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Education

- 1980-1981 NSERC Postdoctoral Fellow, California Institute of Technology; Advisor H.B. Gray
1980 PhD in Inorganic Chemistry, McGill University, Montreal, QC, Canada
Thesis: *Spectral Studies on Group VIB Metal Chalcocarbonyls*, Advisor I.S. Butler
1974 Graduate Part II, Royal Institute of Chemistry (now Royal Society of Chemistry) UK
1971 BSc (General) Chemistry, Biochemistry, Mathematics, University College Dublin, Ireland

Employment history

- 2018- Distinguished Professor Emeritus, Concordia University
2017-2018 Professor Emeritus, Department of Chemistry and Biochemistry, Concordia University
1994-2017 Professor, Department of Chemistry and Biochemistry, Concordia University
1987-1994 Associate Professor, Department of Chemistry and Biochemistry, Concordia University
1985- Cross-appointed to the Department of Biology, Concordia University
1982-1987 Assistant Professor, Department of Chemistry and Biochemistry, Concordia University

1999-2001 Consultant (LC-MS), ClinTrials BioResearch, Montreal
1996-1997 Visiting Scientist, Biochemistry and Molecular Biology, Merck Frosst, Montreal
1987, 1989 Visiting Scientist, University of Florence, Italy
1987, 1988 Visiting Scientist, Princeton University, USA.
1987 Visiting Scientist, Unit of Nitrogen Fixation, University of Sussex, UK
1986 Visiting Lecturer, University College Dublin, Ireland
1985, 1991 Visiting Scientist, California Institute of Technology, USA
1976-1978 Technical Editor, Canadian Journal of Spectroscopy
1974-1979 Instructor, General Chemistry Laboratory, McGill University
1971-1973 Quality Control Chemist, Ranks Ltd., Limerick, Ireland
1970 Biochemistry Assistant, Regional Hospital, Limerick, Ireland

Summary of career publications, presentations, research trainee supervision and research funding

Citation h-index (Google Scholar) **42**

Publications in refereed journals **134**

Invited seminars **140**; presentations at refereed conferences **350+**

Conferences and symposia (co)organized **16**

Theses (co)supervised PhD **20**; MSc **35**; Diploma **5**; BSc **42**

PDFs (co)supervised **18**; RAs supervised **19**

Total research funding **\$20.2 M**

I. Publications in refereed journals

1. M. A. A. Orabi, E. A. Orabi, E. Abdel-Sattar E, H. Sakagami, A. M. English, T. Hatano and H. Elimam (2023) *Structural determination and anticholinesterase assay of C-glycosidic ellagitannins from Lawsonia inermis leaves: A study supported by DFT calculations and molecular docking*, *Fitoterapia* 164, 105360. <https://doi.org/10.1016/j.fitote.2022.105360>
2. E.A. Orabi and A.M. English (2020) *Modeling Shows that Rotation About the Peroxide O-O bond Assists Protein and Lipid Functional Groups in Discriminating Between H₂O₂ and H₂O*, *J. Phys. Chem. B.* 125, 137-147. <https://doi.org/10.1016/j.molliq.2021.115469>
3. D. Martins, G.A. McKay, A.M. English, D. Nguyen (2020) *Sublethal paraquat confers multidrug tolerance in Pseudomonas aeruginosa by inducing superoxide dismutase activity and lowering envelope permeability*, *Front. Microbiol.* 11:576708. <https://doi.org/10.3389/fmicb.2020.576708>
4. S. Dastpeyman, R. Godin, G. Cosa and A.M. English (2020) *Quantifying Heme-Protein Maturation from Ratiometric Fluorescence Lifetime Measurements on the Single Fluorophore in Its GFP Fusion*, *J. Phys. Chem. A*, 124, 746-754. <https://doi.org/10.1021/acs.jpca.9b11901>
5. E.A. Orabi and A.M. English (2019) *Expanding the range of binding energies and oxidizability of biologically relevant S-aromatic interactions: Imidazolium and phenolate binding to sulfoxide and sulfone*, *Phys. Chem. Chem. Phys.* 21, 14620-14628. <https://doi.org/10.1039/C9CP02332A>
6. D. Martins, D. Nguyen and A.M. English (2019) *Ctt1 catalase activity potentiates antifungal azoles in the emerging opportunistic pathogen Saccharomyces cerevisiae*, *Nature Sci Reports.* 9, 9185-9195. <https://doi.org/10.1038/s41598-019-45070-w>
7. M. Kathiresan and A.M. English (2018) *LC-MS/MS proteoform profiling exposes cytochrome c peroxidase self-oxidation in mitochondria and functionally important hole hopping from its heme*, *J. Am. Chem. Soc.* 140, 12033-12039. <https://doi.org/10.1021/jacs.8b05966>
8. E.A. Orabi and A.M. English (2018) *Predicting structural and energetic changes in Met-aromatic motifs on methionine oxidation to the sulfoxide and sulfone*, *Phys. Chem. Chem. Phys.* 20, 23132-23141. <https://doi.org/10.1039/C8CP03277G>
9. D. Martins, G. Sampathkumar, G. McKay, M. Khakimova, A.M. English and D. Nguyen (2018) *Superoxide dismutase activity confers (p)ppGpp-mediated antibiotic tolerance to stationary phase Pseudomonas aeruginosa*, *Proc. Nat. Acad. Sci, USA* 115, 9797-9802. <https://doi.org/10.1073/pnas.1804525115>

10. E.A. Orabi and A.M. English (2018) A Simple Additive Potential Model for Simulating Hydrogen Peroxide in Chemical and Biological Systems, *J. Chem. Theory Comput.* 14, 2808-2821. <https://doi.org/10.1021/acs.jctc.8b00246>
11. E. Orabi and A.M. English (2018) Modeling the structural, energetic and redox properties of protein S-aromatic motifs, *J. Phys. Chem. B*, 122, 3760-3770. <https://doi.org/10.1021/acs.jpcc.8b00089>
12. S. Jahangiri, Q.K. Timerghazin, H. Jiang, G.H. Peslherbe and A.M. English (2017) Dramatic C–C Bond Activation on Protonation of the Persistent Nitroxyl Radical TEMPO, *Int. J. Mass Spectrom.* 429, 182-188 (Festschrift for T.B. McMahon). <https://doi.org/10.1016/j.ijms.2017.08.007>
13. P. Ponka, A.D. Sheftel, A.M. English, D.S. Bohle and D. Garcia-Santosa (2017) Do mammalian cells really need to export and import heme? *Trends in Biochemical Sciences (TIBS)* 42, 395-406. <https://doi.org/10.1016/j.tibs.2017.01.006>
14. M. Kathiresan and A.M. English (2017) LC-MS/MS reveals that hole hopping in cytochrome c peroxidase protects its heme from oxidative modification by excess H₂O₂, *Chem. Sci.* 8, 1152-1162 (Paper selected by the Faculty of I000). <https://doi.org/10.1039/C6SC03125K>
15. E. Orabi and A.M. English (2016) Sulfur-Aromatic Interactions: Modeling Cysteine and Methionine Binding to Tyrosinate and Histidinium Ions to Assess Their Influence on Protein Electron Transfer, *Isr. J. Chem.* 56, 872-885 (Invited contribution: Festschrift for H.B. Gray). <https://doi.org/10.1002/ijch.201600047>
16. M. Kathiresan and A.M. English (2016) Targeted proteomics identify metabolism-dependent interactors of yeast cytochrome c peroxidase: Implications in stress response and heme trafficking, *Metallomics* 8, 434 -443. <https://doi.org/10.1039/c5mt00330j>
17. M.S. Shadrina, A.M. English and G.H. Peslherbe (2016) Benchmarking Rapid TLES Simulations of Gas Diffusion in Proteins: Mapping O₂ Migration and Escape in Myoglobin as a Case Study, *J. Chem. Theory Comput.* 12, 2038-2046. <https://doi.org/10.1021/acs.jctc.5b01132>
18. M.S. Shadrina, G.H. Peslherbe and A.M. English (2015) Quaternary-linked changes in structure and dynamics that modulate O₂ migration within hemoglobin's gas diffusion tunnels, *Biochemistry* 54, 5268-5278. <https://doi.org/10.1021/acs.biochem.5b00368>
19. M.S. Shadrina, G.H. Peslherbe and A.M. English (2015) O₂ and water migration pathways between the solvent and heme pockets of hemoglobin with open and closed conformations of the distal HisE7, *Biochemistry* 54, 5279-5289. <https://doi.org/10.1021/acs.biochem.5b00369>
20. D. Martins and A.M. English (2015) Peroxynitrite and hydrogen peroxide elicit a similar cellular stress response mediated by the CcpI sensor protein, *Free Rad. Biol. Med.* 85, 138-147. <https://doi.org/10.1016/j.freeradbiomed.2015.04.010>
21. M. Kathiresan, D. Martins and A.M. English (2014) Respiration triggers heme transfer from cytochrome c peroxidase to catalase in yeast mitochondria, *Proc. Nat. Acad. Sci, USA* 111, 17468-17473. <https://doi.org/10.1073/pnas.1409692111>
22. D. Martins and A.M. English (2014) SodI oxidation and formation of soluble aggregates in yeast: relevance to sporadic ALS development, *Red. Biol.* 2, 632-639. <https://doi.org/10.1016/j.redox.2014.03.005>

