

**List of Publications: Anne-Frances Miller****Aug 2017**

- 1 J. C. De Paula, P. M. Li, **A.-F. Miller**, B. W. Wu and G. W. Brudvig (1986) "Effect of the 17- and 23-Kilodalton Polypeptides, Calcium and Chloride on Electron Transfer in Photosystem II." *Biochemistry* 25, 6487-6494.
- 2 **A.-F. Miller**, J. C. De Paula, and G. W. Brudvig (1987) "Formation of the S<sub>2</sub> state and Structure of the Mn Complex in Photosystem II Lacking the Extrinsic 33 Kilodalton Polypeptide." *Photosynth. Res.* 12, 205-218.
- 3 J. C. De Paula, W. F. Beck., **A.-F. Miller**, R. B. Wilson and G. W. Brudvig (1987) "Studies of the Manganese Site of Photosystem II by Electron Spin Resonance Spectroscopy." *J. Chem. Soc. Faraday Transactions* 83, 3635-3651.
- 4 L. K. Thompson, **A.-F. Miller**, J. C. De Paula and G. W. Brudvig (1988) "Electron Donation in Photosystem II." *Israel J. Chem.* 28, 121-128.
- 5 **A.-F. Miller** and G. W. Brudvig (1989) "Manganese and Calcium Requirements for Reconstitution of Oxygen-Evolution Activity in Manganese-Depleted Photosystem II Membranes." *Biochemistry* 28, 8181-8190.
- 6 L. K. Thompson, **A.-F. Miller**, C. A. Buser, J. C. De Paula and G. W. Brudvig (1989) "Characterization of the Multiple Forms of Cytochrome b559 in Photosystem II." *Biochemistry* 28, 8048-8056.
- 7 **A.-F. Miller** and G. W. Brudvig (1990) "Electron Transfer Events Leading to Reconstitution of Oxygen-Evolution Activity in Manganese-Depleted Photosystem II Membranes." *Biochemistry* 29, 1385-1392.
- 8 **A.-F. Miller** and G. W. Brudvig (1991) "A Guide to EPR Spectroscopy of Photosystem II Membranes." *Reviews in Bioenergetics, Biochim. Biophys. Acta.* 1056, 1-18.
- 9 **A.-F. Miller** and W. H. Orme-Johnson (1992) "The Dependence on Iron Availability of Allocation of Iron to Nitrogenase Components in *K. pneumoniae* and *E. coli*" *J. Biol. Chem.* 267, 9398-9408.
- 10 **A.-F. Miller**, M. Z. Papastavros and A. G. Redfield (1992) "NMR Studies of the Conformational Change in Human N-p21<sup>ras</sup> Produced by Replacement of Bound GDP with the GTP Analog GTPγS" *Biochemistry* 31, 10208-10216.
- 11 **Miller, A.-F.**, C. J. Halkides and A. G. Redfield (1993) " An NMR Comparison of the Changes Produced by Different Guanosine 5'-Triphosphate Analogs in Wild-Type and Oncogenic Mutant p21<sup>ras</sup>" *Biochemistry* 32, 7367-7376.
- 12 C. Abeygunawardana, D. J. Weber, A. G. Gittis, D. N. Frick, J. Lin, **A.-F. Miller**, M. J. Bessman, and A. S. Mildvan (1995) "Solution Structure of the MutT Enzyme, a Nucleoside Triphosphate Pyrophosphohydrolase" *Biochemistry* 34, 14997-15005.
- 13 D. M. Noll, **A.-F. Miller** and P. S. Miller (1996) "Effect of Third Strand Orientation on Oligonucleotide Intramolecular Triplex Stability" *J. Am. Chem. Soc.* 118, 8979-8980.
- 14 **A.-F. Miller** and D. L. Sorkin (1997) "Superoxide Dismutases: A Molecular Perspective" *Comments on Molecular and Cellular Biophysics*, 9(1) 1 - 48.
