

Dr. Amanda Bryant-Friedrich
Professor

Curriculum Vitae

College of Graduate Studies
University of Toledo
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EDUCATION AND TRAINING

Dr. rer. nat. Pharmaceutical Chemistry Advisor: Prof. Dr. Richard Neidlein	1997	Ruprecht-Karls Universität Heidelberg
M.S. Chemistry Advisor: Dr. Richard Polniaszek	1992	Duke University
B.S. Chemistry	1990	North Carolina Central University

EMPLOYMENT

July 2018 – pres.	Dean, College of Graduate Studies and Vice-Provost for Graduate Affairs, Univ. of Toledo, Toledo, OH
July 2018 – pres.	Professor, Medicinal and Biological Chemistry, Univ. of Toledo, OH
January 2016 – pres.	Director, Shimadzu Laboratory for Pharmaceutical Research Excellence, Univ. of Toledo, Toledo, OH
Sept 2018 – Aug. 2019	Interim Dean, College of Pharmacy and Pharmaceutical Sciences, Univ. of Toledo, Toledo, OH
July 2016 – July 2018	Dean, College of Graduate Studies, Univ. of Toledo, Toledo, OH
July 2014 – Sept 2018	Director, International Pharmaceutical Sciences Graduate Student Retention and Recruitment, College of Pharmacy and Pharmaceutical Sciences, Univ. of Toledo, Toledo, OH
August 2008 - 2018	College of Natural Sciences and Mathematics, Univ. of Toledo, Toledo, OH Associate Professor of Chemistry (Joint Appointment)
Aug 2007 – 2018	College of Pharmacy and Pharmaceutical Sciences, Univ. of Toledo, Toledo, OH Associate Professor of Medicinal and Biological Chemistry
Aug 2009 –present	Adjunct Associate Professor of Chemistry, Oakland Univ., Rochester, MI
Aug 2006 – Aug. 2009	Associate Professor of Chemistry, Oakland Univ., Rochester, MI
June 2004 – June 2006	Director of the Michigan Eastern Regional Center for Undergraduate Research in Chemistry, Oakland Univ. Rochester, MI
Aug 2000- Aug 2006	Assistant Professor of Chemistry, Oakland Univ., Rochester, MI
Aug 1999-May 2000	College of Liberal Arts and Sciences, Wayne State University, Detroit, MI

Adjunct Faculty and Lecturer Department of Chemistry

Mar 1997- Mar 1999 Department of Organic Chemistry, Universität Basel, Basel, Switzerland
 Postdoctoral Research Fellow, Advisor: Prof. Dr. Bernd Giese

AWARDS/HONORS

- 2020 Milestones Award of the YWCA of Northwest Ohio
- 2020 Fellow of the American Association for the Advancement of Science
- 2019 Woman of Distinction Girl Scouts of Northwest Ohio
- 2018 Fellow of the American Chemical Society
- 2015-2016 Academic Leadership Fellow, American Association of Colleges of Pharmacy
- 2015 Alice H. Skeens Outstanding Woman Award, University of Toledo Women's Commission
- 2014 Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences, Central Region, American Chemical Society
- Oakland University Faculty Recognition Award

CORPORATE/COMMUNITY BOARDS

- 2020 – present, The Imagination Station, Board of Directors
- 2018 - present, Commissioner, Ohio Lake Erie Commission
- 2015 - present, Maumee Valley Country Day School, Board of Directors, Co-Vice Chair
- 2013 - 2014, Apple Tree Nursery School, Board of Directors
- 2012 - present, College of Arts and Sciences, North Carolina Central University, Advisory Board

PROFESSIONAL ACTIVITY

Publications (Refereed Journals - *indicates graduate student, †indicates undergraduate)

1. U.K. de Silva*, K. Choudhuri*, A.C. Bryant-Friedrich, Y. Lapitsky, Customizing polyelectrolyte complex shapes through photolithographic directed assembly, *Soft Matter*, 14 (2018) 521-532.
2. M.F. Bedi, W. Li†, T. Gutwald†, A.C. Bryant-Friedrich, Synthesis of damaged DNA containing the oxidative lesion 3'-oxothymidine, *Bioorganic & Medicinal chemistry*, 25 (2017) 5598-5602.
3. Raziya Shaik*, Matthew W. Ellis*, Matthew J. Starr†, Nicholas J. Amato*, and A. C. Bryant-Friedrich, "Photochemical Generation of a C5'-Uridinyl Radical", *ChemBiochem*. 2015, 16, 2379-2384.
4. Buthina Al-Oudat, Alex Salyer, Kevin Trabbic, A. Bryant-Friedrich, "3'-Modified oligodeoxyribonucleotides for the study of 2-deoxyribose damage in DNA", *Bioorg. Med. Chem. Lett.*, 2013, 23, 854-859.
5. Nicholas J. Amato and Amanda Bryant-Friedrich, "The impact of structure on oxidatively generated DNA damage products resulting from the C3'-thymidinyl radical," *ChemBiochem*. 2013, 21, 187-190.
6. Nicholas J. Amato, Christopher N. Mwai, Timothy C. Mueser, Amanda C. Bryant-Friedrich, "Thermodynamic and structural analysis of DNA damage architectures related to replication", *J. Nucleic Acids*, 2013, 2013, 867957.
7. Suaad A. S. Audat, * CherylAnn Trzasko Love, * Buthina A. S. Al-Oudat* and A. C. Bryant-Friedrich, "Synthesis of C3'-Modified Nucleosides for Selective Generation of the C3'-Deoxy-

- 3'-Thymidiny Radical: A Proposed Intermediate in LEE Induced DNA Damage". *J. Org. Chem.* 2012, 77, 3829-3837.
8. Rehana Zaidi* and A. Bryant-Friedrich, "The Effect of Reductant Levels on the Formation of Damage Lesions Derived from a 2-Deoxyribose Radical in ssDNA", *Radiat. Res.*, 2012, 177, 565-572.
 9. G. Lahoud, * A. Hitt, A. Bryant-Friedrich, "The aerobic fate of the C-3'-thymidiny radical in single stranded DNA", *Chem. Res. Toxicol.*, 2006, 19, 1630-1636. (5 citations)
 10. G. Lahoud, * J. Fancher, † S. Grosu, B. Cavanaugh, † and A. Bryant-Friedrich, "Automated Synthesis, Characterization and Structural Analysis of Oligonucleotide C-3'-Radical Precursors", *Bioorg. Med. Chem.*, 2006, 14, 2581-2588. (5 citations)
 11. A. Bryant-Friedrich "Generation of a C-3'-Thymidiny Radical in Single-Stranded Oligonucleotides under Anaerobic Conditions", *Org. Lett.*, 2004, 6, 2329. (10 citations)
 12. D. Becker, A. Bryant-Friedrich, C. Trzasko*†, M. Sevilla, "Electron Spin Resonance Study of DNA Irradiated with Argon Heavy Ion Beams: Evidence for Formation of Sugar/Phosphate Radicals", *Radiat. Res.*, 2003, 160, 174. (32 citations)
 13. S. Körner, A. Bryant-Friedrich, B. Giese, "C-3'- α - and β -Branched 2'-Deoxythymidines as Precursors for the Selective Generation of C-3'-Nucleoside Radicals", *J. Org. Chem.* 1999, 64, 1559. (4 citations)
 14. A. Bryant-Friedrich and R. Neidlein, "Syntheses and Properties of Donor/Acceptor Arylethynyl-Substituted 1,6-Methano[10]annulenes", *Helv. Chim. Acta*, 1997, 80, 1639.
 15. A. Bryant-Friedrich and R. Neidlein, "Syntheses and Reactions of Thio-substituted 1,6-Methano[10]annulenes", *Helv. Chim. Acta*, 1997, 80, 128.
 16. A. Bryant-Friedrich and R. Neidlein, "Synthesis and Chemical Reactions of New Ethynyl-Substituted 1,6-Methano[10]annulenes", *Synthesis*, 1995, 1506.