23. D. Martins, V.I. Titorenko and A.M. English (2014) *Cells with impaired mitochondrial H₂O₂ sensing generate less \cdot OH radicals and live longer*, *Antiox. Red. Sig.* 21, 1490-1503. <https://doi.org/10.1089/ars.2013.5575>
24. D. Martins and A.M. English (2014) *Catalase activity is stimulated by H₂O₂ in rich culture medium and is required for H₂O₂ resistance and adaptation in yeast*, *Red. Biol.* 2, 308-313. <https://doi.org/10.1016/j.redox.2013.12.019>
25. B. Shen, C. Bazin and A.M. English (2013) *Rapid high-yield N-acetylation of aminothiols: N-acetylglutathione and N-acetylhomocysteine and their thiol pK_a values*, *J. Pept. Sci.* 19, 263-267. <https://doi.org/10.1002/psc.2492>
26. A. Clarke, M. Ouellet and A.M. English (2013) *Overcoming matrix effects in the chemiluminescence determination of extracellular adenosine triphosphate in erythrocyte suspensions*, *Anal. Biochem.* 436, 66-68. <https://doi.org/10.1016/j.ab.2013.01.024>
27. M. Khakimova, H.G. Ahlgren, J.J. Harrison, A.M. English and D. Nguyen (2013) *The stringent response controls catalases in Pseudomonas aeruginosa and is required for hydrogen peroxide and antibiotic tolerance*, *J. Bacteriol.* 195, 2011-2020. <https://doi.org/10.1128%2FJB.02061-12>
28. D. Martins, M. Kathiresan and A.M. English (2013) *Cytochrome c peroxidase (Ccp1) is a mitochondrial heme-based H₂O₂ sensor that modulates antioxidant defense*, *Free Rad. Biol. Med.* 65, 541-551. <https://doi.org/10.1016/j.freeradbiomed.2013.06.037>
29. A.B. Seabra, M. Ouellet, M. Antonic, M.N. Chrétien and A.M. English (2013) *Catalysis of nitrite generation from nitroglycerin by glyceraldehyde-3-phosphate dehydrogenase (GAPDH)*, *Nitric Oxide* 35, 116-122. <https://doi.org/10.1016/j.niox.2013.09.003>
30. M.S. Shadrina, A.M. English and G.H. Peslherbe (2012) *Effective simulations of gas diffusion through kinetically accessible tunnels in multi-subunit proteins: O₂ pathways and escape routes in T-state deoxyhemoglobin*, *J. Am. Chem. Soc.* 134, 11177-11184. <https://doi.org/10.1021/ja300903c>
31. D. Susanto, A.M. English, R. Sharma and E. Kwong (2011) *An alternative approach using ESI-MS to iron quantitation in pharmaceutical formulations containing iron oxide*, *J. Mass Spec.* 46, 508-516. <https://doi.org/10.1002/jms.1919>
32. E.E. Moran, Q.K. Timerghazin, E. Kwong and A.M. English (2011) *Kinetics and mechanism of S-nitrosothiol acid-catalyzed hydrolysis: Sulfur activation promotes facile NO⁺ release*, *J. Phys. Chem. B* 115, 3112-3126. <https://doi.org/10.1021/jp1035597>
33. J.I. Garcia, A.B. Seabra, R. Kennedy and A.M. English (2010) *Nitrite and nitroglycerin induce rapid release of the vasodilator ATP from erythrocytes: Relevance to the chemical physiology of local vasodilation*, *J. Inorg. Biochem.* 104, 289-296. <https://doi.org/10.1016/j.jinorgbio.2009.12.009>
34. A.A. Goldberg, V.R. Richard, P. Kyryakov, S.D. Bourque, A. Beach, M.T. Burstein, A. Glebov, O. Koupaki, T. Boukh-Viner, C. Gregg, M. Juneau, A.M. English, D.Y. Thomas and V.I. Titorenko (2010) *Chemical genetic screen identifies lithocholic acid as an anti-aging compound that extends yeast chronological life span in a TOR-independent manner, by modulating housekeeping longevity assurance processes*, *Aging* 2, 393-414. <https://doi.org/10.18632%2Faging.100168>
35. Q.K. Timerghazin, G.H. Peslherbe and A.M. English (2008) *Structure and stability of HSNO, the simplest S-nitrosothiol*, *Phys. Chem. Chem. Phys.* 10, 1532-1539. <https://doi.org/10.1039/B715025C>

36. Q.K. Timerghazin, A.M. English and G.H. Peslherbe (2008) *On the multireference character of S-nitrosothiols*, Chem. Phys. Letts. 454, 24-29. <https://doi.org/10.1016/j.cplett.2008.01.062>
37. Q.K. Timerghazin, G.H. Peslherbe and A.M. English (2007) *Resonance description of S-nitrosothiols: Insights into reactivity*, Org. Letts. 9, 3049-3052. <https://doi.org/10.1021/ol0711016>
38. J. Laterreur and A.M. English (2007) *Hemoglobin S-nitrosation on oxygenation of nitrite deoxyhemoglobin incubations is attenuated by methemoglobin*, J. Inorg. Biochem. 101, 1827-1835. <https://doi.org/10.1016/j.jinorgbio.2007.07.021>
39. J.-F. Roy, M.N. Chrétien, B. Woodside and A.M. English (2007) *Reduction and S-nitrosation of the neuropeptide oxytocin: Implications for its biological function*, Nitric Oxide 17, 82-90. <https://doi.org/10.1016/j.niox.2007.06.005>
40. M. Ye and A.M. English (2006) *Binding of polyaminocarboxylate chelators to the active-site copper inhibits the GSNO-reductase activity but not the superoxide dismutase activity of Cu,Zn-superoxide dismutase*, Biochemistry 45, 12723-12732. <https://doi.org/10.1021/bi061077o>
41. H. Jiang and A.M. English (2006) *Phenotypic analysis of the *ccp1* Δ and *ccp1* Δ -*ccp1*^{WI91F} mutant strains of *Saccharomyces cerevisiae* indicates that cytochrome c peroxidase functions in oxidative-stress signaling*, J. Inorg. Biochem. 100, 1996-2008. <https://doi.org/10.1016/j.jinorgbio.2006.07.017>
42. H. Jiang and A.M. English (2006) *Evaluation of D₁₀-Leu metabolic labeling coupled with MALDI-MS analysis in studying the response of the yeast proteome to H₂O₂ challenge*, J. Proteome Res. 5, 2539-2546. <https://doi.org/10.1021/pr060019m>
43. B. Shen, J.C. Scaiano and A.M. English (2006) *Zeolite encapsulation decreases TiO₂-photosensitized ROS generation in cultured human skin fibroblasts*, Photochem. Photobiol. 82, 5-12 (**Special issue dedicated J. C. (Tito) Scaiano on his 60th birthday**). <https://doi.org/10.1562/2005-05-29-RA-551>
44. B. Shen and A.M. English (2005) *Mass spectrometric analysis of nitroxyl-mediated protein modification: Comparison of products formed with free and protein-based cysteines*, Biochemistry 44, 14030-14044. <https://doi.org/10.1021/bi0507478>
45. T. Boukh-Viner, T. Guo, A. Alexandrian, A. Cerracchio, C. Gregg, S. Haile, R. Kyskan, S. Milijevic, D. Oren, J. Solomon, V. Wong, J.M. Nicaud, R.A. Rachubinski, A.M. English and V.I. Titorenko (2005) *Dynamic ergosterol- and ceramide-rich domains in the peroxisomal membrane serve as an organizing platform for peroxisome fusion*, J. Cell Biol. 168, 761-773. <https://doi.org/10.1083%2Fjcb.200409045>
46. H. Bard, A.M. English, C. Gagnon and K. Bellemin (2005) *The effect of adult hemoglobin on red blood cell nitric oxide levels during fetal development*, Biol. Neonate 87, 203-206. <https://doi.org/10.1159/000082987>
47. M.N. Chretien, B. Shen, H. Garcia, A.M. English and J.C. Scaiano (2004) *Ship-in-a-bottle synthesis of fluorescence-labeled nanoparticles: Applications in cellular imaging*, Photochem. Photobiol. 40, 434-437. <https://doi.org/10.1111/j.1751-1097.2004.tb00110.x>
48. H. Bard, A.M. English, K. Bellemin and C. Gagnon (2004) *Developmental changes in NO bioavailability in fetal erythrocytes*, Semin. Perinatol. 28, 312-316. <https://doi.org/10.1053/j.semperi.2004.08.009>