- 15 C. K. Vance, Y. M. Kang and **A.-F. Miller** (1997) "Selective Labeling and Direct Observation by NMR of the Active Site Glutamine of Fe-Containing Superoxide Dismutase" *J. Biomol. NMR*, 9, 201-206.

- 16 D. L. Sorkin and **A.-F. Miller** (1997) "Observation of a Long-Predicted Active Site pK in Fe-Superoxide Dismutase from *E. coli*" *Biochemistry.*, *36(16)* 4916-4924.
- 17 **A.-F. Miller**, L. A. Egan and C. A. Townsend (1997) "Measurement of the Degree of Coupled Isotopic Enrichment of Different Positions in an Antibiotic Peptide by NMR" *J. Magn. Reson.*, *125(1)* 120-131.
- 18 D. L. Sorkin, D. K. Duong and **A.-F. Miller** (1997) "Mutation of Tyrosine 34 to Phenylalanine Eliminates the Active Site pK of Reduced Fe-SOD" *Biochemistry* *36*, 8202 - 8208.
- 19 C. K. Vance and **A.-F. Miller** (1998) "A Simple Proposal that Can Explain the Inactivity of Metal-Substituted Superoxide Dismutases" *J. Am. Chem. Soc.*, *120 (3)*, 461-467.
- 20 C. K. Vance and **A.-F. Miller** (1998) "Spectroscopic Comparisons of the pH Dependencies of Fe-Substituted-(Mn) Superoxide Dismutase and Fe-Superoxide Dismutase", *Biochemistry* *37(16)*, 5518-5527.
- 21 R. L. Koder, Jr. and **A.-F. Miller** (1998) "Overexpression, Isotopic Labeling and Spectral Characterization of *Enterobacter cloacae* Nitroreductase" *Protein Expression and Purification.* *13*, 53-60.
- 22 R. L. Koder, Jr. and **A.-F. Miller** (1998) "Steady State Kinetic Mechanism, Stereospecificity, Substrate and Inhibitor Specificity of *Enterobacter cloacae* Nitroreductase" *Biochim. Biophys. Acta*, *1385*, 395-405.
- 23 J. Lou, F. Moshiri, M. K. Johnson, M. E. Lafferty, D. L. Sorkin, **A.-F. Miller**, and R. J. Maier (1999) "Mutagenesis Studies of the FeSII Protein of *Azotobacter vinelandii*: Roles of Histidine and Lysine Residues in the Protection of Nitrogenase from Oxygen Damage.", *Biochemistry*, *38(17)* 5563-5571.
- 24 K. A. Campbell, E. Yikilmaz, C. V. Grant, W. Gregor, **A.-F. Miller**, and R. D. Britt (1999) "Parallel Polarization EPR Characterization of the Mn(III) Center of Oxidized Manganese Superoxide Dismutase", *J. Am. Chem. Soc.*, *121(19)* 4714-4715.
- 25 S. Vathyam, R. A. Byrd and **A.-F. Miller** (1999) "Assignment of the Backbone Resonances of Oxidized Fe-Superoxide Dismutase, a 42 kDa Paramagnet-Containing Enzyme", *J. Biomol. NMR*, *14 (3)* 293-294.
26. R. L. Koder, Jr., M. E. Rodgers and **A.-F. Miller** (1999) "Flavin Binding Thermodynamics in *Enterobacter cloacae* Nitroreductase," in *Flavins and Flavoproteins*, S. Ghisla, P. Kroneck, P. Macheroux and H. Sund, Eds., Agency for Scientific Publications, Berlin, pp. 45-48.
- 27 J. D. Walsh and **A.-F. Miller** (1999) "Theoretical Destabilization of the Flavin Semiquinone of *Enterobacter cloacae* Nitroreductase by a Hydrogen-Bonding-Bending Mechanism," in *Flavins and Flavoproteins*, S. Ghisla, P. Kroneck, P. Macheroux and H. Sund, Eds., Agency for Scientific Publications, Berlin, pp. 63-66.