Publications (Webinars)

1. Amanda Bryant-Friedrich, Amber Charlebois, Les McQuire (2016, September 20) Becoming "Award Ready" [Webinar]. Retrieved from https://www.youtube.com/watch?v=G_sdsNVUJQU&feature=youtu.be
2. Isabel Escobar and Amanda Bryant-Friedrich, Northwest Ohio Chapter of the Association for Women Science (AWIS) Women in Science Day Of Meetings (WISDOM). AWIS White Paper and Webinar, 2013. <http://awis.org/displaycommon.cfm?an=1&subarticlenbr=349>

Publications (Book Chapters)

1. Amanda Bryant-Friedrich, "A. Bryant-Friedrich", *African American Women Chemists in the Modern Era* by Jeannette Brown Ed.; Oxford University Press, 2018.
2. Amanda Bryant-Friedrich, "Invictus", In *Mom the Chemistry Professor*, by Kim Woznack, Amber Charlebois, Renee Cole, Cecilia Marzabadi, Gail Webster, Ed.; Elsevier: New York, 2018.
3. L. Berhan, A. Bryant-Friedrich, N. Collins, I. Escobar, C. Gilbert, and C. Gruden, "A FORWARD to Professorship Workshop" In *Forward to Professorship in STEM: Inclusive Faculty Development Strategies That Work* by R. S. Heller, C. Mavripilis, and P. Sabila, Ed.; Elsevier: New York, 2015, 91-105.
4. Cadwalader and Bryant-Friedrich, "Improving Transparency and Equity in Scholarly Recognition by Scientific Societies" In *Careers, Entrepreneurship, and Diversity: Challenges and*

Opportunities in the Global Chemistry Enterprise, H. N. Cheng, S. Shah and M. L. Wu, Ed.; ACS Symposium Series, American Chemical Society: Washington, D. C., 2014, 245-254.

<http://pubs.acs.org/doi/abs/10.1021/bk-2014-1169.ch022>

5. Bryant-Friedrich. "Fate of DNA Sugar Radicals", in *Advances in Molecular Toxicology*, James Fishbein Ed.; Elsevier: New York, 2010; Vol. 4, pp 127-155.
6. Bryant-Friedrich, "The Journey of an African American Female Chemist-Scholar" in T. Berry and N. Mizelle, eds. (2006) *From Oppression to Grace: Women of Color and Their Dilemmas Within the Academy*, Stylus Publishing, LLC, Virginia. (Solicited, contributing author.)

Published Abstracts

1. Immaculate Sappy and Amanda Bryant-Friedrich, "Synthesis of 2'-C-methyl pseudouridines for the inhibition of HCV RNA-polymerase", 254th Annual Meeting of the American Chemical Society, Washington, DC, August 20 – 24, 2017.
2. Shin Cho, and Amanda Bryant-Friedrich, "Degradation from C5' oxidation and its adducts as potential biomarkers", 254th Annual Meeting of the American Chemical Society, Washington, DC, August 20 – 24, 2017.
3. Matthew Ellis, and Amanda Bryant-Friedrich, "Investigation into the reactivity of a C5'-uridinyl radical", 254th Annual Meeting of the American Chemical Society, Washington, DC, August 20 – 24, 2017.
4. Bader Alabdullah and Amanda Bryant-Friedrich, "Design and synthesis of novel uridine analogue with possible anti-HCV activity", 254th Annual Meeting of the American Chemical Society, Washington, DC, August 20 – 24, 2017.
5. Matthew Ellis and Amanda Bryant-Friedrich, "Investigation of RNA oxidation via selective generation of a C5'-uridinyl radical", 252nd Annual Meeting of the American Chemical Society, Philadelphia, PA, August 21 – 25, 2016.
6. Shin Cho, Suaad Audat, Amanda Bryant-Friedrich, "Investigation of DNA lesions from C5'-oxidation", 252nd Annual Meeting of the American Chemical Society, Philadelphia, PA, August 21 – 25, 2016.
7. Bader Alabdullah, and Amanda Bryant-Friedrich, "Design and synthesis of novel nucleotide analogues targeting HCV NS5B", 252nd Annual Meeting of the American Chemical Society, Philadelphia, PA, August 21 – 25, 2016.
8. Immaculate Sappy, Joseph Nunnari, Amanda C. Bryant-Friedrich, "Synthesis of 2'-C-methyl pseudouridines for the inhibition of HCV RNA polymerase", 250th Annual Meeting of the American Chemical Society, Boston MA, August 16 – 20, 2015.
9. Fernand Bedi, Prajakta Bhatkhande, Weiye Li, Samar Ayoub, Amanda Bryant-Friedrich, "Synthesis and analysis of DNA lesions generated from oxidative damage at the C-3' position of deoxyribonucleotides", 250th Annual Meeting of the American Chemical Society, Boston MA, August 16 – 20, 2015.
10. Matthew Ellis, Raziya Shaik, Amanda Bryant-Friedrich, "Generation of a C5'-uridinyl radical", 250th Annual Meeting of the American Chemical Society, Boston MA, August 16 – 20, 2015.
11. Prajakta Bhatkhande and Amanda Bryant-Friedrich, "Small molecule biomarker of oxidative damage from low energy electrons", 250th Annual Meeting of the American Chemical Society, Boston MA, August 16 – 20, 2015.
12. Matthew J. Starr, Raziya Shaik, Amanda C. Bryant-Friedrich. "Investigating Oxidative Damage in RNA through Pseudouridinyl Radical Precursors" Graduate Research Forum, University of Toledo, Toledo OH, March 2015.