49. M. Ouellet, S.M. Aitken, A.M. English and M.D. Percival (2004) *Aromatic hydroxamic acids and hydrazides as inhibitors of the peroxidase activity of prostaglandin synthase-2*, Arch. Biochem. Biophys. 431, 107-118. <https://doi.org/10.1016/j.abb.2004.07.031>
50. L. Tao and A.M. English (2004) *Protein S-glutathiolation triggered by decomposed S-nitrosoglutathione*, Biochemistry 43, 4228-4038. <https://doi.org/10.1021/bi035924o>
51. S.M. Aitken, M. Ouellet, M.D. Percival and A.M. English (2003) *Mechanism of horseradish peroxidase inactivation by benzhydrazide: a critical evaluation of arylhydrazides as peroxidase inhibitors*, Biochem. J. 375, 613-621. <https://doi.org/10.1042/bj20021936>
52. A.A. Romeo, J.A. Capobianco and A.M. English (2003) *Superoxide dismutase targets NO from GSNO to Cys β 93 of oxyhemoglobin in concentrated but not dilute solutions of the protein*, J. Am. Chem. Soc. 125, 14370-14378. <https://doi.org/10.1021/ja0289752>
53. P.J. Wright and A.M. English (2003) *Scavenging with TEMPO[•] to identify peptide- and protein-based radicals by mass spectrometry: Advantages of spin scavenging over spin trapping*, J. Am. Chem. Soc. 125, 8655-8665. <https://doi.org/10.1021/ja0291888>
54. R. Papp, I. Ekiel and A.M. English (2003) *ESI-MS and FTIR studies of the interaction between the second PDZ domain of hPTPIE and target peptides*, Biochem. Cell Biol. 81, 71-80. <https://doi.org/10.1139/o03-036>
55. L. Tao and A.M. English (2003) *Mechanism of S-nitrosation of recombinant human brain calbindin D_{28k}*, Biochemistry 42, 3326-3334. <https://doi.org/10.1021/bi0269963>
56. G. Tsaprailis and A.M. English (2003) *Different pathways of radical translocation in yeast cytochrome c peroxidase and its W191F mutant on reaction with H₂O₂ suggest an antioxidant role*, J. Biol. Inorg. Chem. 8, 248-255. <https://doi.org/10.1007/s00775-002-0407-6>
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58. H. Jiang and A.M. English (2002) *Quantitative analysis of the yeast proteome by incorporation of labeled leucine*, J. Proteome Res. 1, 345-350. <https://doi.org/10.1021/pr025523f>
59. A.A. Romeo, J.A. Capobianco and A.M. English (2002) *Heme Nitrosylation of Deoxyhemoglobin by S-Nitrosoglutathione Requires Copper*, J. Biol. Chem. 277, 24135-24141. <https://doi.org/10.1074/jbc.M202221200>
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62. S.M. Aitken, J.L. Turnbull, M.D. Percival and A.M. English (2001) *Thermodynamic analysis of the binding of aromatic hydroxamic acid analogs to ferric horseradish peroxidase*, Biochemistry 40, 13980-13989. <https://doi.org/10.1021/bi010445f>

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64. A. Filosa and A.M. English (2001) *Mass spectral analysis of protein-based radicals using DBNBS: Non-radical adduct formation vs spin trapping*, *J. Biol. Chem.* 276, 21022-21027. <https://doi.org/10.1074/jbc.M100644200>
65. P.J. Wright and A.M. English (2001) *Buffer anions promote leaching of Ca²⁺ from horseradish peroxidase at low pH*, *J. Biol. Inorg. Chem.* 6, 348-358. <https://doi.org/10.1007/s007750000202>
66. A.A. Romeo, A. Filosa, J.A. Capobianco and A.M. English (2001) *Metal chelators inhibit S-nitrosation of Cys β 93 in oxyhemoglobin*, *J. Am. Chem. Soc. (Chem. Comm)* 123, 1782-1783. <https://doi.org/10.1021/ja005612y>
67. D.E. Wilcox and A.M. English (2001) *Effects of metal ions on the oxidation and nitrosation of cysteine residues in proteins and enzymes*, *Metal Ions in Biological Systems*, Vol 38. Eds. A, Sigel and H. Sigel, Marcel Dekker, New York, pp 313-350. [doi: 10.1006/bbrc.2000.2117](https://doi.org/10.1006/bbrc.2000.2117)
68. A. Filosa and A.M. English (2000) *Probing local thermal stabilities of bovine, horse and tuna ferricytochromes c at pH 7*, *J. Biol. Inorg. Chem.* 5, 448-454. <https://doi.org/10.1007/PL00021446>
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70. A. Filosa, A.A. Ismail and A.M. English (1999) *FTIR-monitored thermal titration reveals different mechanisms for the alkaline isomerization of tuna compared to horse and bovine cytochrome c*, *J. Biol. Inorg. Chem.* 6, 717-726. <https://doi.org/10.1007/PL00010652>
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2. Key scholarly presentations

1. **Eraldo Antonini Award Lecture.** 13th International Conference on Porphyrins and Phthalocyanines (ICPP-11), Buffalo, NY, USA, June 2024.
2. Control of Hole Hopping in Cytochrome c Peroxidase: Insights from Mass Spectrometric, Spectroscopic and Computational Studies, 11th International Conference on Porphyrins and Phthalocyanines (ICPP-11), Buffalo, NY, USA, July 2021. (Cancelled due to COVID)
3. Computational Insights into the Mass Spectra of TEMPO•M⁺ ions, 32st Annual Tandem Mass Spectrometry Workshop, Lake Louise, Alberta, December 2019.
4. How mass spectrometry empowers the study of metalloprotein redox reactions in the test tube and cell, Department of Chemistry, Carleton University, Ottawa, Ontario, November 2019.
5. Lifetime-FRET as a Probe of Protein Heme Binding in Test Tubes and Live Cells, Plenary Lecture, Tetrapyrrole Discussion Group, University of Bristol, UK September 2019

6. Insights from MD simulations on NO diffusion in hemoglobin, XLV International Congress of Theoretical Chemists of Latin Expression (CHITEL/QUITEL XLV), Montreal August **2019**
7. Quantifying Protein Heme Binding in Live Cells by Fluorescence-Lifetime Imaging Microscopy (FLIM). 10th Canadian Nitric Oxide Society Meeting (CNOS-10), Trent University, ON, July **2019**
8. Live-cell FLIM imaging of protein heme loading: the extraordinary case of cytochrome c peroxidase. 62nd Annual Canadian Society of Molecular Biosciences Conference, Montreal, Quebec, June **2019**
9. Exploring the role of catalase activity in fungal and bacterial survival strategies against antimicrobials. CanBIC-7, Parry Sound, Ontario, May **2019**.
10. New Insights into redox biology from proteoform profiling by LC-MS/MS. **Fred Lossing Award Lecture**, 31st Annual Tandem Mass Spectrometry Workshop, Lake Louise, AB, November **2018**.
11. Hemoglobin is conformationally gated to synergize O₂ and NO binding to match O₂ delivery with metabolic demand. XXth International Conference on Oxygen Binding and Sensing Proteins (O2BIP-20), Barcelona, Spain, September **2018**.
12. Tracking the heme loading of a protein in live cells by fluorescence-lifetime imaging microscopy (FLIM), 10th International Conference on Porphyrins and Phthalocyanines (ICPP-10), Munich, Germany, July **2018**.
13. Optimizing LC-MS/MS detection of protein interactors in GST pulldowns: CcpI-GST as a test case. L'Institut de Microbiologie de la Méditerranée, CNRS et Aix-Marseille Université, Marseille, France, June **2018**.
14. Mapping hole hopping in a protein by proteoform profiling provides insights into emerging redox functions. Unité de Bioénergétique et Ingénierie des Protéines, Marseille, France, June **2018**.
15. Direct Monitoring of Changes in Heme Loading of an Antioxidant Heme Protein in Live Cells Induced by Hydrogen Peroxide. COSC-10, Edmonton, AB, May **2018**.
16. How can a heme peroxidase activate H₂O₂ and protect its heme without its reducing substrate? Department of Chemistry, Simon Fraser University, Burnaby, BC, August **2017**.
17. Insights into catalase activation in yeast, EMBO Workshop: Thiol oxidation in toxicity and signaling, Sant Feliu de Guíxols, Spain, September **2017**.
18. Modeling reveals that the β-subunit of hemoglobin is designed to transport NO from its heme to Cysβ93, 9th Canadian Nitric Oxide Society Meeting (CNOS-9), University of Windsor, ON, July **2017**.
19. In-depth LC-MS/MS analysis of protein oxidative modification exposes a novel signaling mechanism: Peroxide-regulated heme transfer, Keynote Lecture, 100th Canadian Chemistry Conference and Exhibition, Toronto, ON, May **2017**.
20. Hemoglobin – a conformationally gated nanobioreactor that synergizes O₂ and NO binding to match O₂ delivery with metabolic demand, **Clara Benson Award Lecture**, 100th Canadian Chemistry Conference and Exhibition, Toronto, ON, May **2017**.
21. Diffusion of NO within the β-subunit of hemoglobin as a mechanism to conserve its vasoactivity,