- 28 D. L. Sorkin and **A.-F. Miller** (2000) "Amino Acid Specific Labelling and Active Site Studies of Iron(II)- and Fe(III)-Superoxide Dismutase from *Escherichia coli*" *J. Biomol. NMR* *17*, 311-322.
- 29 S. Vathyam, R. A. Byrd and **A.-F. Miller** (2000) "Mapping the Effects of Metal Ion Reduction and Substrate Analog Binding to Fe-Superoxide Dismutase by NMR" *Magn. Reson. Chem.* *38(7)* 536-542.

- 30 A. L. Schwartz, E. Yikilmaz, C. K. Vance, S. Vathyam, R. L. Koder, Jr. and **A.-F. Miller** (2000) "Mutational and Spectroscopic Studies of the Significance of the Active Site Glutamine to Metal ion Specificity in Superoxide Dismutase", *J. Inorg. Biochem.*, 80, 247-256.
- 31 H. Nivinskas, R. L. Koder, Jr., Ž. Anusevičius, J. Šarlauskas, **A.-F. Miller**, N. Čenas (2000) "Two-Electron Reduction of Nitroaromatic Compounds by *Enterobacter cloacae* NAD(P)H Nitroreductase: Description of Quantitative Structure-Activity Relationships" *Acta Biochim. Pol.* 47 (4) 941-949.
- 32 H. Nivinskas, R. L. Koder, Jr., Ž. Anusevičius, J. Šarlauskas, **A.-F. Miller** and N. Čenas (2001) "Quantitative Structure-Activity Relationships in Two-Electron Reduction of Nitroaromatic Compounds by *Enterobacter cloacae* NAD(P)H:Nitroreductase" *Arch. Biochem. Biophys.* 385 (1), 170-178.
- 33 R. L. Koder, L. Oyedele and **A.-F. Miller** (2001) "Retro-Nitroreductase, a Putative Evolutionary Precursor to *Enterobacter cloacae* strain 96-3 Nitroreductase" *Journal of Antioxidants and Redox Signalling* 3 (5), 747-755.
- 34 **A.-F. Miller** (2001) "Fe Superoxide Dismutase" in Handbook of Metalloproteins, Wieghardt, K., Huber, R., Poulos, T. L. and Messerschmidt, A, Eds., Wiley and Sons. pp. 668-682.
- 35 M. A. Kelly, B. W. Chellgren, A. L. Rucker, J. M. Troutman, M. G. Fried, **A.-F. Miller** and T. P. Creamer (2001) "Host-Guest Study of Left-Handed Polyproline II Helix Formation". *Biochemistry* 40, 14376-14383.
- 36 C. K. Vance and **A.-F. Miller** (2001) "Novel Insights into the Basis for *E. coli* SOD's Metal Ion Specificity, from Mn-Substituted Fe-SOD and its Very High  $E_m$ ", *Biochemistry* 40, 13079-13087.
- 37 J. Xie, E. Yikilmaz, **A.-F. Miller** and T. C. Brunold (2002) "Second-Sphere Contributions to Substrate-Analogue Binding in Iron(III) Superoxide Dismutase" *J. Am. Chem. Soc.* 124(14) 3769-3774.
- 38 E. Yikilmaz, J. Xie, T. C. Brunold and **A.-F. Miller** (2002), "Hydrogen-Bond-Mediated Tuning of the Redox Potential of the Non-Heme Fe site of Superoxide Dismutase.", *J. Am. Chem. Soc.* 124(14) 3482-3483.
- 39 C. Haynes, R. L. Koder, Jr., **A.-F. Miller** and D. W. Rodgers (2002) "Structures of Nitroreductase in Three States: Effects of Inhibitor Binding and Reduction", *J. Biol. Chem.*, 277 (13) 11513-11520.
- 40 H. Nivinskas, S. Stadkeviciene, J. Šarlauskas, R. L. Koder, Jr., **A.-F. Miller** and N. Čenas (2002) "Two-Electron Reduction of Quinones by *Enterobacter cloacae* NAD(P)H:Nitroreductase: Quantitative Structure-Activity Relationships." *Arch. Biochim. Biophys.* 403, 249-258.