13. Matthew J. Starr, Raziya Shaik, Amanda C. Bryant-Friedrich. “Investigating Oxidative Damage in RNA through Pseudouridinyl Radical Precursors” Rustbelt RNA Conference, Pittsburg, PA, October 2014.
14. Buthina Al-Oudat, Suaad Audat, CherylAnn Trzasko Love, Amanda C. Bryant-Friedrich, “A Study of DNA Radical Species Related to Low Energy Electrons”, Gordon Research Conference on Radiation Chemistry, Andover, New Hampshire, July 13-18, 2014.
15. Nicholas J. Amato, Christopher N. Mwai, Timothy Mueser, Amanda C. Bryant-Friedrich, “Oxidative DNA damage in replication relevant architectures”, 246th ACS National Meeting and Exposition, Indianapolis, Indiana, 2013.
16. Nicholas J. Amato and Amanda C. Bryant-Friedrich, “C3'-DNA damage: Impact of DNA structure on the formation of oxidative damage products.” 244th Annual Meeting of the American Chemical Society, Philadelphia, PA, 2012.
17. Raziya Shaik and Amanda C. Bryant-Friedrich, “Photochemical generation of the C5'-uridinyl and pseudouridinyl radical for the study of oxidative damage in RNA.” 244th Annual Meeting of the American Chemical Society, Philadelphia, PA, 2012.
18. Amato, Nicholas and Amanda C. Bryant-Friedrich. “DNA Damage and Ionizing Radiation: Impact of DNA Structure on the Reactivity and Fate of the C3'-Thymidinyl Radical.” Gordon Research Conference on Radiation Chemistry, Andover, New Hampshire, July 29- August 3, 2012.
19. Fernand Mel Bedi and Amanda C. Bryant-Friedrich. “Synthesis and Analysis of DNA Oligomers Containing the Oxidative Damage Lesion 3'-Oxothymidine”. Gordon Research Conference on Radiation Chemistry, Andover, New Hampshire, July 29- August 3, 2012.
20. Raziya Shaik and Amanda C. Bryant-Friedrich. “Study of Radical Initiated Damage to RNA through Independent Generation of C5'Uridinyl Radical”. Gordon Research Conference on Radiation Chemistry, Andover, New Hampshire, July 29- August 3, 2012.
21. Nicholas J. Amato, Chistopher Mwai, India Turner, Ting Wang, Timothy Mueser and Amanda C. Bryant-Friedrich. “Biophysical Analysis of DNA Architectures Generated by Oxidative Damage”, 43rd Meeting of the Central Region of the American Chemical Society, Dearborn, Michigan, June 5-9, 2012.
22. Amanda C Bryant-Friedrich, Buthina Abdallah, Suaad Abdallah, Cheryl Ann Love, Kevin Trabbic, Identification of damage lesions derived from the 3'-deoxy-C3'-thymidinyl radical.”, 242nd Meeting of the American Chemical Society, Denver, CO, August, 2011.
23. Raziya Shaik and Amanda C. Bryant-Friedrich,”Synthesis of modified uridine as a radical precursor for the study of oxidative damage to RNA”, 242nd Meeting of the American Chemical Society, Denver, CO, August, 2011.
24. Buthina Abdallah, Kevin Trabbic and Amanda C. Bryant-Friedrich, “Identification of Damage Products Derived from C3'-Deoxy-3'-thymidinyl Radical, A Proposed Intermediate from DNA-LEEs Interactions ”, 2nd Annual Midwest Graduate Research Symposium, Toledo, OH, March 26th, 2011.
25. Suaad Abdallah, Michelle Patania and Amanda C. Bryant-Friedrich, “Investigation of the stability and reactivity of DNA 5'-oxidation products in the search for biomarkers of oxidative stress and radiation damage, 2nd Annual Midwest Graduate Research Symposium, University of Toledo, Toledo, Ohio, USA, March 26th, 2011.
26. Nicholas J. Amato, Chistopher Mwai, India Turner, Ting Wang, Timothy Mueser and Amanda C. Bryant-Friedrich, “The Effects of Sugar Oxidation on the Structure and Stability of Replication Relevant DNA Architectures”, 13th Annual Midwest DNA Repair Symposium, Toledo, OH, May 14th-15th, 2011.
27. Nicholas J. Amato, Chistopher Mwai, India Turner, Ting Wang, Timothy Mueser and Amanda C. Bryant-Friedrich, “The Effects of Sugar Oxidation on the Structure and Stability of Replication Relevant DNA Architectures”, 2nd Annual Midwest Graduate Research Symposium, Toledo, OH, March 26th, 2011.

28. Nicholas J. Amato, Christopher Mwai, India Turner, Ting Wang, Timothy Mueser and Amanda C. Bryant-Friedrich, "Creation, Analysis and Selective Oxidation of Modified Replication Related DNA Architectures", 240th Meeting of the American Chemical Society, Boston, MA, August, 2010
29. Nicholas J. Amato, Ting Wang, Timothy Mueser and Amanda C. Bryant-Friedrich, "Investigation Into the Fate of Selectively Generated 2-Deoxyribose Oxidation Products in Replication Relevant DNA Constructs", 12th Annual Midwest DNA Repair Symposium, Louisville, KY, May, 2010.
30. Buthina Abdallah and Amanda Bryant-Friedrich, "Generation and investigation of C3'-deoxy-3'-thymidinyl radical in single-stranded oligonucleotides", 240th Meeting of the American Chemical Society, Boston, MA, USA, 2010.
31. Buthina Abdallah and Amanda Bryant-Friedrich, "Oxidative Damage to DNA by Low-Energy Electrons", University of Toledo Midwest Graduate Research Symposium, University of Toledo, Toledo, OH, USA, 2010.
32. Buthina Abdallah, and Amanda Bryant-Friedrich. "Independent Generation of DNA Radicals Resulting from Low-Energy Electrons", Scholars' Celebration/Sigma Xi Student Research Symposium, University of Toledo, Toledo, OH, 2009.
33. Ting Wang, Nicholas J. Amato, Rehana Zaidi, Timothy C. Mueser and Amanda Bryant-Friedrich. "Interplay of Oxidative DNA Damage and DNA-Protein Complexes". Sanibel Conference of the American Society for Mass Spectrometry, St. Pete Beach, Florida, 2009.
34. Buthina Abdallah and Amanda Bryant-Friedrich. "Independent generation of DNA radicals resulting from low-energy electrons". 55th Annual Meeting of the Radiation Research Society Savannah, Georgia, 2009.
35. Anthony Berardinelli, B. Snyder, Amanda Bryant-Friedrich and Wendell Griffith "Towards the Development of a Method for the Quantitation of Methylation to Lysine Residues in Proteins", 58th Annual Conference of the American Society for Mass Spectrometry, Philadelphia, PA, 2009.
36. Amanda Bryant-Friedrich and Rehana Zaidi. "Glutathione Availability and DNA Damage". 100th Annual Meeting of the American Association of Cancer Research, Denver, CO, 2009.
37. Amanda Bryant-Friedrich, "CAREER: C-3'-Nucleic Acid Radicals: Generation and Mechanistic Investigations" Leaders of the Global Scientific Community Program for Academic Excellence with Arden Bement Jr., University of Toledo, Toledo, OH, 2008.
38. Amanda Bryant-Friedrich, Buthina Abdallah, and Suaad Abdallah, "Mechanisms Involved in the Damage of DNA by Low Energy Electrons", 54th Annual Meeting of the Radiation Research Society, Boston, MA 2008 (Session Chair)
39. Amanda Bryant-Friedrich. "The Role of Oxidatively Generated DNA Fragments in the Formation of Nucleic Acid Adducts". American Association of Cancer Research 99th Annual Meeting, San Diego, California, 2008.
40. Suaad Abdallah and Amanda Bryant-Friedrich Synthesis of Modified 2',3'-Dideoxynucleosides. Bridging Graduate Studies at the University of Toledo Graduate Student Research Symposium, University of Toledo, Toledo, Ohio, 2008.
41. Buthina Abdallah and Amanda Bryant-Friedrich Independent Generation of DNA Radicals Resulting from Low-Energy Electrons. Bridging Graduate Studies at the University of Toledo Graduate Student Research Symposium, University of Toledo, Toledo, Ohio, 2008.
42. R. A. Zaidi and Amanda Bryant-Friedrich, "Glutathione concentration and the Aerobic Fate of the C3'-Thymidinyl Radical in DNA", American Chemical Society, 234th Annual Meeting, Boston, Massachusetts, 2007.
43. Amanda Bryant-Friedrich, "Stereoselectivity of Repair and Lifetime of C-3'-DNA Radicals", 2006 Annual Meeting of the Radiation Research Society, Philadelphia, Pennsylvania, 2006.
44. Sanda Grosu, Georges Lahoud, and Amanda Bryant-Friedrich, "Stereoselectivity of Repair and Lifetime of C-3'-DNA Radicals", American Chemical Society 232nd Fall National Meeting, San Francisco, California, 2006.