- 6th Canadian Bioinorganic Chemistry Meeting (CanBIC-6), Parry Sound, ON, May **2017**.
22. Factors affecting the protein interactions found in GST-CcpI pulldowns from yeast cells, 9th International Symposium on Enabling Technologies for the Life Sciences, Ottawa, ON, May **2017**.
 23. Peroxide-regulated heme transfer: A novel redox signaling mechanism, 23rd Annual Meeting of the Society for Redox Biology and Medicine joint with the 18th Biennial Congress of the Society for Free Radical Research International, San Francisco, CA, USA, November **2016**.
 24. Mass spectrometric and computational investigation of novel heme-based cell signaling, Barnett Institute, Department of Chemistry and Chemical Biology, Northeastern University, Boston, MA, USA, October **2016**.
 25. Peroxide-regulated heme transfer: A novel signaling mechanism uncovered by mass spectrometric analysis of protein oxidative modification, Montreal Post ASMS Symposium, Montreal, QC, October **2016**.
 26. Multiple cycles of heme-mediated radical transfer in cytochrome c peroxidase: Insights from LC-MS/MS and EPR analysis, 9th International Conference on Porphyrins and Phthalocyanines (ICPP-9), Nanjing, China, July **2016**.
 27. Identification of novel protein binding partners by targeted proteomics suggests an expanded role for the heme peroxidase CcpI in stress response and heme trafficking, 99th Canadian Chemistry Conference and Exhibition, Halifax, NS, June **2016**.
 28. Cytochrome c peroxidase (CcpI), a protein at the crossroads of the stress response and heme trafficking in yeast, Plenary Lecture, 9th Meeting of the Canadian Oxidative Stress Consortium (COSC-9), Guelph, ON, June **2016**.
 29. Peroxynitrite and hydrogen peroxide are detoxified in cells by a common heme peroxidase-dependent pathway, 98th Canadian Chemistry Conference and Exhibition, Ottawa, ON, June **2015**.
 30. Characterization of heme-mediated oxidation by H₂O₂ of cytochrome c peroxidase gives insights into its biological function, 98th Canadian Chemistry Conference and Exhibition, Ottawa, ON, June **2015 (Symposium celebrating J.C. Scaiano's 70th Birthday)**.
 31. Oxidative protein modification in health and disease, 6th Symposium on Mass Spectrometry, Faculty of Medicine and Health Sciences, University of Sherbrooke, QC, May **2015**.
 32. LC-MS/MS analysis of heme-mediated oxidation by H₂O₂ of cytochrome c peroxidase gives insights into its novel biological functions, CanBIC-5, Parry Sound, ON, May **2015**.
 33. Comparing oxidative protein modifications in the test tube versus cell, Toronto Mass Spec Group Meeting, Toronto, ON, April **2015**.
 34. Mitochondrial H₂O₂ signaling involving heme transfer between proteins, COSC-8, Ottawa, ON, June **2014**.
 35. Cytochrome c peroxidase communicates a mitochondrial H₂O₂ signal by heme transfer, 97th Canadian Chemistry Conference and Exhibition, Vancouver, BC, June **2014**.
 36. Comparison of heme-mediated protein oxidation by H₂O₂ in vitro and in the cellular environment, 97th Canadian Chemistry Conference and Exhibition, Vancouver, BC, June **2014**.

37. Mass spectrometric analysis reveals the formation of a highly stable, active-site sulfenic acid in human GAPDH, 26th Annual Tandem Mass Spectrometry Workshop, Lake Louise, AB, December **2013**.
38. Insights into the H₂O₂ sensing and signaling functions of cytochrome c peroxidase from its post-translational modifications (PTMs) in yeast, CanBIC-4, Parry Sound, ON, May **2013**.
39. What post-translational modifications of cytochrome c peroxidase reveal about its H₂O₂ sensing and signaling functions, 96th Canadian Chemistry Conference and Exhibition, Quebec City, QC, May **2013**.
40. Age-dependent non-enzymatic post-translational modifications (PTMs) in copper-zinc superoxide dismutase associated with aggregation and neurodegeneration, 96th Canadian Chemistry Conference and Exhibition, Quebec City, QC, May **2013**.
41. Platform development to monitor age- and oxidant-related protein post-translational modifications: The case of copper-zinc superoxide dismutase, 7th International Symposium on Enabling Technologies for the Life Sciences, Toronto, ON, May **2013**.
42. Deciphering by LC-MS cellular mechanisms of oxidative modifications of copper-zinc superoxide dismutase associated with neurodegenerative diseases and asthma, York University, Toronto, ON, February **2013**.
43. Remarkable age-related protein post-translation modifications (PTMs) identified by FT-MS, 25th Annual Tandem Mass Spectrometry Workshop, Lake Louise, AB, November **2012**.
44. The hemoglobin tetramer behaves as a conformationally gated nanobioreactor optimized for NO-modulated O₂ delivery, 19th Methods in Protein Structure Analysis, Ottawa, ON, June **2012**.
45. Human hemoglobin possesses a highly efficient pathway for intramolecular NO diffusion from the β-heme to surface Cysβ 93, CNOS-8, University of Toronto, Hospital for Sick Children, Toronto, ON, June **2012**.
46. Computational and mass spectrometric analysis reveals dramatic C-C bond activation in the protonated nitroxyl radical, 90th Canadian Chemistry Conference and Exhibition, Calgary, AB, May **2012**.
47. Nitroglycerin activation by GAPDH has implications in RBC-mediated vasodilation and nitrate tolerance, 18th Annual Meeting of the Society for Free Radical Biology and Medicine, Atlanta, GA, USA, November **2011**.
48. Cytochrome c peroxidase modulates yeast lifespan by affecting Mn-superoxide dismutase, catalase and aconitase activities: Chemical biology of CcP, ICBIC-15, Vancouver, BC, August **2011**.
49. Release of NO_x from nitrosothiols: theoretical considerations, CNOS-7, Queen's University, Kingston, ON, June **2011**.
50. Role of GAPDH in nitrite-induced release of the vasodilator ATP from erythrocytes, CNOS-6, University of Western Ontario, London, ON, June **2010**.
51. Biochemical and pharmacological regulation of blood flow by red cells, Biotechnology Research Institute, NRC, Montreal, QC, May **2010**.

52. Nitrite and nitroglycerin induce rapid release of the vasodilator ATP from erythrocytes: Role in blood-flow regulation, CNOS-5, University of Waterloo, ON, August **2009**.
53. Inorganic nitrite and nitroglycerin induce vasodilator release from erythrocytes, CanBIC-2, Parry Sound, ON, May **2009**.
54. Dissecting the chemical physiology of erythrocyte induced vasodilation: Role of an ATP/nitrite/NO signaling pathway: Department of Chemistry, University of Toronto, ON, April **2009**.
55. ATP—key mediator in nitrite/NO signaling: New insights into the chemical physiology of blood-flow regulation by red blood cells, 5th International Conference on the Biology, Chemistry and Therapeutic Applications of Nitric Oxide, Bregenz, Austria, August **2008**.
56. New insights into an old vasodilator: Role of red blood cells in nitroglycerin-induced vasodilation, Department of Chemistry, University of Waterloo, ON, April **2008**.
57. Role of red blood cells in nitrate tolerance: Further insights into vasodilation, Centre for Blood Pressure Research, Panum Institute, University of Copenhagen, Denmark, February **2008**.
58. Nitrate tolerance: Role of red blood cells, Centre de Saclay, Service de Bioénergétique, Paris, France, December **2007**.
59. Hemoglobin and the NO metabolon of red blood cells, CNOS-3, Laval University, Quebec City, QC, August **2007**.
60. Hemoglobin and the NO metabolon of red blood cells, CanBIC-1, Parry Sound, ON, May **2007**.
61. Hemoglobin, nitrosothiols, nitrite and blood flow: Mechanistic insights, COSC-5, Montreal, QC, May **2007**.
62. Understanding metal-ion control of S-nitrosothiol stability and reactivity, 90th Canadian Chemistry Conference and Exhibition, Winnipeg, MB, May **2007**.
63. What can the physiological roles of roles of yeast cytochrome c peroxidase (CCP) tell us about oxidative stress? Centre de Saclay, Service de Bioénergétique, Paris, France, June **2006**.
64. Une approche protéomique pour l'évaluation de la méthode TAP pour l'analyse des complexes protéiques formés par le cytochrome c peroxydase chez *S. cerevisiae*, 74^e Congrès de L'ACFAS, Montreal, QC, May **2006**.
65. Reactions of protein- and peptide-based thiols with nitrogen oxides (NO_x): Expanding our inventory of post-translational modifications, 6th Annual CREFSIP Symposium, Laval University, Quebec City, QC, May **2006**.
66. Biochemical and biophysical studies on S-nitrosothiols, 2nd Annual McGill Biophysical Chemistry Symposium, Montreal, QC, May **2006**.
67. Probing the physiological roles of yeast cytochrome c peroxidase (CCP) using a CCP-GFP fusion protein, Department of Pharmacy, University of Arizona, Tucson, AZ, USA, April **2006**.
68. Mass spectrometric and computational studies of TEMPO[•] and tyrosyl derivatives relevant to protein-based radical scavenging, 6th Annual CERMM Symposium, Montreal, QC, February **2006**.