- 41 T. A. Jackson, J. Xie, E. Yikilmaz, **A.-F. Miller** and T. C. Brunold (2002), "Spectroscopic and Computational Studies on Iron and Manganese Superoxide Dismutases: Nature of the Chemical Events Associated with Active Site pKs" *J. Am. Chem. Soc.* 124, 10833-10845.
- 42 J. Maliekal, A. Karapetian, C. K. Vance, E. Yikilmaz, Q. Wu, T. A. Jackson, T. C. Brunold, T. G. Spiro and **A.-F. Miller**. (2002) "Comparison and Contrasts Between the Active Site pKs of Mn-Superoxide Dismutase and those of Fe-Superoxide Dismutase" *J. Am. Chem. Soc.* 124: 15064-15075.

- 43 R. L. Koder, Jr., C. Haynes, M. E. Rodgers, D. W. Rodgers and **A.-F. Miller** (2002) "Flavin Thermodynamics Explain the Oxygen Insensitivity of Enteric Nitroreductases." *Biochemistry* 41(48) 14197-14205.
- 44 J. Walsh and **A.-F. Miller**, (2003) "NMR Shieldings and Electron Correlation Reveal Remarkable Behaviour on the Part of the Flavin N5 Reactive Center" *J. Phys. Chem.* 107(3): 854-863.
- 45 J. D. Walsh and **A.-F. Miller** (2003) "Flavin Reduction Potential Tuning by Substitution and Bending" *J. Mol. Structure: THEOCHEM.* 623, 185-195.
- 46 **A.-F. Miller**, K. Padmakumar, D. L. Sorkin, A. Karapetian and C. K. Vance. (2003) "Proton-Coupled Electron Transfer in Fe-Superoxide Dismutase and Mn-Superoxide Dismutase". *J. Inorg. Biochem.* 93, 71-83.
- 47 **A.-F. Miller**. "Superoxide Processing" (2003) in *Comprehensive Coordination Chemistry II*, Vol 8 (Coordination Chemistry of the Biosphere), L. Que, Jr. and W. B. Tolman, Eds, J. McCleverty and T. Meyer, series Eds, Elsevier/Pergamon Oxford UK.
48. T. A. Jackson, E. Yikilmaz, **A.-F. Miller** and T. C. Brunold (2003) "Spectroscopic and Computational Study of a Non-Heme Iron {Fe-NO}7 System: Exploring the Geometric and Electronic Structures of the Nitrosyl Adduct of Iron Superoxide Dismutase." *J. Am. Chem. Soc.* 125, 8348-8363.
49. **A.-F. Miller** (2004) "Superoxide Dismutase, an Active Site that Saves but a Protein that Kills" *Curr. Op. Chem. Biol.* 8: 162-168.
50. T. A. Jackson, A. Karapetyan, **A.-F. Miller** and T. C. Brunold,. (2004) "Spectroscopic and Computational Studies of the Azide-Adduct of Manganese Superoxide Dismutase: Definitive Assignment of the Ligand Responsible for the Low-Temperature Thermochromism" *J. Am. Chem. Soc.* 126: 12477-12491.
51. T. A. Jackson, A. Karapetyan, **A.-F. Miller** and T. C. Brunold, (2005) "Probing the Geometric and Electronic Structures of the Low Temperature Azide Adduct and the Product-Inhibited Form of Oxidized Manganese Superoxide Dismutase" *Biochemistry* 44(5) 1504-1520.
52. **A.-F. Miller**, D. L. Sorkin and K. Padmakumar (2005) "The Anion Binding Properties of Reduced and Oxidized Iron-Containing Superoxide Dismutase Reveal no Requirement for Tyrosine 34", *Biochemistry* 44(16):5969-5981.
53. E. Yikilmaz, D. W. Rodgers and **A.-F. Miller** (2006) "The Crucial Importance of Chemistry in the Structure-Function Link: Manipulating H-Bonding in Fe-Superoxide Dismutase", *Biochemistry* 45(4) 1151-1161.
