1 | 25 |
| 67 | Passive Picoinjection Enables Controlled Crystallization in a Droplet Microfluidic Device. *Small*, **2017**, 13, 1702154 | 11 | 24 |

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|---|---|---|---|
| 66 | Probing the catalytic mechanism of Escherichia coli amine oxidase using mutational variants and a reversible inhibitor as a substrate analogue. *Biochemical Journal*, **2002**, 365, 809-16 | 3.8 | 24 |
| 65 | Conserved tyrosine-369 in the active site of Escherichia coli copper amine oxidase is not essential. *Biochemistry*, **2001**, 40, 12808-18 | 3.2 | 24 |
| 64 | Multiple interactions of lysine-128 of Escherichia coli glutamate dehydrogenase revealed by site-directed mutagenesis studies. *Protein Engineering, Design and Selection*, **1988**, 2, 147-52 | 1.9 | 22 |
| 63 | A high-throughput assay of membrane protein stability. *Molecular Membrane Biology*, **2008**, 25, 617-24 | 3.4 | 21 |
| 62 | Enhanced expression and purification of fungal galactose oxidase in Escherichia coli and use for analysis of a saturation mutagenesis library. *ChemBioChem*, **2011**, 12, 593-601 | 3.8 | 20 |
| 61 | Isolation of isoform-specific binding proteins (Affimers) by phage display using negative selection. *Science Signaling*, **2017**, 10, | 8.8 | 19 |
| 60 | Recombinant production of the therapeutic peptide lunasin. *Microbial Cell Factories*, **2012**, 11, 28 | 6.4 | 19 |
| 59 | Investigation of the structure and function of a Shewanella oneidensis arsenical-resistance family transporter. *Molecular Membrane Biology*, **2008**, 25, 691-705 | 3.4 | 19 |
| 58 | Reliable scale-up of membrane protein over-expression by bacterial auto-induction: from microwell plates to pilot scale fermentations. *Molecular Membrane Biology*, **2008**, 25, 588-98 | 3.4 | 18 |
| 57 | Active site rearrangement of the 2-hydrazinopyridine adduct in Escherichia coli amine oxidase to an azo copper(II) chelate form: a key role for tyrosine 369 in controlling the mobility of the TPQ-2HP adduct. *Biochemistry*, **2005**, 44, 1583-94 | 3.2 | 18 |
| 56 | Development of an Affimer-antibody combined immunological diagnosis kit for glypican-3. *Scientific Reports*, **2017**, 7, 9608 | 4.9 | 17 |
| 55 | Properties of the Trp290His variant of Fusarium NRRL 2903 galactose oxidase: interactions of the GOasesemi state with different buffers, its redox activity and ability to bind azide. *Journal of Biological Inorganic Chemistry*, **1997**, 2, 702-709 | 3.7 | 17 |
| 54 | Medical implications from the crystal structure of a copper-containing amine oxidase complexed with the antidepressant drug tranylcypromine. *FEBS Letters*, **2004**, 576, 301-5 | 3.8 | 17 |
| 53 | Involvement of the NH2-terminal region of oryzacystatin-I in cysteine proteinase inhibition. *Protein Engineering, Design and Selection*, **1995**, 8, 1303-7 | 1.9 | 17 |
| 52 | Tyrosine 495 is a key residue in the active site of galactose oxidase. *Biochemical Society Transactions* , **1995**, 23, 510S | 5.1 | 17 |
| 51 | The Klebsiella aerogenes glutamate dehydrogenase (gdhA) gene: cloning, high-level expression and hybrid enzyme formation in Escherichia coli. *Molecular Genetics and Genomics*, **1985**, 199, 141-5 | | 17 |
| 50 | Rapid preparation of highly reliable PDMS double emulsion microfluidic devices. *RSC Advances*, **2016**, 6, 25927-25933 | 3.7 | 16 |
| 49 | Primary Amine Oxidase of Escherichia coli Is a Metabolic Enzyme that Can Use a Human Leukocyte Molecule as a Substrate. *PLoS ONE*, **2015**, 10, e0142367 | 3.7 | 14 |

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| 48 | Structure of a xenon derivative of Escherichia coli copper amine oxidase: confirmation of the proposed oxygen-entry pathway. *Acta Crystallographica Section F: Structural Biology Communications*, **2008**, 64, 1105-9 | | 14 |