69. The reaction of nitrogen oxides (NO_x) with thiols: Biological implications, Northeastern University, Boston, MA, USA, September **2005**.
70. Mass spectrometric and computational studies of TEMPO• and tyrosyl derivatives relevant to Tio-inspired protein radical scavenging, Reactive Intermediates in Photochemistry: An International Conference **Celebrating Tito Scaiano's Achievements**, Ottawa, ON, August **2005**.
71. Copper in the transduction of NO_x-derived signals: Mechanisms and biological implications, 12th International Conference on Biological Inorganic Chemistry (ICBIC-12), Ann Arbor, MI, USA, July/August **2005**.
72. Copper-catalyzed NO transfer between thiols of biological interest, Department of Chemistry, University College Dublin, Ireland, September **2004**.
73. Copper-catalyzed NO-thiol reactions of biological interest, Centre de Saclay, Service de Bioénergétique, Paris, France, September **2004**.
74. Biologically relevant metal catalyzed NO-transfer reactions, 87th Canadian Society for Chemistry Conference, London, ON, May **2004**.
75. Copper-catalyzed NO-thiol reactions of biological interest, Department of Chemistry, Queen's University, Kingston, ON, July **2004**.
76. Copper-catalyzed NO-transfer reactions: Important in neuroprotection and blood flow? Department of Chemistry, University of Toronto, ON, January **2004**.
77. Copper-catalyzed NO-transfer reactions: Important in neuroprotection and blood flow? Department of Chemistry, McGill University, Montreal, QC, November **2003**.
78. Superoxide dismutase: An S-nitrosotransferase? Department of Chemistry, Princeton University, NJ, USA, November **2002**.
79. Superoxide dismutase: An S-nitrosotransferase? Department of Chemistry, Johns Hopkins University, Baltimore, MD, USA, November **2002**.
80. Superoxide dismutase: An S-nitrosotransferase? Medical Center, University of Maryland Baltimore, MD, USA, November **2002**.
81. Copper-catalyzed protein S-nitrosation, 85th Canadian Society for Chemistry Conference, Vancouver, BC, June **2002**.
82. Role of metal ions in regulation of nitric oxide signaling, McMaster University, Hamilton, ON, August **2001**.
83. Role of copper ions in regulation of nitric oxide signaling, 7th Quebec Annual Inorganic Chemistry Symposium, Bishop's University, Lennoxville, QC, August **2001**.
84. Role of copper ions in regulation of nitric oxide signaling, Royal Society for Chemistry, Annual Conference, Birmingham, England, July **2001**.
85. S-nitrosohemoglobin: A blood-flow regulator? University of Windsor, ON, June **2001**.
86. S-nitrosohemoglobin: A blood-flow regulator? University College Galway, Ireland, December **2000**.

87. S-nitrosohemoglobin: A blood-flow regulator? University of Western Ontario, London, ON, December **2000**.
88. S-nitrosohemoglobin: A blood-flow regulator? Université de Québec à Montréal, QC, November **2000**.
89. Lectures (3) on bioinorganic and biophysical chemistry, Medical Biophysics Centre, University of Oriente, Santiago de Cuba, Cuba, May/June **2000**
90. Assessing oxidative stress by mass spectrometry, Montreal Mass Spectrometry Discussion Group, Merck Frosst, Montreal, QC, February **2000**.
91. Mechanistic aspects of peroxidase function in oxidative and nitrosative stress, 82nd Canadian Society for Chemistry Conference, Toronto, ON, June **1999**.
92. Peroxidases in oxidative and nitrosative stress, Laval University, Quebec, QC, April **1999**.
93. Peroxidases in oxidative and nitrosative stress, Trent University, Peterborough, ON, April **1999**.
94. FTIR spectroscopy in metalloprotein analysis, Astra Pharma, Montreal, QC, September **1998**.
95. FTIR spectroscopy in metalloprotein analysis, BRI/NRC, Montreal, QC, June **1998**.
96. Novel ferrocene-containing polyacrylamide-based redox gels for biosensor use, University of Limerick, Ireland, July **1998**.
97. Peroxidases and the biological chemistry of H₂O₂, Dartmouth College, Hanover, NH, USA, November **1997**.
98. Mechanistic insights from mass spectral analysis into the antioxidant properties of yeast cytochrome c peroxidase, RISE Workshop, Department of Chemistry, Dalhousie University, Halifax, NS, August **1997**.
99. Overexpression of soluble guanylate cyclase in Sf9 cells, 40th Annual CFBS Conference, Quebec City, QC, June **1997**.
100. Reactive intermediates in proteins, RISE Workshop, Department of Chemistry, University of Waterloo, ON, August **1996**.
101. L'immobilization d'enzymes redox dans des gels de ferrocene-polyacrylamide neutres et chargés pour des applications électro-analytiques, 64e Congrès de L'ACFAS, Montreal, QC, May **1996**.
102. Les applications de la spectroscopie FTIR à l'étude des hèmes peroxydases, 64e Congrès de L'ACFAS, Montreal, QC, May **1996**.
103. Reactivity and inhibition of oxyferryl heme centres in proteins, Department of Chemistry, McMaster University, Hamilton, ON, April **1996**.
104. Oxyferryl heme centers in proteins, International Chemical Congress of Pacific Basin Societies (PACIFICHEM'95), Honolulu, HI, USA, December **1995**.
105. FTIR studies on ternary complexes of horseradish peroxidase with CO and substrate molecules, International Chemical Congress of Pacific Basin Societies (PACIFICHEM'95), Honolulu, HI, USA,

December **1995**.

106. Design of heme peroxidase inhibitors: A spectroscopic approach, Department of Chemistry, McGill University, Montreal, QC, December **1995**.
107. Design of heme peroxidase inhibitors: A spectroscopic approach, Department of Biochemistry, Queen's University, Kingston, ON, November **1995**.
108. Rates of reduction of oxyferryl heme in hemoproteins, 78th Canadian Chemistry Conference and Exhibition, Guelph, ON, May **1995**.
109. Reagentless enzyme-based amperometric sensors, 78th Canadian Chemistry Conference and Exhibition, Guelph, ON, May **1995**.
110. Mechanisms of control of oxyferryl heme reactivity in hemoproteins, Department of Chemistry, University of Western Ontario, London, ON, May **1995**.
111. Mechanisms of control of oxyferryl heme reactivity in hemoproteins, Department of Chemistry, Brookhaven National Laboratory, Long Island, NY, USA, May **1995**.
112. Study of oxyferryl heme reactivity using both radiation and photochemical techniques, ACS National Meeting, Anaheim, CA, USA, April **1995**.
113. Probing via fluorometric and mass spectrometric techniques for tryptophan oxidation during H₂O₂ turnover by cytochrome c peroxidase and selected mutants, Gordon Research Conference (Quinone and Redox-Active Amino Acid Cofactors), Ventura, CA, USA, February **1995**.
114. Reactivity of oxyferryl iron in hemoproteins, Department of Chemistry, Virginia Commonwealth University, Richmond, VA, USA, March **1994**.
115. Development of electroactive enzymes (electrozymes) for biosensor applications, Department of Chemistry, University of Montreal, QC, October **1993**.
116. Cytochrome c peroxidase, NSF Inorganic Biochemistry Summer Workshop, Center for Metalloenzyme Studies, University of Georgia, Athens, GA, USA, August **1993**.
117. Electron transfer in the H₂O₂-oxidized intermediates of cytochrome c peroxidase and myoglobin, ACS National Meeting, Denver, CO, USA, March **1993**.
118. Hemoglobin: One of Nature's oxygen carriers, Science Exploration Week, Concordia University, Montreal, QC, May **1992**.
119. Electron transfer in heme proteins, Department of Chemistry, Carleton University, Ottawa, ON, March **1992**.
120. Metal carbonyl reporter groups, **Otto Maass Building Silver Anniversary Symposium**, Department of Chemistry, McGill University, Montreal, QC, May **1991**.
121. Electron transfer in cytochrome c peroxidase, Division of Chemistry and Chemical Engineering, Caltech, Pasadena, CA, USA, February **1991**.
122. Characterization of enzyme intermediates in yeast cytochrome c peroxidase, Department of Chemistry, Queen's University, Kingston, ON, December **1990**.

123. Characterization of enzyme intermediates in yeast cytochrome c peroxidase, Department of Chemistry, University of Vermont, Burlington, VT, USA, November **1990**.
124. Iron coordination and redox reactivity in heme peroxidases, Department of Chemistry and Biochemistry, University of Guelph, ON, April **1990**.
125. Iron coordination and redox reactivity in heme peroxidase, Department of Chemistry, York University, ON, April **1990**.
126. Effect of substrate binding on Fe^{II} coordination in heme peroxidases: A sabbatical approach, Department of Chemistry and Biochemistry, Concordia University, Montreal, QC, March **1990**.
127. Nitric oxide binding to cytochrome c and its peroxidase, University of Florence, Italy, December **1989**.
128. Electron transfer in hemoproteins, McGill Chemical Society, Chemistry Department, McGill University, Montreal, QC, March **1989**.
129. Studies on cytochrome c peroxidase and its mutants, Chemistry Department, University of Alberta, Edmonton, AB, December **1988**.
130. Vibrational spectroscopic studies on cytochrome c peroxidase and its mutant proteins, University of Sussex, Brighton, England, October **1987**.
131. Biological electron transfer, 70th Canadian Chemical Conference, Laval, Quebec City, QC, June **1987**.
132. Electron transfer in the cytochrome c/cytochrome c peroxidase complex, Chemistry Department, University of Michigan, Ann Arbor, MI, USA, March **1987**.
133. Structure function relationships in hemoproteins: Studies on cytochrome c peroxidase, University College, Dublin, Ireland, November **1986**.
134. Lectures (8) on bioinorganic chemistry, University College, Dublin, Ireland, November/December **1986**.
135. What makes a hemoprotein a ligninase? Oxidation by heme enzyme intermediates, Workshop on Genetic Physico-chemical Approaches for Analysis of Biological Catalysts, Florence, Italy, June **1986**.
136. Structure function relationships in heme proteins: Studies on cytochrome c peroxidase, Chemistry Department, University of California, Santa Barbara, CA, USA, January **1986**.
137. Studies on cytochrome c peroxidase, Chemistry Department, Université de Québec à Montréal, QC, November **1984**.
138. Photochemical probes of bioinorganic systems, Can-Am Chemical Congress, Montreal, QC, June **1984**.
139. Cytochrome c peroxidase: Nature's gift to the biochemist, Chemistry Department, University of Rochester, NY, USA, December **1983**.
140. Metalloproteins in electron transfer chains, Centre de Recherche en Photobiophysique, Université du Québec à Trois Rivières, QC, April **1983**.