45. Amanda Bryant-Friedrich and Georges Lahoud, “Elucidation of the Mechanism of Degradation of the C-3'-DNA Radical under Aerobic Conditions”, Biological Reactive Intermediates Conference VII: BRIs and Human Health and Disease, Tuscon, Arizona, 2006.
46. Amy L. Sloat, Christa L. Colyer, Georges Lahoud, Amanda Bryant-Friedrich, “CE-ESI-MS Analysis of C-3'-Radical Derived Oxidative Damage Products”, Triangle Chromatography Discussion Group, Raleigh, North Carolina, 2005.
47. Amanda Bryant-Friedrich, “Oxidative DNA Damage Initiated by a C-3'-Radical Under Aerobic Conditions”, Free Radical Reactions, Gordon Research Conference, Plymouth, New Hampshire, 2005. (poster selected for oral presentation)
48. Amanda Bryant-Friedrich, “Independent Generation of Nucleic Acid Radicals and MERCURIC: Michigan Eastern Regional Center for Undergraduate Research in Chemistry”, Oakland University Center for Biomedical Research, Rochester, Michigan, 2005.
49. Georges Lahoud, Amanda Bryant-Friedrich, “Spontaneous Cleavage of a 3'-DNA Radical under Aerobic Conditions”, American Chemical Society 228th Fall National Meeting, Philadelphia, Pennsylvania, 2004.
50. Amanda Bryant-Friedrich, Georges Lahoud, “Anaerobic Studies of Spontaneous DNA Strand Scission by a C-3'-Radical”, American Chemical Society 228th Fall National Meeting, Philadelphia, Pennsylvania, 2004.
51. Amanda Bryant-Friedrich, Georges Lahoud, “Anaerobic Studies of DNA Strand Scission by a C-3'-Radical”, Life Science Networking, Oakland University, Rochester Michigan, 2004.
52. Amanda Bryant-Friedrich, Georges Lahoud, “Oxidative DNA Damage Initiated by a C-3'-Radical under Aerobic Conditions”, Life Science Networking, Oakland University, Rochester Michigan, 2004.
53. Amanda Bryant-Friedrich, Georges Lahoud, “Oxidative DNA Damage Initiated by a C-3'-Radical under Aerobic Conditions”, 8th International Workshop on Radiation Damage to DNA, Banff, Canada, 2004. (refereed)
54. Georges Lahoud, Amanda Bryant-Friedrich, “Oxidative DNA Damage Initiated by a C-3'-Radical”, American Association for Cancer Research, Radiation Biology and Cancer: From Molecular Responses to the Clinic, Dana Point, California, 2004.
55. Amanda Bryant-Friedrich, “Diversification of the Chemical Workforce Through Curriculum Development”, Meeting Michigan College Chemistry Teachers Association, University of Detroit-Mercy, Detroit, Michigan, 2003.
56. Georges Lahoud, Amanda Bryant-Friedrich, “C-3'-Modified Nucleosides for the Investigation of Radical Initiated DNA Strand Scission”, 225th ACS National Meeting, New Orleans, Louisiana, 2003.
57. Michael Sevilla, CherylAnn Trzasko, Amanda Bryant-Friedrich, D. Becker, “Sugar Radical from Immediate Strand Breaks in Heavy Ion Irradiated DNA”, Radiation Research Society Annual Meeting, Reno, Nevada, 2002.
58. Amanda Bryant-Friedrich, “C-3'-Modified Nucleosides for the Investigation of Radical Initiated DNA Strand Scission”, 2001 Fall Biomedical Research Forum, Oakland University, Rochester, Michigan. 2001.
59. Amanda Bryant-Friedrich, “C-3'-Modified Nucleosides for the Investigation of Radical Initiated DNA Strand Scission”, 7th International Workshop on Radiation Damage to DNA, Nouan-Le Fuzelier, France. 2001. (refereed)
60. Amanda Bryant-Friedrich, B. Giese, “Selective Generation of C-3' Nucleoside Radicals: An Appropriate Precursor”, Gordon Research Conference on Bioorganic Chemistry, Proctor Academy, Andover, New Hampshire. 2000.

Invited Talks (National and International Meetings)

1. Amanda Bryant-Friedrich, “Oxidative Damage at a Modified Ribonucleic Acid”, XXIII

- International Roundtable on Nucleosides, Nucleotides and Nucleic Acids, University of California, San Diego in La Jolla, CA, USA, August 26-30, 2018.
2. Amanda Bryant-Friedrich, “Conquering the Unconquerable” 256th ACS National Meeting in Boston, MA, August 19-23, 2018.
 3. Amanda Bryant-Friedrich, “Creation of a Nucleic Acids Tool Box and Other Lofty Goals Creation of a Nucleic Acids Tool Box and Other Lofty Goals”, 2018 TSRC Workshop on Nucleic Acid Chemistry, Telluride, CO, July 23-27, 2018.
 4. Amanda Bryant-Friedrich, “Elucidation of the Nucleic Acid-Derived Endogenous Exposome”, 2017 Mesilla Chemistry Workshop, Mass Spectrometry of Nucleic Acids, Hotel Mesilla, Las Cruces, NM, February 4-8th, 2017.
 5. Suaad Abdallah, Fernand Bedi, Prajakta Bhatkhande, Weiye Li, and Amanda Bryant-Friedrich, “Organic Chemistry in the Elucidation of the Exposome” Al-Zaytoonah University of Jordan and The University of Toledo Pharmaceutical Sciences Conferences (ZTIPC 2015), Amman, Jordan, October 21-24, 2015.
 6. The 2015–2016 Cohort of ALFP Fellows Debate: “Change Management is a Reactive Process of Managing Resistance During Change”, 2016 American Association of Colleges of Pharmacy, Interim Meeting, Tampa Marriott Waterside Hotel, Tampa, Florida, February 20-23, 2015.
 7. Amanda Bryant-Friedrich. “An exploration of low-energy radiation-induced DNA damage”, 60th Annual Meeting of the Radiation Research Society Las Vegas, Nevada, September, 2014.
 8. Amanda Bryant-Friedrich. “Utilization of Radical Precursors in the Determination of DNA Damage Products Derived from Low Energy Electrons”, 2014 Telluride Workshop on Nucleic Acid Chemistry, August, 2014.
 9. Amanda Bryant-Friedrich, Erin Cadwalader, Joan M. Herbers. “Recreating the award selection process to positively impact diversity and inclusion in STEM”, 246th ACS National Meeting and Exposition, Indianapolis, Indiana, 2013.
 10. Amanda Bryant-Friedrich. “Chemical toxicology of endogenously generated reactive oxygen species and their role in cancer etiology”, Al-Zaytoonah University of Jordan and The University of Toledo Pharmaceutical Sciences Conferences (ZTIPC 2012), Amman, Jordan, 2012.
 11. Amanda Bryant-Friedrich. “The Interplay of Oxidative Damage and DNA-Protein Interactions”, Gordon Conference for Bioorganic Chemistry, Andover, New Hampshire, 2010.
 12. Amanda Bryant-Friedrich. “Oligonucleotide Products of the Indirect Effect: Products of a Single Radical”, Gordon Conference for Radiation Chemistry, Andover, New Hampshire, 2010.
 13. Amanda Bryant-Friedrich. “Branching out: Radiation chemistry in a biological environment for biologists and physicians”. 55th Annual Meeting of the Radiation Research Society Savannah, Georgia, 2009.
 14. Amanda Bryant-Friedrich. “Chemical Mechanisms of Nucleic Acid Damage”, Central Regional Meeting of the American Chemical Society, Cleveland, OH, 2009.
 15. Amanda Bryant-Friedrich, Tools for the Study of DNA Damage, Telluride Workshop on Nucleic Acid Chemistry, Telluride, Colorado, 2008.
 16. Amanda Bryant-Friedrich, DNA Damage Lesions as Potential Biomarkers, American Chemical Society, 234th Annual Meeting, Boston, Massachusetts, 2007.
 17. Amanda Bryant-Friedrich and G. A. Lahoud, “Oligonucleotide Fragmentation Products Derived from the C-3'-Thymidinyl Radical”, Biological Reactive Intermediates Conference VII: BRIs and Human Health and Disease, Tuscon, Arizona, 2006.
 18. Amanda Bryant-Friedrich, “The Role of the C-3'-Nucleotide Radical in DNA Damage”, Symposium: Chemistry and Biology of Deoxyribose Oxidation, 52nd Annual Meeting of the Radiation Research Society, Denver, Colorado, 2005.
 19. Amanda Bryant-Friedrich, “Student Success Stories - Past”, Meeting of Minds XIII, Oakland University, Rochester, 2005.
 20. Amanda Bryant-Friedrich, “Diversity in Chemistry”, Broader Impacts Showcase, National Science Foundation, American Chemical Society 230th Fall National Meeting, Philadelphia,

Pennsylvania, 2005.