| 47 | Non-immunoglobulin scaffold proteins: Precision tools for studying protein-protein interactions in cancer. *New Biotechnology*, **2018**, 45, 28-35 | 6.4 | 13 |
| 46 | Probing metal ion substrate-binding to the E. coli ZitB exporter in native membranes by solid state NMR. *Molecular Membrane Biology*, **2008**, 25, 683-90 | 3.4 | 13 |
| 45 | Investigation into the mechanism of λmax shifts and their dependence on pH for the 2-hydrazinopyridine derivatives of two copper amine oxidases. *Journal of Molecular Catalysis B: Enzymatic*, **2000**, 8, 17-25 | | 12 |
| 44 | Affimer-Enzyme-Inhibitor Switch Sensor for Rapid Wash-free Assays of Multimeric Proteins. *ACS Sensors*, **2019**, 4, 3014-3022 | 9.2 | 11 |
| 43 | Recombinant production of self-assembling β-structured peptides using SUMO as a fusion partner. *Microbial Cell Factories*, **2012**, 11, 92 | 6.4 | 11 |
| 42 | Efficient deletion mutagenesis by PCR. *Protein Engineering, Design and Selection*, **1992**, 5, 467-8 | 1.9 | 10 |
| 41 | Crystallization of the NADP(+)-dependent glutamate dehydrogenase from Escherichia coli. *Journal of Molecular Biology*, **1993**, 234, 1270-3 | 6.5 | 9 |
| 40 | A urea channel from Bacillus cereus reveals a novel hexameric structure. *Biochemical Journal*, **2012**, 445, 157-66 | 3.8 | 8 |
| 39 | Reagentless Affimer- and antibody-based impedimetric biosensors for CEA-detection using a novel non-conducting polymer. *Biosensors and Bioelectronics*, **2021**, 178, 113013 | 11.8 | 8 |
| 38 | Affimer proteins as a tool to modulate fibrinolysis, stabilize the blood clot, and reduce bleeding complications. *Blood*, **2019**, 133, 1233-1244 | 2.2 | 8 |
| 37 | Affimers as anti-idiotypic affinity reagents for pharmacokinetic analysis of biotherapeutics. *BioTechniques*, **2019**, 67, 261-269 | 2.5 | 7 |
| 36 | Structure, recombinant expression and mutagenesis studies of the catalase with oxidase activity from Scytalidium thermophilum. *Acta Crystallographica Section D: Biological Crystallography*, **2013**, 69, 398-408 | | 7 |
| 35 | PIMS sequencing extension: a laboratory information management system for DNA sequencing facilities. *BMC Research Notes*, **2011**, 4, 48 | 2.3 | 7 |
| 34 | The gdhA1 point mutation in Escherichia coli K12 CLR207 alters a key lysine residue of glutamate dehydrogenase. *Molecular Genetics and Genomics*, **1993**, 240, 286-9 | | 7 |
| 33 | Affimer reagents as tools in diagnosing plant virus diseases. *Scientific Reports*, **2019**, 9, 7524 | 4.9 | 6 |
| 32 | Structural analysis of galactose oxidase. *Biochemical Society Transactions*, **1990**, 18, 931-2 | 5.1 | 6 |
| 31 | Protease inhibitors and directed evolution: enhancing plant resistance to nematodes. *Biochemical Society Symposia*, **2001**, 125-42 | | 6 |

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| 30 | Affimer-based impedimetric biosensors for fibroblast growth factor receptor 3 (FGFR3): a novel tool for detection and surveillance of recurrent bladder cancer. *Sensors and Actuators B: Chemical*, **2021**, 326, 128829 | 8.5 | 6 |
| 29 | Tyrosine 381 in E. coli copper amine oxidase influences substrate specificity. *Journal of Neural Transmission*, **2011**, 118, 1043-53 | 4.3 | 5 |
| 28 | Oxygen Activation Switch in the Copper Amine Oxidase of Escherichia coli. *Biochemistry*, **2018**, 57, 5301-5314 | 3.2 | 4 |
| 27 | Probing the molecular mechanisms in copper amine oxidases by generating heterodimers. *ChemBioChem*, **2015**, 16, 559-64 | 3.8 | 4 |
| 26 | Hydrazine and amphetamine binding to amine oxidases: old drugs with new prospects. *Journal of Neural Transmission*, **2007**, 114, 743-6 | 4.3 | 4 |