3. Awards, distinctions, academic leadership

- 2024 Eraldo Antonini Award, Society for Porphyrins and Phthalocyanines (*recognizes lifetime achievement in the field of porphyrin/heme research; awarded biennially*)
- 2019-2023 Member, Local Organizing Committee, 11th Meeting of the Canadian Oxidative Stress Consortium (COSC 2023)
- 2018- Member, Editorial Board of *Biochemistry and Cell Biology*
- 2018 Distinguished Professor Emeritus Designation
- 2018 Fred Lossing Award, Canadian Society for Mass Spectrometry (*recognizes distinguished contributions to mass spectrometry in Canada*)
- 2018 Finalist, Outstanding Graduate Mentor Award, Canadian Assoc for Graduate Studies
- 2017 Concordia University Mentorship Award
- 2017 Clara Benson Award, Canadian Society for Chemistry (*recognizes a woman who has made a distinguished contribution to chemistry while working in Canada*)
- 2016-2018 CSC representative, Technical Committee, Atlantic Basin Chemistry Conference (ABCCChem)
- 2016 Dean's Award for Excellence in Scholarship (Senior)
- 2015 Honorary Concordia University Research Chair in Bioinorganic Chemistry
- 2014-2020 Review Editor, *Frontiers in Cellular Biochemistry*
- 2014-2018 Director of Conferences and Executive Board Member, Canadian Society for Chemistry (CSC)
- 2014 Fellow of the Chemical Institute of Canada (FCIC)
- 2014 Provost's Circle of Distinction
- 2014 External Reviewer, Department of Chemistry and Biochemistry, University of Windsor
- 2012- Member, Editorial Board, *Redox Biology*
- 2012-2020 Member, Program Committee, Society for Redox Biology and Medicine
- 2012-2020 Member, Publications Committee, Society for Redox Biology and Medicine
- 2012- 2014 Member, Nominations Committee, Society for Bioinorganic Chemistry
- 2011-2019 Member, Evaluation Committee, Canadian Foundation for Innovation (CFI), Province of Alberta
- 2011-2014 Member, NSERC Vanier CGS Selection Committee
- 2011 Technical Program Chair, 94th Canadian Chemistry Conference and Exhibition, Montreal (CSC Conference)
- 2010-2017 Executive Member, Montreal Mass Spectrometry Discussion Group (MMSDG)

2008-2013 Scientific Officer, CIHR Panel on Biochemistry and Molecular Biology A

2008-2009 Chair, CFI MAC 3 Committee

2008 Concordia University Senior Research Fellow

2006-2008 Member, CIHR Panel on Biochemistry and Molecular Biology A

2006 *Ad Hoc* Member, NIH Macromolecular Structure & Function A, Study Section

2005-2021 Member, Editorial Board, Journal of Inorganic Biochemistry

2003-2006 Member, Killam Fellowships and Prizes Selection Committee

2003-2004 Member, NSERC EWR Steacie Fellowship Selection Committee

2003 *Ad Hoc* Member, CIHR Panel on Biochemistry and Molecular Biology A

2002-2015 Concordia University Research Chair in Bioinorganic Chemistry (Senior)

2001 Member, Canadian Foundation for Innovation (CFI) Expert Committee

2001 Member, Gerhard-Herzberg Canada Gold Medal Selection Committee

2000- Member, College of Reviewers for Canada Research Chairs

2000-2004 Member, Editorial Board, Journal of Biological Inorganic Chemistry

1999-2002 Member, FCAR Committee, Etablissement de nouveau chercheurs (now FRQNT)

1998 Member, NSERC Doctoral Prizes Committee

1998 Member, NSERC Chemistry Major Equipment/Installation Subcommittee

1998 Chair, External Review Committee, Department of Chemistry, University of Victoria

1997 External Reviewer, Department of Chemistry, Bishop's University

1996-2007 Faculty Member, RISE (Reactive Intermediates Student Exchange) Program

1995-1996 Chair, NSERC Inorganic and Organic Chemistry Grant Selection Committee (24)

1994-1995 Chair, NSERC Chemistry Minor Equipment Subcommittee

1993-1995 Member, NSERC Inorganic and Organic Chemistry Grant Selection Committee (24)

1987 NATO Exchange Award

1987 NSERC-Royal Society Bilateral Award

1980-1981 NSERC Canada Postdoctoral Fellowship

1979 Department of Education (Dublin, Ireland) Postdoctoral Fellowship (declined)

1976-1978 NSERC Postgraduate Fellowship

1975-1976 Alexander McFee Fellowship, McGill University

1979 T. Sterry Hunt Teaching Award, McGill University

1975 Summer Scholarship, McGill University

Scholarly leadership and administrative contributions at Concordia

2017- Executive Member, Centre for Biological Applications of Mass Spectrometry (CBAMS)

2015-2017 Chair, Departmental Faculty External Awards Committee

2015-2017 CIC/CSC Liaison

2015 Member, Search Committee, Strategic Hire in Nanomedicine

2013-2017 Member, University Appeals Board

2013-2015 Member, Departmental Personnel Committee

2011-2012 Member, Search Committee, PERFORM Chair and Scientific Director

2010 Member, Search Committee, CRC I in Computational Nanochemistry

2010 Chair, Search Committee, NSERC IRC Biological mass spectrometry

2009 Member, Search Committee, Johnson Chair in Quebec and Canadian Irish Studies

2008 Member, Search Committee, CRC I in computational chemistry

2008 Member, Advisory Search Committee, Dean and Associate Vice-President, Graduate Studies

2007-2010 Member, University Senate

2007-2009 Director, Departmental Promotion/Communication Committee

2007-2008 Member, Review Committee of the School of Graduate Studies

2007 Chair, Masters Evaluation Committee

2006-2007 Member, GPA Committee, School of Graduate Studies

2005-2011 Member, Departmental Personnel Committee

2003-2017 Founding Executive Director, Centre for Biological Applications of Mass Spectrometry (CBAMS)

2001-2004 Arts and Science Faculty Representative, University Senate

2001-2004 Member, Departmental Personnel Committee

2001-2002 Member, Advisory Search Committee, Dean of Graduate Studies and Research

2000-2022 Executive Member, Centre for Research in Molecular Modeling (CERMM)

2000-2002 Co-Director, Chemistry and Biochemistry Co-Op Program

2000 Member, Senate Committee on Research

1999-2002 Member, University Committee on Research Centres

1999-2002 Chair, Chemistry Graduate Screening Committee

1999-2001 Member, University Library Committee

1998-1999 Member, Faculty Research Committee for the Sciences

1997-2010 Member, Chair's Advisory Committee, Chemistry and Biochemistry

1997-1999 Advisor, Chemistry and Biochemistry Graduate Research Conference

1997-1999 Member, Departmental Personnel Committee

1997 Member, Search Committee for Department Chair, Biology

1996-2001 Advisor, Undergraduate Research Projects, Chemistry and Biochemistry

1996-1999 Administrator, Undergraduate Research Projects, Chemistry and Biochemistry

1995-1999 Graduate Program Director, Chemistry and Biochemistry

1995-1996 Member, Editorial Board *Thursday Report*

1994-2003 Founding Director, Departmental Mass Spectrometry Facility

1994-2000 Member, Departmental Advisory Committee to the Chair

1994-1995 Member, Faculty Task Force for the Picosecond Laser Centre

1994-1995 Member, Faculty of Engineering & Computer Science Tenure Committee

1993-1994 Alternate Member, Faculty of Engineering & Computer Science Tenure Committee

1993-1994 Member, Search Committee for Department Chair

1990-1995 Member, Graduate Program Screening Committee (Biochemistry)

1990-1993 Member, Departmental Personnel Committee

1990-1991 University NSERC Scholarship Selection Committee

Organization of national and international conferences

1. Member, Local Organizing Committee, 11th Meeting of the Canadian Oxidative Stress Consortium (COSC 2023), Montreal, May **2023**.
2. Contributions de la spectrométrie de masse dans les sciences de la santé et de la vie. 82^e Congrès de L'ACFAS, Montreal, QC, May **2014**; Co-chairs: Pierre Thibault (University of Montreal) and Dajana Vuckovic (Concordia).
3. Cellular redox sensors, Symposium, 19th Annual Meeting of the Society for Free Radical Biology and Medicine, San Diego, CA, USA, November **2012**; Co-chair: Marcelo Bonini, University of Illinois at Chicago.
4. Technical Program Chair, 94th Canadian Chemistry Conference and Exhibition, Montreal, QC, June **2011**.