54. B. W. Chellgren, **A.-F. Miller** and T. P. Creamer (2006) 'Evidence for polyproline II helical structure in short polyglutamine tracts.' *Journal of Molecular Biology.* 361: 362-371.
55. R. L. Koder, Jr., J. D. Walsh, M. S. Pometun, P. L. Dutton, R. J. Wittebort and **A.-F. Miller** (2006) '<sup>15</sup>N Solid-State NMR provides a sensitive probe of oxidized flavin reactive sites.', *J. Am. Chem. Soc.* 128(47) 15200-15208.
56. R. L. Koder, Jr., B. R. Lichtenstein, J. F. Cerda, **A.-F. Miller** and P. L. Dutton (2007) "A flavin analogue with improved solubility in organic solvents" *Tet. Lett.* 48: 5517-5520.
57. E. Yikilmaz, J. Porta, L. Grove, A. Vahedi-Faridi, Y. Bronshteyn, T. C. Brunold, G. E. O. Borgstahl and **A.-F. Miller** (2007) "How can a single second sphere amino

- acid change cause a reduction midpoint potential change of hundreds of mV ? " *J. Am. Chem. Soc.* 129: 9927-9940.
58. W. L. Boatright, M.S. Jahan, B.M. Walters, **A.F. Miller**, D. Cui, E.J. Hustedt and Q. Lei (2008) "Carbon Centered Radicals in Isolated Soy Proteins", *J Food Science*, 73(3):C222-226.
  59. **A.-F. Miller** (2008) "Redox tuning over almost 1 V in a structurally-conserved active site: lessons from superoxide dismutase.", *Acc. Chem. Res.* 41 (4) 501-510.
  60. J. F. Cerda, R. L. Koder, B. R. Lichtenstein, C. M. Moser, **A.-F. Miller**, and P. L. Dutton (2008) "Hydrogen Bond-Free Flavin Redox Properties: Managing Flavins in Extreme Aprotic Solvents" *Org. Biomol. Chem.*, 6: 2204-2212.
  61. L. Grove, J. Xie, E. Yikilmaz, **A.-F. Miller**, and T. C. Brunold (2008) "Spectroscopic and Computational Insights into Second-Sphere Contributions to Redox Tuning in Escherichia coli Iron Superoxide Dismutase" *Inorg. Chem.* 47: 3978-3992.
  62. L. E. Grove, J. Xie, E. Yikilmaz, A. Karapetyan, **A.-F. Miller**, and T. C. Brunold (2008) "Spectroscopic and Computational Insights into Second-Sphere Amino-Acid Tuning of Substrate Analogue/Active-Site Interactions in Iron(III) Superoxide Dismutase"
  63. **A.-F. Miller** (2008) "The shortest wire" *Proc. Natl. Acad. Sci. U.S.A.* 105 (21): 7341-7342.
  64. G. Osei-Prempeh, H.-J. Lehmler, **A.-F. Miller**, B. L. Knutson and S. E. Rankin (2010) "Fluorocarbon and hydrocarbon functional group incorporation into nanoporous silica employing fluorinated and hydrocarbon surfactants as templates" *Microporous & Mesoporous Materials* 129: 189-199.
  65. **A.-F. Miller**, E. Yikilmaz and S. Vathyam (2010) " <sup>15</sup>N-NMR characterization of His residues in and around the active site of FeSOD." *Biochim. Biophys. Acta* 1804: 275-284.
  66. T. Maly, **A.-F. Miller** and R. G. Griffin (2010) "In-situ High-Field Dynamic Nuclear Polarization : Direct and Indirect Polarization of <sup>13</sup>C nuclei" *Chem. Phys. Chem.* 11(5): 999-1001.
  67. J. Johnston, H. Hassan, **A.-F. Miller** and M. Apicella (2010) "Sialic acid transport and catabolism are cooperatively regulated by SiaR and CRP in nontypeable *Haemophilus influenzae*" *BMC Microbiology* 10:240.