21. Amanda Bryant-Friedrich, “CAREER: C-3’-Nucleic Acid Radicals: Generation and Mechanistic Investigations”, National Science Foundation CAREER Workshop, Arlington, Virginia, 2004.
22. Amanda Bryant-Friedrich, “Mechanistic Investigations into the Cleavage of DNA via a C-3’-Radical”, National Science Foundation Workshop on Physical Organic Chemistry, Newport, Rhode Island, 2003.

Invited Talks (other)

1. Amanda Bryant-Friedrich, “Scholarly Recognition, for the Win”, ChemConnect Lecturer, Duke University, Durham, NC, November 20, 2019.
2. Amanda Bryant-Friedrich, “Oxidative Nucleic Acid Damage in Disease Etiology”, Duke University, Durham, NC, November 19, 2019.
3. Amanda Bryant-Friedrich, “DNA Damage and Ionizing Radiation: Reactivity and Fate of 2’-Deoxyribose Radicals”, University of Minnesota, Minneapolis, MN, October 7, 2019.
4. Amanda Bryant-Friedrich, “Oh the Places You Will Go...”, Geneseo Reaching Out to Women and Under-Represented Groups in STEM Fields, SUNY-Geneseo, Geneseo, NY, March 26, 2018.
5. Amanda Bryant-Friedrich, “The Elucidation of the Internal Exposome”, Mildred Perry Memorial “On the Road” Lecture California University of Pennsylvania, February 12, 2018.
6. Amanda Bryant-Friedrich, “Elucidation of the Nucleic Acid-Derived Endogenous Exposome”, Department of Chemistry, Carnegie Mellon University, Pittsburgh, Pennsylvania, March 9, 2017.
7. Amanda Bryant-Friedrich, “Elucidation of the Nucleic Acid-Derived Endogenous Exposome”, Department of Medicinal Chemistry and Pharmacognosy, The University of Illinois at Chicago, Chicago, Illinois, March 3, 2017.
8. Amanda Bryant-Friedrich, “Modified Nucleic Acids in the Study of Disease Etiology and Drug Development”, Department of Pharmaceutical Sciences, Rosalind Franklin University, North Chicago, Illinois, March 7, 2016
9. Amanda Bryant-Friedrich. “The Elucidation of the Internal Exposome”, ANACHEM. SAS and the Detroit Section of the American Chemical Society February Section Meeting, The University of Detroit Mercy, Detroit, Michigan, 2016.
10. Amanda Bryant-Friedrich. "2-Deoxyribose Damage in DNA", Department of Chemistry, Vanderbilt University, Nashville, Tennessee, April, 9th, 2014.
11. Amanda Bryant-Friedrich. “Implicit Bias: What it is and how it affects us and what we do”, College Seminar, College of Engineering, The University of Toledo, Toledo, OH October 30th, 2013.
12. Amanda Bryant-Friedrich. “Chemical toxicology of endogenously generated oxygen species and their role in cancer etiology”, Departmental Seminar (Chemistry), Northeastern University, Boston, Massachusetts, October 2nd, 2013.
13. N. J. Amato, T. C. Mueser, and A. C. Bryant-Friedrich. "Probing the Relationship Between DNA Structure, Oxidative DNA Damage and Protein Binding" Department of Environmental Toxicology, University of California-Riverside, Riverside, California, April 3rd, 2013.
14. Amanda Bryant-Friedrich. “Chemical toxicology of endogenously generated reactive oxygen species and their role in cancer etiology”, The University of Detroit Mercy, Detroit, Michigan 2012.
15. Amanda Bryant-Friedrich. Ribose Based DNA Damage Products Derived from Radical Chemistry”, Departmental Seminar, Departmental Seminar (Chemistry), University of Cincinnati, Cincinnati, Ohio, May 18, 2012.
16. Amanda Bryant-Friedrich. “2-Deoxyribose Fragments as Biomarkers of Oxidative Stress” Research Day, University of Toledo, Toledo, Ohio, April 29, 2011.
17. Amanda Bryant-Friedrich. “Sugar Oxidation in DNA”, The Midwest Symposium Carbohydrate and Glycobiology Symposium, University of Toledo, Toledo, Ohio, 2010.

18. Amanda Bryant-Friedrich. “2-Deoxyribose Oxidation in DNA”, Departmental Seminar (Chemistry), University of Connecticut, Storrs, Connecticut, 2010.
19. Amanda Bryant-Friedrich. “The Interplay of Oxidative Damage and DNA-Protein Interactions”, Gordon Conference for Bioorganic Chemistry, Andover, New Hampshire, 2010.
20. Amanda Bryant-Friedrich. “Oligonucleotide Products of the Indirect Effect: Products of a Single Radical”, Gordon Conference for Radiation Chemistry, Andover, New Hampshire, 2010.
21. Amanda Bryant-Friedrich. “Nucleic acid damage: Cause and Cure”. Diversity in Bioengineering Day, Oakland University, Rochester, MI, 2009
22. Amanda Bryant-Friedrich. “Branching out: Radiation chemistry in a biological environment for biologists and physicians”. 55th Annual Meeting of the Radiation Research Society Savannah, Georgia, 2009.
23. Amanda Bryant-Friedrich. “Chemical Mechanisms of Nucleic Acid Damage”, Central Regional Meeting of the American Chemical Society, Cleveland, OH, 2009.
24. Amanda Bryant-Friedrich. “Oxidative Damage to DNA: Cause and Cure”, Women in Science and Mathematics Speaker Series, Buffalo State College, Buffalo, NY, 2009.
25. Amanda Bryant-Friedrich. “Oxidative Damage to DNA: Cause and Cure”, Undergraduate Research Day, North Carolina Central University, Durham, NC, 2009.
26. Amanda Bryant-Friedrich. “Oxidative Damage to DNA: Cause and Cure”, Departmental Seminar, University of Toledo, Department of Pharmacology, Toledo, OH, 2009.
27. Amanda Bryant-Friedrich. “Women of Color in the Academy-“From Oppression to Grace”, The Catharine S. Eberly Center for Women, Brown Bag Series, 2008.
28. Amanda Bryant-Friedrich. “Oxidative Damage to DNA: Cause and Cure”, Departmental Seminar, Andrews University, Berrien Springs, Michigan, 2008.
29. Amanda Bryant-Friedrich, Tools for the Study of DNA Damage, Telluride Workshop on Nucleic Acid Chemistry, Telluride, Colorado, 2008.
30. Amanda Bryant-Friedrich. The Interaction of Small Molecules with Nucleic Acids, Diversity in Bioengineering Day, Oakland University, Rochester, Michigan, 2007.
31. Amanda Bryant-Friedrich, DNA Damage Lesions as Potential Biomarkers, American Chemical Society, 234th Annual Meeting, Boston, Massachusetts, 2007.
32. Amanda Bryant-Friedrich, Departmental Seminar, Department of Medicinal and Biological Chemistry, College of Pharmacy, The University of Toledo, Toledo, Ohio, 2006.
33. Amanda Bryant-Friedrich, Departmental Seminar, Department of Biochemistry and Cancer Biology, Medical University of Ohio, The University of Toledo, Toledo, Ohio, 2006.
34. Amanda Bryant-Friedrich, “The Significance of a Single Oxidative Event in DNA Damage”, Departmental Seminar, University of California, Davis, 2006.
35. Amanda Bryant-Friedrich, “Genesis of Oxidative Damage”, Seminar, Madonna University, Livonia, Michigan, 2006.
36. Amanda Bryant-Friedrich, “Probing the Chemical World of DNA”, Departmental Seminar, Oakland University, Rochester, Michigan, 2005.
37. Amanda Bryant-Friedrich, “Elucidating the Role of Sugar Radicals in DNA Damage”, Departmental Seminar, Wayne State University, Department of Biochemistry, Detroit, Michigan, 2005.
38. Amanda Bryant-Friedrich, “Elucidating the Role of Sugar Radicals in DNA Damage”, Departmental Seminar, Michigan State University, Department of Organic Chemistry, East Lansing, Michigan, 2005.
39. Amanda Bryant-Friedrich, “Elucidating the Role of Sugar Radicals in DNA Damage”, Departmental Seminar, University of Michigan, Department of Medicinal Chemistry, Ann Arbor, Michigan, 2005.
40. Amanda Bryant-Friedrich, “Elucidating the Roles of Sugar Radicals in DNA Damage”, Departmental Seminar, Wake Forest University, Wake Forest, North Carolina, 2005.