| 25 | Preliminary studies of two active site mutants of galactose oxidase. *Biochemical Society Transactions*, **1993**, 21 ( Pt 3), 319S | 5.1 | 4 |
| 24 | Novel Plant Defences Against Nematodes **1994**, 197-210 | | 4 |
| 23 | Engineering Plant Nematode Resistance by Anti-Feedants. *Developments in Plant Pathology*, **1997**, 237-249 | | 4 |
| 22 | Cofactor processing in galactose oxidase. *Biochemical Society Transactions*, **2003**, 31, 506-9 | 5.1 | 4 |
| 21 | Crystallization and preliminary X-ray analysis of a bifunctional catalase-phenol oxidase from Scytalidium thermophilum. *Acta Crystallographica Section F: Structural Biology Communications*, **2009**, 65, 486-8 | | 3 |
| 20 | Identification of the site of oxidase substrate binding in Scytalidium thermophilum catalase. *Acta Crystallographica Section D: Structural Biology*, **2018**, 74, 979-985 | 5.5 | 3 |
| 19 | RAS-inhibiting biologics identify and probe druggable pockets including an SII-α allosteric site. *Nature Communications*, **2021**, 12, 4045 | 17.4 | 3 |
| 18 | Selection and characterisation of Affimers specific for CEA recognition. *Scientific Reports*, **2021**, 11, 744 | 4.9 | 3 |
| 17 | C-Terminal Domain of the Human Zinc Transporter hZnT8 Is Structurally Indistinguishable from Its Disease Risk Variant (R325W). *International Journal of Molecular Sciences*, **2020**, 21, | 6.3 | 2 |
| 16 | Investigating the active centre of the Scytalidium thermophilum catalase. *Acta Crystallographica Section F: Structural Biology Communications*, **2013**, 69, 369-75 | | 2 |
| 15 | Dissecting the mechanism of oxygen trafficking in a metalloenzyme. *Faraday Discussions*, **2011**, 148, 269-82; discussion 299-314 | 3.6 | 2 |
| 14 | Large-scale preparation of bacterial cell membranes by tangential flow filtration. *Molecular Membrane Biology*, **2008**, 25, 609-16 | 3.4 | 2 |
| 13 | Molecular and functional studies of copper amine oxidase from Arabidopsis thaliana. *Biochemical Society Transactions*, **1995**, 23, 630S | 5.1 | 2 |

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| 12 | Recombinant Production of Self-Assembling Peptides. *Advances in Chemical Engineering*, **2009**, 79-117 | 0.6 | 1 |
| 11 | Prokaryotic Copper Amine Oxidases **2006**, | | 1 |
| 10 | CRYSTAL STRUCTURE OF THE PRECURSOR OF GALACTOSE OXIDASE. *Biochemical Society Transactions*, **2000**, 28, A77-A77 | 5.1 | 1 |
| 9 | Molecular events at nematode-induced feeding sites. *European Journal of Plant Pathology*, **1992**, 98, 175-181 | | 1 |
| 8 | Fibrinogen interaction with complement C3: a potential therapeutic target to reduce thrombosis risk. *Haematologica*, **2021**, 106, 1616-1623 | 6.6 | 1 |
| 7 | One-step gold nanoparticle size-shift assay using synthetic binding proteins and dynamic light scattering. *Sensors and Actuators B: Chemical*, **2022**, 361, 131709 | 8.5 | 1 |
| 6 | Isolation of Artificial Binding Proteins (Affimer Reagents) for Use in Molecular and Cellular Biology. *Methods in Molecular Biology*, **2021**, 2247, 105-121 | 1.4 | 0 |
| 5 | Peptide-Based Biomaterials: Rational Molecular Design of Complementary Self-Assembling Peptide Hydrogels (Adv. Healthcare Mater. 5/2012). *Advanced Healthcare Materials*, **2012**, 1, 679-679 | 10.1 | |
| 4 | Multimolecular organization of the bacterial enzyme pullulanase. *Biochemical Society Transactions*, **1988**, 16, 722-723 | 5.1 | |
| 3 | Functional analysis of the starch debranching enzyme pullulanase. *Biochemical Society Transactions*, **1988**, 16, 723-724 | 5.1 | |
| 2 | Site-directed mutagenesis studies of Escherichia coli glutamate dehydrogenase. *Biochemical Society Transactions*, **1988**, 16, 874-875 | 5.1 | |
| 1 | Affinity purification of fibrinogen using an Affimer column.. *Biochimica Et Biophysica Acta - General Subjects*, **2022**, 1866, 130115 | 4 | |