  68. N. B. Surmeli, N. K. Litterman, **A.-F. Miller** and J. T. Groves (2011) "Peroxynitrite Mediates Active Site Tyrosine Nitration in Manganese Superoxide Dismutase. Evidence of a Role for the Carbonate Radical Anion." *J. Am. Chem. Soc.* 132 (48), 17174–17185
  69. D. Cui, R. L. Koder, Jr. P. L. Dutton and **A.-F. Miller** (2011) " <sup>15</sup>N Solid-State NMR as a probe of Flavin H-bonding." *J. Phys. Chem -B.* 115 (24): 7788-7798.
  70. B. Purushothaman, M. Bruzek, S. R. Parkin, **A.-F. Miller** and J. E. Anthony (2011) "Synthesis and structural characterization of crystalline nonacenes", VIP paper, *Angewandte Chemie Int. Ed.* 50(31) Cover pg. 6932 text pages 7013-7017
  71. A. A. Adeneye, P. A. Crooks, **A. F. Miller**, J. Goodman, O. O. Adeyemi, E. O. Agbaje (2012) "Isolation and structure elucidation of a new indole alkaloid, erinidine, from *Hunteria umbellata* seed." *Pharmacologia* 3(7): 204-214.

72. **A.-F. Miller** (2012) "Superoxide dismutases: ancient enzymes and new insights." *FEBS Lett.* 586: 585-595.
73. T. Maly, D. Cui, R. G. Griffin and **A.-F. Miller** (2012) "Dynamic nuclear polarization based on an endogenous radical" *J. Phys. Chem. -B* 116: 7055-7065.
74. **A.-F. Miller** (2013) "Superoxide Dismutases" Encyclopedia of Biophysics, G. Roberts, V. Davidson, Ed. pp 2517-2522.75. Jackson, T. A., Gutman, C. T. , Maliekal, J., **Miller, A.-F.** Brunold, T. C. (2013) "Geometric and Electronic Structures of Manganese-substituted Iron Superoxide Dismutase" *Inorganic Chemistry* 52(6):3356-3367.
76. Mattei, A., Mei, X., **Miller, A.-F.**, Li, T. (2013) "Two Major Pre-Nucleation Species that are Conformationally Distinct and in Equilibrium of Self-Association" *Crystal Growth & Design* 13(8): 3303-3307.
77. Pan, J., Bhardwaj, M., Faulkner, J. R., Nagabhyru, P., Charlton, N. D., Higashi, R. M., **Miller, A.-F.**, Young, C. A., Grossman, R. B., Schardl, C. L. (2013) "Ether bridge formation in loline alkaloid biosynthesis" *Phytochem. D.* 98:60-68
78. Crooks, P. A., Zaineb, F.-A., **Miller, A.-F.**, Zito, W. S. (2013) "Antihyperglycemic profile of erinidine isolated from *Hunteria umbellata* seed." *African journal of traditional, complementary, and alternative medicines AJTCAM* 10(2): 189-202.
79. **Miller, A.-F.** (2014) "Solid state NMR of flavins and flavoproteins" in "Flavins and flavoprotein protocols" Schleicher, E. and Weber, S., Eds. (Elsevier). Methods in Molecular Biology Vol.1146, pp 307-340.
80. Rathnayake, S., Unrine, J. M., Judy, J., **Miller, A.-F.**, Rao, W., Bertsch, P. M. (2014) "A multi-technique investigation of phosphate induced transformation of ZnO nanoparticles." *Environmental Science & Technology* 48(9): 4757-4764.
81. Sheng, Y., Abreu, I. A., Cabelli, D. E., Maroney, M. J., **Miller, A.-F.**, Teixeira, M. and Valentine, J. S. (2014) "Superoxide dismutases and superoxide reductases" *Chemical Reviews* 2014 114:3854-3918.