41. Amanda Bryant-Friedrich, “Radical Induced Nucleic Acid Damage”, Departmental Seminar, Eastern Michigan University, Ypsilanti, Michigan, 2003.
42. Amanda Bryant-Friedrich, “Radical Induced Nucleic Acid Damage”, Departmental Seminar, Oakland University, Rochester, Michigan, 2003.
43. Amanda Bryant-Friedrich, “The Use of Modified Nucleosides for the Investigation of Oxidative Processes in Nucleic Acids”, Sigma Xi Seminar Luncheon Series, Oakland University, Rochester, Michigan, 2001.
44. Amanda Bryant-Friedrich, “Nucleoside Radicals”, Departmental Seminar, Andrews University, Berrien Springs, Michigan, 2001.

Presentations with Undergraduates and High School Students

1. Hans Tchienga, Mel Fernand Bedi and Amanda Bryant-Friedrich, “Method for the analysis and quantification of 3-methylene furanone: A biomarker of oxidative damage to DNA”, 254th Annual Meeting of the American Chemical Society, Washington, DC, August 20 – 24, 2017.
2. Joseph Nunnari, Immaculate Sappy, Amanda Bryant-Friedrich, “Sugar modified pseudouridines as potential anti-viral agents”, 252nd Annual Meeting of the American Chemical Society, Philadelphia, PA, August 21 – 25, 2016.
3. Alex C. D. Salyer and Amanda Bryant-Friedrich. ”Generation of a C3’-deoxy-3’-thymidinyl radical”, 43rd Meeting of the Central Region of the American Chemical Society, Dearborn, Michigan, June 5-9, 2012.
4. Sierra Arndt and Amanda Bryant-Friedrich. “Synthesis Towards the Precursor to the 5’-Pseudouridinyl Radical” 2011 Annual Biomedical Research Conference for Minority Students (ABRCMS), St. Louis, MO, Nov 12 2011.
5. Fernand M. Bedi and Amanda Bryant-Friedrich, “The Role of DNA Damage Products in DNA Adduction”, 42nd Annual Mid-Atlantic Graduate Student Symposium (MAGSS) in Medicinal Chemistry, University of Toledo, Toledo, Ohio, 2009.
6. Fernand M. Bedi and Amanda Bryant-Friedrich, “The Role of DNA Damage Products in DNA Adduction” 11th Annual Midwest DNA Repair Symposium, The University of Michigan, Ann Arbor, Michigan, 2009.
7. Fernand M. Bedi and Amanda Bryant-Friedrich, “The Role of DNA Damage Products in DNA Adduction” POSTERS AT THE CAPITOL: Undergraduate Research in Northwest Ohio, Ohio Statehouse, Columbus, Ohio, 2009.
8. Vanessa Friedrich and Amanda Bryant-Friedrich, “Origins of Endogenous DNA Damage”, Winterim Fair 2008, Maumee Valley Country Day School, Toledo, OH, 2008.
9. Sarah Colling, Amanda Bryant-Friedrich, Synthesis of a Sugar Derived DNA Damage Product, Undergraduate Research Presentations, Oakland University, Rochester, MI 2007.
10. Kimberly Williams, A. Dvir, Amanda Bryant-Friedrich, The Effects of DNA Damage Products on Transcription”, Michigan Eastern Regional Center for Undergraduate Research in Chemistry & Merck/AAAS Summer 2006 Research Presentations, Oakland University, Rochester, MI, 2006.
11. Jameelah Muhammad, Amanda Bryant-Friedrich, “Investigation of C-3’-Radical Adducts: 3’-Ketonucleosides”, Michigan Eastern Regional Center for Undergraduate Research in Chemistry & Merck/AAAS Summer 2006 Research Presentations, Oakland University, Rochester, MI, 2006.
12. Sara Maltese, Amanda Bryant-Friedrich, “Spin-Trapping of DNA Radicals”, Michigan Eastern Regional Center for Undergraduate Research in Chemistry & Merck/AAAS Summer 2006 Research Presentations, Oakland University, Rochester, MI, 2006.
13. Ross Brothers, Amanda Bryant-Friedrich, “Synthesis of a 2’,3’-Dideoxynucleoide Radical Precursor”, Michigan Eastern Regional Center for Undergraduate Research in Chemistry & Merck/AAAS Summer 2006 Research Presentations, Oakland University, Rochester, MI, 2006.