5. Member, Organizing Committee, 15th International Conference on Biological Inorganic Chemistry (ICBIC-15), Vancouver, BC, August **2011**.
6. 4th Canadian Nitric Oxide Society Meeting, Concordia University, Montreal, QC, August **2008**.
7. Inorganic sensing and signaling, Symposium, Metals in Biology Gordon Research Conference, Ventura, CA, USA January **2006** (Discussion leader).
8. 10th Annual Reactive Intermediates Student Exchange (RISE) Symposium, Concordia University, Montreal, QC, August **2005**.
9. Metalloproteins and metals in medicine, Symposium, Joint 39th IUPAC Congress and 86th Canadian Chemistry Conference and Exhibition, Ottawa, ON, August **2003**.
10. Topics in clinical and biological chemistry lecture series (6 lectures), Concordia University, Montreal, QC, Winter **2001**.
11. Topics in clinical and biological chemistry lecture series (9 lectures), Concordia University, Montreal, QC, Winter **2000**.
12. 5th Annual Reactive Intermediates Student Exchange (RISE) Symposium, Concordia University, Montreal, QC, August **2000**.
13. Biological and biomimetic inorganic chemistry, Symposium, 82nd Canadian Chemistry Conference and Exhibition, Toronto, ON, May/June **1999**; Co-chair: G. Ozin (University of Toronto).
14. Metal ions in biology and medicine – natural and synthetic approaches, Symposium, International Chemical Congress of the Pacific Basin Societies (PACIFICHEM'95), Honolulu, HI, USA, December **1995**; Co-chairs: A. Butler (USA), J. Dawson (USA); S. Yano (Japan).
15. Electron transfer in inorganic and bioinorganic chemistry, Symposium, 78th Canadian Chemistry Conference and Exhibition, Guelph, ON, May/June **1995**.
16. Biochemical and biomedical aspects of inorganic chemistry, Joint Symposium (Biological, Medicinal and Inorganic Divisions), 76th Canadian Chemistry Conference and Exhibition, Sherbrooke, Quebec, QC, May/June 3 **1993**; Co-chair: M. Gresser (Merck Frosst).
17. Haem-Iron, Symposium, 5th International Conference on Bioinorganic Chemistry (ICBIC-5), Oxford, England, August **1991**; Co-Chair.
18. Control of charge transfer in cytochrome and chlorophyll complexes, Scientific Meeting, Concordia University, Montreal, QC, August **1990**; Organizing Committee: P. Nicholls, A.M. English, J.A. Kornblatt, B.C. Hill and G. Gingras.
19. Electron Donor Acceptor, Gordon Research Conference, Newport, RI, USA, August **1990** (Discussion Leader).
20. Catalytic properties of hemes and hemoproteins, Scientific Meeting, Concordia University, Montreal, QC, June 6, **1987**; Co-organizer: B.C. Hill.

4. Grants

- Digital Research Alliance of Canada (formerly Compute Canada) ~**\$100,000** in-kind to A.M. English based on usage of the advanced research computing platform over 10 years.
- NSERC Discovery Grant: *Biological chemistry of heme-mediated peroxide signalling and heme trafficking* **\$409,000** awarded to A.M. English in **2018** (\$79,000 per year for five years plus COVID Supplement \$12,000; end date extended to 2025 due to COVID).
- FRQSC (Société et culture) Grant: *The Green Film Lab: Non-digital Filmmaking Renewal and Sustainable Film Processing* **\$186,960** awarded to Roy Cross (PI) and A.M. English in **2018** (\$62,320 per year for three years).
- Concordia University Horizon Fellows Program: *Linking peroxide sensing and heme mobilization* **\$68,000** awarded to A.M. English in **2017** (\$34,000 per year for two years as matching PDF support).
- Concordia University Horizon Fellows Program: *Modeling Comparative Enzyme Inhibition* **\$68,000** awarded to G.H. Peslherbe (PI) and A.M. English in **2017** (\$34,000 per year for two years as matching PDF support).
- FRQNT Regroupement stratégique Grant (renewal): *PROTEO, Le regroupement québécois de recherche sur la fonction, l'ingénierie et les applications des protéines* **\$3,186,000** awarded in **2016** to N. Voyer (PI), A.M. English plus 41 others (\$531,000 per year for six years; funds mainly for student stipends, student exchange and student conference travel).
- NSERC Discovery Grant: *Mechanistic underpinnings of biological oxidative processes: Chemical, computational and genetic analysis of reactions between metalloproteins and redox signaling molecules* **\$270,000** awarded to A.M. English in **2013** (\$54,000 per year for five years).
- Merck & Co (USA) Corporate Donation: *LTQ-FT ICR mass spectrometer (Thermo Scientific)* **\$1,000,000** (approximate replacement cost) donated to A.M. English in **2012**.
- NSERC CREATE Grant: Training program in Bionanomachines **\$1,500,000** awarded to K. Gehring (PI), A.M. English and 27 others in **2011** (Term 2011-2017; plus \$200,000 from McGill. Funding to AME's trainees \$85,567).
- FRQNT Regroupement stratégique Grant: *PROTEO, Le regroupement québécois de recherche sur la fonction, la structure et les applications des protéines* **\$1,650,000** awarded in **2010** to N. Voyer (PI), A.M. English plus 31 others (\$275,000 per year for six years; funds mainly for student stipends, student exchange and student conference travel).
- Merck Frosst Corporate Donation: *High-throughput Laser Diode Thermal Desorption (LDTD) APCI source (Phytronix)* **\$95,000** (replacement cost) donated to A.M. English in **2010**.
- Merck Frosst Corporate Donation: *LCQ Deca XP plus ion trap mass spectrometer (Thermo Scientific)* **\$150,000** (approximate replacement cost) donated to A.M. English in **2010**.
- Caprion (Montreal) Corporate Donation: *Two 2 QTOF3 mass spectrometers and 2 CapLCs (Waters Micromass)* **\$600,000** (approximate replacement cost) donated to A.M. English in **2010**.

- CFI New Initiatives Fund: *High Performance Mass Spectrometer for Metabolite Profiling, Reaction Monitoring, and Biomolecule Analysis* **\$1,175,447** awarded to A.M. English (PI) and six others in **2009**.
- NSERC RTI Grant: *Ultracentrifuge and Rotors for Cellular Subfractionation* **\$114,498** awarded to P.B.M. Joyce (PI), A.M. English and eight others in **2009**.
- NSERC RTI Grant: *Fluorimeter for Biophysical Characterizations* **\$39,351** awarded to P. Pawelek (PI), A.M. English plus three others in **2009**.
- FRQNT Projet de recherche en équipe Grant: *Elaboration of Biologically Derived S-Nitrosothiols Towards New NO Donors and Pharmaceuticals* **\$140,940** awarded to G.H. Peslherbe (PI), A.M. English and B.P. Kennedy (Merck Frosst) in **2008** (\$46,980 per year for three years).
- Concordia University Research Platform Support: *CBAMS, Centre for Biological Applications of Mass Spectrometry* **\$590,000** awarded to A.M. English in **2008** (\$30,000 in 2008; \$70,000 per year 2009-2017 for CBAMS operation).
- Canadian Hemophilia Society (Dream for a Cure) Operating Grant: *Structural and genetic analysis of the complexes between Factor VIII and low density lipoprotein receptor-related protein: Toward a long-acting Factor VIII* **\$50,000** awarded to A.M. English (PI) and T. Ming (BRI, NRC) in **2008** (\$25,000 per year for two years).
- Concordia University CURC Program: *Senior Research Chair in Bioinorganic Chemistry (Renewal)* **\$210,000** awarded to A.M. English in **2008** (\$30,000 per year for seven years).
- FRQS Regroupements stratégiques Grant: *GRASP, Groupe de Recherche Axé sur la Structure des Protéines* **\$2,660,000** awarded to K. Gehring (PI), A.M. English and 35 others in **2008** (\$266,000 per year for ten years; funds mainly for platform maintenance and student support).
- NSERC Discovery Grant: *Biological redox chemistry underlying nitric oxide and hydrogen peroxide signaling* **\$405,000** awarded to A.M. English in **2007** (\$81,000 per year for five years).
- NSERC RTI Grant: *Accessories for the Centre for Biological Applications of Mass Spectrometry* **\$65,105** awarded to A.M. English in **2007**.
- NSERC RTI Grant: *Upgrading of FTIR spectrometer for biophysical studies* **\$21,146** awarded to A.M. English (PI), P. Pawelek and J.L. Turnbull in **2006**.
- PFIZER (USA) Corporate Donation: *Quattro LC (Waters Micromass) Triple Quadrupole Mass Spectrometer* **\$350,000** (replacement cost) donated to A.M. English in **2006**.
- NSERC RTI Grant: *Circular dichroism spectropolarimeter* **\$101,381** awarded to J.L. Turnbull (PI), A.M. English and five others in **2005**.
- NSERC RTI Grant: *High performance liquid chromatography system for chemical biology* **\$57,065** awarded to A.M. English in **2005**.
- NSERC RTI Grant: *Phosphor imager* **\$27,879** awarded to R.N. Michel (PI), A.M. English and three others in **2005**.
- NSERC RTI Grant: *An analytical microbalance for the elemental and isotopic study of organic carbon*

dynamics in aquatic environment **\$18,520** awarded to Y. Gélinas (PI), A.M. English and two others in **2005**.