82. Pitsawong, W., Hoben, J. P., **Miller, A.-F.** (2014) "Understanding the Broad Substrate Repertoire of Nitroreductase Based on its Kinetic Mechanism" *the Journal of Biological Chemistry.* 289:15203-15214.
83. Peters, J. W., **Miller, A.-F.**, Jones, A. K., King, P. W. and Adams, M. W. (2016) "Electron Bifurcation" *Curr. Opin. Chem. Biol.* 31:146-152.
84. Sarma, R., Sloan, M. J. and **Miller, A.-F.** (2016) 'Flavin-Sensitized Electrode System for Oxygen Evolution Using Photo-Electrocatalysis'. *Chem. Comm* 52:8834-8837.
85. Hoben, J. P., Wang, J. and **Miller, A.-F.** (2016) 'Unboiling an egg: an Undergraduate Experiment in Circular Dichroism of Proteins, Unfolding and Refolding.' *J. Chem. Ed.* 94(3) 356-360.
86. Das, S., Xu, W., Lehmler, H.-J., **Miller, A.-F.**, Knutson, B. L. and Rankin, S. E. (2016) "Inverted Micelle-in-Micelle Configuration in Cationic/Carbohydrate Surfactant Systems" *Chem. Phys. Chem.* 18(1): 79-86.
87. Lubner, C. E., Jennings, D. P., Mulder, D. W., Schut, G. J., Zadvornyy, O., Hoben, J., Tokmina-Lukaszewska, M., Berry, L., Nguyen, D., Lipscomb, G. L., Bothner, B., Jones, A. K., **Miller, A.-F.**, King, P. W., Adams, M. W. W. and Peters, J. W. (2017) "Mechanistic Insights into Energy Conservation by Flavin-Based Electron Bifurcation" *Nature Chemical Biology* 13: 655-659.

88. Pitsawong, W., Haynes, C., Koder, R., Jr., Rodgers, D. and **Miller, A.-F.** (2017) "Mechanism-informed refinement reveals altered substrate binding mode for catalytically competent nitroreductase". *Structure* 25(7) 978-987.
89. Sarma, R., Islam, M. S., **Miller, A.-F.** and Bhattacharyya, D. (2017) "Layer-by-Layer assembled laccase enzyme on stimuli-responsive membranes for chloroorganics degradation" *ACS Applied Materials & Interfaces* 9(17) 14858-14867.
90. Hoben, J. P., Lubner, C. E., Ratzloff, M. W., Schut, G. J., Nguyen, D. M. N., Hempel, K. W., Adams, M. W. W., King, P. W., **Miller, A.-F.** (2017) "Equilibrium and ultrafast kinetic studies manipulating electron transfer: a short-lived flavin semiquinone is not sufficient for electron bifurcation" In Press, *J. Biol. Chem.*
91. **Miller, A.-F.** and Wang, T. (2017) "A single outer-sphere mutation stabilizes apo-Mn superoxide dismutase by 35°C and disfavours Mn binding" In Press, *Biochemistry*.
92. Ledbetter, R. N. Garcia Costas, A. M., Lubner, C. E., Mulder, D. E., Tokmina-Lukaszewska, M., Artz, J. H., Patterson, A., Magnuson, T. S., Jay, Z. J., Duan, H. D., Miller, J., Plunkett, M. H, Hoben, J. P., Barney, B. M., Carlson, R. P., **Miller, A.-F.**, Bothner, B., King, P. W., Peters, J. W., and Seefeldt, L. C. (2017) "The Electron Bifurcating FixABCX Protein Complex from *Azotobacter vinelandii*: Generation of Low-Potential Reducing Equivalents for Nitrogenase Catalysis" In Press, *Biochemistry*.
93. Garcia Costas, A. M., Poudel, S., **Miller, A.-F.**, Schut G. J., Ledbetter, R. N., Fixen, K., Seefeldt, L. C., Adams, M. W., Harwood, C. S., Boyd, E. S. Peters, J. W., "Defining Electron Bifurcation in the Electron Transferring Flavoprotein Family" *Accepted by J. Bacteriol.*