14. Line Jensen, Amanda Bryant-Friedrich, A. Dvir, “Investigating the Effect of DNA Damage Lesions on Transcription”, “Capturing the Genetic Capability to Make New Natural Products, Metropolitan Detroit American Chemical Society Student Affiliate Meeting, Oakland University, Rochester, MI, 2006.
15. Stephanie Harvey, Amanda Bryant-Friedrich, Linda Schweitzer, J. Zeilstra-Ryalls, “Capturing the Genetic Capability to Make New Natural Products, Metropolitan Detroit American Chemical Society Student Affiliate Meeting, Oakland University, Rochester, MI, 2006.
16. Adam Chornoby, Steven Townsend, Amanda Bryant-Friedrich, “Synthesis of a C-5'-Nucleoside Radical Precursor”, Center for Biomedical Research & Merck/AAAS Summer 2005 Research Presentations, Oakland University, Rochester, MI, 2005.
17. Line Jensen, Amanda Bryant-Friedrich, A. Dvir, “Investigating the Effect of DNA Damage Lesions on Transcription”, Center for Biomedical Research & Merck/AAAS Summer 2005 Research Presentations, Oakland University, Rochester, MI, 2005.
18. Line Jensen, Amanda Bryant-Friedrich, A. Dvir “Investigating the Effect of DNA Damage Lesions on Transcription”, Meeting of Minds XIV, University of Michigan, Dearborn, Dearborn, MI, 2005.
19. Stephanie Harvey, Amanda Bryant-Friedrich, Linda Schweitzer, J. Zeilstra-Ryalls, “Capturing the Genetic Capability to Make New Natural Products, Center for Biomedical Research & Merck/AAAS Summer 2005 Research Presentations, Oakland University, Rochester, MI, 2005.
20. Janet John, Georges Lahoud, Amanda Bryant-Friedrich, “Synthesis of a Radical Derived DNA Damage Product”, Michigan Eastern Regional Center for Undergraduate Research in Chemistry Summer 2005 Research Presentations, Oakland University, Rochester, MI, 2005.
21. Breyanna Cavanaugh, Amanda Bryant-Friedrich, “Determination of the Mechanism of C-3'-DNA Induced Strand Scission Under Anaerobic Conditions”, Center for Biomedical Research Summer 2004 Research Presentations, Oakland University, Rochester, MI, 2004.
22. Suaad Abdallah, Jill Zimmer, Amanda Bryant-Friedrich, “Synthesis of Halogenated Anthraquinones as Model DNA Intercalators”, 225th ACS National Meeting, New Orleans, Louisiana, 2003.
23. Jessie Fancher, Amanda Bryant-Friedrich, “C-3'-DNA Conjugates”, 225th ACS National Meeting, New Orleans, Louisiana, 2003.
24. Kristen Forzley, Amanda Bryant-Friedrich, “Effects of Chromophore Structure on DNA Intercalation”, 225th ACS National Meeting, New Orleans, Louisiana, 2003.
25. CherylAnn Trzasko, Amanda Bryant-Friedrich, “Interaction of Low-Energy Ionizing Radiation with the DNA Backbone: Production of a C-3'-Radical?”, 225th ACS National Meeting, New Orleans, Louisiana, 2003.
26. CherylAnn Trzasko and Amanda Bryant-Friedrich, “Interactions of Low-Energy Ionizing Radiation with the DNA Backbone: Production of a 2',3'-Dideoxy-C-3'-Nucleoside Radical?”, 7th International Workshop on Radiation Damage to DNA, Nouan-Le Fuzelier, France. 2001. (refereed)
27. CherylAnn Trzasko and Amanda Bryant-Friedrich, “Interactions of Low-Energy Ionizing Radiation with the DNA Backbone: Production of a 2',3'-Dideoxy-C-3'-Nucleoside Radical?”, Meeting of the Minds, University of Michigan-Flint, Flint, Michigan. 2001.
28. David Cowl and Amanda Bryant-Friedrich, “C-3'-Modified Nucleosides for the Investigation of Radical Initiated DNA Strand Scission”, Meeting of the Minds, University of Michigan-Flint, Flint, Michigan. 2001.
29. Todd M. Muszynski and Amanda Bryant-Friedrich, “C-3'-Radicals in RNA Strand Cleavage: A Radical Precursor”, Meeting of the Minds, University of Michigan-Flint, Flint, Michigan. 2001.
30. CherylAnn Trzasko and Amanda Bryant-Friedrich, “Interactions of Low-Energy Ionizing Radiation with the DNA Backbone: Production of a 2',3'-Dideoxy-C-3'-Nucleoside Radical?”, American Chemical Society Student Affiliates Meeting, University of Detroit Mercy, Detroit, Michigan. 2001.

31. David Crowl and Amanda Bryant-Friedrich, “C-3’-Modified Nucleosides for the Investigation of Radical Initiated DNA Strand Scission”, American Chemical Society Student Affiliates Meeting, University of Detroit Mercy, Detroit, Michigan. 2001.
32. Todd M. Muszynski and Amanda Bryant-Friedrich, “C-3’-Radicals in RNA Strand Cleavage: A Radical Precursor”, American Chemical Society Student Affiliates Meeting, University of Detroit Mercy, Detroit, Michigan. 2001.
33. CherylAnn Trzasko and Amanda Bryant-Friedrich, “Interactions of Low-Energy Ionizing Radiation with the DNA Backbone: Production of a 2,’3’-Dideoxy-C-3’-Nucleoside Radical?”, 2001 Fall Biomedical Research Forum, Oakland University, Rochester, Michigan. 2001.

Summary of research funding

Principal investigator or co-investigator on total funding ~\$4M to date

Current: Creation of tools to determine the impact of natural modifications on RNA damage (2019-2022; \$600,000)

Past: Principle investigator: FDA Conference Grant (2015-2016; \$5,000), NSF Research Grants Principal Investigator: NSF Research Grant (2013-2016; \$300,000) Shimadzu Scientific Instruments, Instrumentation Grant/Gift

(2009-2013; \$336,000), NSF CAREER Award (2002-2008; \$438,000), NSF Minority Planning Grant (2000-2001; \$17,962), NIH-R13 Support for Scientific Meetings (2007-2008; \$15,500); Research Excellence Fund, Oakland University (2001-2004; \$26,000); Faculty Research Fellowship, Oakland University (2001-2002; \$7500); Minority/Women Summer Grant, Wayne State University (2000-2001; \$4,500).

Co-investigator: NSF Major Research Instrumentation Grant (2009-2012; \$447,799); University of Toledo Interdisciplinary Research Initiation Grant (2010-2011; \$100,000); NSF Forward to Professorship Workshop Development Grant (2010-2011; \$10,000) NSF Major Research Instrumentation Grant (2008-2011; \$376,134); NSF Undergraduate Research Centers (2004-2006; \$49,010); Michigan Space Grant Consortium, Pre-College Education Program (\$5,000); Computer Course Fee Fund, Oakland University (2001-2002; \$20,000).

TEACHING EXPERIENCE

- Total nineteen years of classroom and laboratory teaching undergraduate and graduate courses in organic, bioorganic and medicinal chemistry; also supervising 50 undergraduate researchers and 14 graduate students
- Nine years of classroom teaching undergraduate and graduate courses in medicinal and advanced medicinal chemistry; also supervising 14 undergraduates and 6 graduate students at The University of Toledo.
- Seven years of classroom and laboratory teaching undergraduate and graduate courses in organic, bioorganic chemistry and organic laboratory and supervision of undergraduate and graduate researchers at Oakland University, Rochester, MI.
- One-year classroom teaching undergraduate courses and laboratories in organic and biological chemistry at Wayne State University, Detroit, MI

SERVICE

Membership Professional Societies

- American Chemical Society
- Society of STEM Women of Color
- Association for Women in Science
- Gesellschaft Deutscher Chemiker
- American Association for the Advancement of Science
- Radiation Research Society
- American Association for Cancer Research
- American Association of Colleges of Pharmacy

Scientific Referee

- Journal of Organic Chemistry
- Analytical and Bioanalytical Chemistry,
- Analytical Chemistry
- Chemistry, A European Journal
- Bioorganic and Medicinal Chemistry
- Chemical Research in Toxicology
- Journal of the American Chemical Society
- Biochemistry
- Journal of Radiation Physics and Chemistry
- Organic Letters
- Molecules

Professional activities

Federal Grant Review

- NIEHS Environmental Sciences Review Committee, 2013-2017
- NSF Chemistry Review Panel, 1/2014, 2/2014, 5/2017, 2/2018
- NSF Committee of Visitors, Division of Chemistry, 5/2016
- NIH Ad Hoc Study Section Member Cancer Health Disparities, 2013
- NIH Ad Hoc Study Section Member Radiation Therapeutics and Biology, 2012
- NIH Permanent Study Section Member Cancer Etiology, 2008-2012
- NIH Ad Hoc Study Section Member Cancer Etiology/Cancer Pathology, 2003-2006
- NIEHS Special Emphasis Panel Conference Grants, 2008/2011/2012
- NIEHS Special Emphasis Panel Program Project Grants, 2010
- NIEHS Panel, Superfund Research and Training Program, 2007
- NSF Site Visit Team Center for Chemical Evolution, Georgia Tech, 2012, 2015
- NSF Proposal Review Panels (REU Panel, 2011/2005; Research Collaboratives Panel, 2008; CAREER Panel, 2007/2006, CRIF:MU Panel, 2006; MRI, 2004; EPSCoR, 2018/2019)
- NSF External Grant Proposal Review, 2001-present
- Research Grants Council of Hong Kong grant proposal review, 2012 and 2013