- Merck Frosst: *Unrestricted funds* **\$78,000** awarded to A.M. English in **2004** (\$12,000 per year 2004-2006; \$27,000 in 2007; \$15,000 in 2008).
- CIHR Major Equipment Grant: *ICP Mass Spectrometer* **\$230,605** awarded to A.M. English in **2002**.
- NSERC Discovery Grant: *Metal-Catalyzed Redox Processes in Cell Signaling* **\$425,000** awarded to A.M. English in **2002** (\$85,000 per year for five years).
- CIHR Operating Grant: *Mechanisms of Protein S-Nitrosation and Denitrosation* **\$448,172** awarded to A.M. English in **2001** (\$94,952 in 2001 plus \$88,305 per year for four years).
- CIHR Equipment Grant: *Stopped-Flow* **\$75,000** awarded to A.M. English in **2001**.
- CIHR Operating Grant: *Biological Factors that are Important for Normal Early Human Development: Reactions of HbF and NO* **\$395,450** awarded to H. Bard (PI) and A.M. English in **2001** (\$79,090 per year for five years).
- CIHR Equipment Grant: *Nitric Oxide Meter* **\$42,000** awarded to H. Bard (PI) and A.M. English in **2001**.
- NSERC Equipment Grant: *Anaerobic Glove Box* **\$33,860** awarded to J. Powlowski (PI) and A.M. English in **2001**.
- Concordia University CURC Program: *Senior Research Chair in Bioinorganic Chemistry* **\$210,000** awarded to A.M. English in **2001** (\$30,000 per year for seven years).
- NSERC Strategic Operating Grant: *Towards Zeolite-hosted Supramolecular Sunscreens* **\$356,700** awarded to J.C. Scaiano (PI) and A.M. English in **2000** (\$123,800 in 2000, \$116,200 in 2001 and 116,700 in 2002).
- NSERC Major Installation Grant: *NanoLC-ESI-MS/MS System for Biomolecular and Functional Proteomics Studies* **\$518,120** awarded to A.M. English (PI) and nine others in **2000**.
- NSERC Equipment Grant: *French Press Cell Lysis System* **\$25,103** awarded to J.L. Turnbull (PI), A.M. English and 3 others in **2000**.
- FCAR Team Operating Grant: *Spectroscopic Analysis of Metalloprotein Structure Function* **\$66,000** awarded to A.M. English (PI) and J.A. Capobianco in **2000** (\$22,000 per year for three years).
- FCAR Team Equipment Grant: *Spectroscopic Analysis of Metalloprotein Structure Function* **\$23,316** awarded to A.M. English (PI) and J.A. Capobianco in **2000**.
- NSERC Operating Grant: *Hemoprotein Control of Biological Redox Processes* **\$269,335** awarded to A.M. English in **1998** (\$64,900 first year plus \$68,145 per year for three years).
- Heart & Stroke Foundation of Canada Grant: *Biochemical and Mutational Analysis of Guanylate Cyclase* **\$34,000** awarded to A.M. English in **1998** (\$11,333 per year for three years).
- NSERC Equipment Grant: *Molecular Biology Equipment* **\$37,770** awarded to A.M. English in **1997**.

- NSERC Equipment Grant: *FTIR Spectrometer* **\$58,474** awarded to A.M. English (PI) and J.L. Turnbull in **1995**.
- NSERC Operating Grant: *Kinetic and Spectroscopic Studies on Heme Proteins* **\$203,584** awarded to A.M. English in **1994** (\$50,896 per year for four years).
- NSERC Major Equipment Grant: *270 MHz NMR*, **\$217,580** (plus **\$100,000** from Concordia) awarded to Y. Tsantrizos (PI) and A.M. English in **1994**.
- NSERC Major Equipment Grant: *Atmospheric Pressure Ionization LS-MS System* **\$287,631** awarded to A.M. English (PI), S.M. Mikkelsen and Y. Tsantrizos in **1994**.
- NSERC Equipment Grant: *Tangential Flow Filtration Unit* **\$15,872** awarded to J.L. Turnbull (PI), A.M. English and 3 others in **1994**.
- NSERC Conference Grant: *Biochemical and Biomedical Aspects of Inorganic Chemistry-76th CSC Conference Symposium, Sherbrooke 1993* **\$3,000** awarded to A.M. English and M. Gresser (Merck Frosst) in **1993**.
- NSERC Equipment Grant: *Circular Dichroism Spectropolarimeter* **\$90,000** awarded to J.L. Turbull (PI), A.M. English and J.A. Kornblatt in **1993**.
- NSERC Equipment Grant: *Large Capacity Ultracentrifuge Rotor* **\$12,773** awarded to J. Powlowski (PI), A.M. English and two others in **1993**.
- NSERC Equipment Grant: *UV-VIS Spectrophotometer* **\$29,910** awarded to A.M. English in **1992**.
- NSERC Equipment Grant: *Refrigerated Centrifuge* **\$27,000** to P.B.M. Joyce (PI), A.M. English and 2 others in **1992**.
- Stroke and Heart foundation of Quebec Grant: *Studies on Guanylate Cyclase* **\$20,000** awarded to A.M. English in **1992** (\$10,000 per year for two years).
- NSERC Strategic Operating Grant: *Derivatization of Enzymes for Use in Amperometric Biosensors and Electrochemical Immunoassays* **\$286,400** awarded to A.M. English (PI) and S.M. Mikkelsen in **1991** (\$95,467 per year for three years).
- NSERC Strategic Equipment Grant: *High Performance Liquid Chromatograph* **\$33,091** awarded to A.M. English (PI) and S.M. Mikkelsen in **1991**.
- NSERC Operating Grant: *Kinetic and Spectroscopic Studies on Heme Proteins* **\$108,000** awarded to A.M. English in **1991** (\$36,000 per year for three years)
- NSERC Equipment Grant: *Glove Box for the Anaerobic Manipulation of Proteins* **\$46,224** awarded to A.M. English in **1990**.
- NSERC Conference Grant: *Control of Charge Transfer in Cytochrome and Chlorophyll Complexes* **\$3,500** awarded to P. Nicholls (PI), A.M. English, G. Gingras, B.C. Hill and J.A. Kornblatt in **1990**.
- NSERC Operating Grant: *Ligand Binding and Redox Properties of Heme Proteins* **\$92,238** awarded to A.M. English in **1988** (\$30,746 per year for 3 years).
- NSERC Equipment Grant: *Automated Fast Protein Liquid Chromatography System* **\$42,932** awarded

to A.M. English in **1988**.

- FCAR Team Equipment Grant: *Electrochemical Equipment* **\$7,666** awarded to A.M. English (PI) and J.A. Kornblatt in **1988**.
- NSERC Operating Grant: *Ligand Binding and Redox Properties of Heme Proteins* **\$23,000** awarded to A.M. English in **1987**.
- FCAR Team Operating Grant: *Studies on Heme Proteins* **\$42,054** awarded to A.M. English (PI) and J.A. Kornblatt in **1987** (\$14,018 per year for three years).
- NSERC and Royal Society Bilateral Award: *Kinetic and Spectroscopic Studies on Metalloproteins Under Anoxic Conditions* **\$2,699** awarded to A.M. English and R.N.F. Thorneley (Sussex) in **1987**.
- NSERC Operating Grant: *Ligand Binding and Redox Properties of Heme Proteins* **\$22,080** awarded to A.M. English in **1986**.
- NSERC Equipment Grant: *Conventional Microsecond Flash Photolysis System* **\$53,074**, awarded to A.M. English (PI) and B.C. Hill in **1986**.
- NATO International Collaborative Award: *Kinetic and Spectroscopic Studies on the Ligand Binding Properties of Peroxidases* **\$17,000** awarded to A.M. English, G. Smulevich (Florence) and T. Spiro (Princeton) in **1986** (term: 1986-1991).
- NSERC Operating Grant: *Ligand Binding and Redox Properties of Heme Proteins* **\$22,000** awarded to A.M. English in **1985**.
- FCAR Team Operating Grant: *Studies on Heme Proteins* **\$27,272** awarded to A.M. English (PI) and J.A. Kornblatt in **1985** (\$13,636 per year for two years).
- NSERC Operating Grant: *Electron Transfer Mechanisms of Metalloproteins* **\$20,950**, awarded to A.M. English in **1984**.
- FCAR (Team) Equipment Grant: *Microcomputer and Accessories* **\$6,000** awarded to A.M. English (PI) and J.A. Kornblatt in **1984**.
- NSERC Operating Grant: *Electron Transfer Mechanisms of Metalloproteins* **\$15,900** awarded to A.M. English in **1983**.
- FCAR Operating Grant: *Photoinduced Electron Transfer in Metalloproteins* **\$14,000** awarded to A.M. English in **1983** (\$7,000 per year for two years)
- FCAR Equipment Grant: *Photoinduced Electron Transfer in Metalloproteins* **\$4,000** awarded to A.M. English in **1983**.
- NSERC Operating Grant: *Structure and Function of Manganese-Containing Metalloproteins* **\$13,000** awarded to A.M. English in **1982**.