Leadership Professional Societies

- Member, Research Committee, Council of Graduate Schools (2016-present)
- Member, Executive Committee, Divisional Activities Committee, American Chemical Society (2018-19)

- Multidisciplinary Program Planning Group, American Chemical Society (2008-present, Executive Committee, 2015-2018, Chair 2018-19)
- Member, Long Range Planning Committee, Medicinal Chemistry Division of the American Chemical Society, 2014-2017
- Session Chair, Gordon Conference for Nucleosides, Nucleotides and Nucleic Acids, Salve Regina, Newport, RI June 25-30th, 2017
- Organizer, Technical Session “Nucleic Acid Therapeutics”, Division of Medicinal Chemistry, 252nd Annual Meeting of the American Chemical Society, Philadelphia, PA, August 21 – 25, 2016
- Program Chair, Division of Chemical Toxicology, The American Chemical Society (2015-2016)
- Session Chair, Chemistry of DNA Strand break Termini, 61st Annual Meeting of the Radiation Research Society, Bonaventure Resort, Weston, Florida, 2015.
- Session Chair, Gordon Conference for Radiation Chemistry, 2012
- President Elect and President, Northwest Ohio Chapter of the Association for Women in Science, 2010-2012
- Member of the Governance Committee Association for Women in Science, 2012
- Chair of the Diversity Taskforce Association for Women in Science, 2012
- Councilor (2008-2010) and Alternate Councilor (2010-2012) for the Chemical Toxicology Division of the American Chemical Society,
- Topical Session Chair, 234th Annual Meeting of the American Chemical Society, 2007
- Councilor for the Radiation Research Society
- Topical Session Chair, Annual Meeting of the Radiation Research Society, 2008
- Chair of the Young Chemists Committee of the Chemistry in Cancer Research Working Group of the American Association for Cancer Research, (2007-2009)

University of Toledo Activities

University

- Speaker, Executive MBA Program, Class of 2019 Graduation Banquet, 2019.
- Career Panel Reviewer, The Office of Sponsored Programs, 2017/2019
- Member, Search Committee, Vice-Provost for Academic Affairs, 2017
- President’s Council on African-American Recruitment and Success (PCARS), 2016-present
- Strategic Planning Committee, Graduate and Professional Students Working Group, 2016-17
- Strategic Enrollment Planning Committee, 2015-2016
- Mentor and Organizer, Talented Aspiring Women Leaders (TAWL), 2013-present
- Member, We Are STEMM Committee, 2016
- Judge, Homecoming 2016
- Member, University Council on Diversity and Inclusion, 2016-present
- Member, Title IX Adjudication Panel, 2014-present
- Diversity Plan Advisory Committee, 2015-2016
- Vice President, Association of Black Faculty and Staff (2012-2016)
- Member, Search Committee, Provost and Executive Vice President for Academic Affairs, 2015-2016
- Member, University Research Council, 2014-2015
- Member, Higher Learning Commission Criterion One Team, 2014-2015
- Member, Search Committee, Dean, College of Health Sciences, 2014
- Judge, Midwest Graduate Research Symposium, 2012-present
- Panel Participant, BOSEF Mentor Panel, 2012
- Member, Graduate Council, 2011 – 2013

- Member, Review Committee Translational Research Stimulation Award 2013
- Member, Diversity Committee College of Graduate Studies, 2012
- Mentor, Panelist, and Member of the Advisory Board Women in STEMM Excelling (WISE), 2008-2012
- Member, Biomarker Research and Individualized Medicine Research Subcommittee, 2010-2011
- Member, Women and Gender Studies Gender and Science Advisory Committee, 2012

College

- Faculty Advisor, Pharmaceutical Sciences Graduate Student Council, 2015-2016
- Member, Admissions Committee for the Professional Division, College of Pharmacy and Pharmaceutical Sciences, 2007-2016
- Faculty Advisor, Christian Pharmacy Fellowship International, 2014-2015
- Member, Diversity Committee, 2014-present
- Relationship Manager for the collaboration between the CPPS at the University of Toledo and the Faculty of Pharmacy at Al-Zaytoonah Private University of Amman, Jordan 2012-present.
- Member, Students Subcommittee for ACPE Reaccreditation Process, College of Pharmacy and Pharmaceutical Sciences, 2011
- Faculty Advisor, Phi Lambda Sigma Pharmacy Leadership Fraternity, College of Pharmacy and Pharmaceutical Sciences, 2009-2011

Department

- Chair, Faculty Search Committee, Department of Medicinal and Biological Chemistry, 2015.
- Organizer, Anniversary Celebration of the Center for Drug Design and Development of the College of Pharmacy and Pharmaceutical Sciences, 2014.
- Member, Graduate Admissions Committee, Medicinal and Biological Chemistry, CPPS, 2014-present
- Member, Search Committee, Department of Chemistry 2014-2015
- Research Mentor for Project SEED, American Chemical Society Research Program for HS Students, (Department of Chemistry) 2008-2010, 2012-2014
- Research Mentor for NSF sponsored Research Experiences for Undergraduates research program, (Department of Chemistry) 2010-2012
- Member, four search committees and twelve dissertation committees in the Department of Medicinal and Biological Chemistry 2007-2009
- Member, six search committees, REU Selection Committee, Users group for MALDI-ToF MS, four non-dissertation proposal committees and nine dissertation committees in the Department of Chemistry 2007-2010
- Member, Graduate Faculty 2008-present
- Member, Committee for the establishment of a School for STEM Education, 2012
- Participant, Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools, site visit session: Research, 2012

Public speaking, outreach and engagement

- Model, Steminist Fashion Show, Fundraiser for the Imagination Station of Toledo, OH.
- Invited Speaker, Conferences for Undergraduate Women in Physics, The University of Toledo, January 13, 2018.
- Luncheon Speaker, Women Chemists Committee of the American Chemical Society, 254th Meeting of the American Chemical Society, Washington, DC. August 19th-23rd, 2017
- Festrede (Dinner Speech) in honor of Professor Bernd Giese, Universitat Fribourg, Fribourg, Switzerland, June 2nd, 2017

- Luncheon Speaker, University Women’s Committee Annual Luncheon, The University of Toledo, April 12th, 2107
- Keynote Speaker, Women in STEMM Research Symposium, University of Tennessee, Knoxville, March 21st, 2017
- Keynote Speaker, 4AW Sister to Sister Celebration, The University of Toledo, September 27th, 2016
- Panelist, “Increasing Successful Awards Nominations from Underrepresented Groups”, 252nd Annual Meeting of the American Chemical Society, Philadelphia, PA, August 21 – 25, 2016.
- Amanda Bryant-Friedrich. Plenary Speaker, Women in Science Symposium, Vanderbilt Institute of Chemical Biology, “Sponsors, mentors, champions”, April 10th, 2014.
- Founding Member, Society of STEM Women of Color, 2014.
- Participant, Conclave STEM Women of Color, 2013-2015.
- Immediate Past President of the Northwestern Ohio Chapter of the Association for Women in Science 2014-present
- Speaker, Girls Rock-ET: Full STEAMM Ahead!, Partnership between Toledo Public Schools and the University of Toledo, April 5th, 2014.
- Mentor, University of Michigan Rackham Graduate School Preparing Future Faculty, 2013-2014
- Founder’s Day Speaker, “Moving Beyond Borders by Breaking Down Barriers” Zeta Alpha Omega, Chapter of Alpha Kappa Alpha Sorority, The Hotel at the University of Toledo, Toledo, OH, 2013.
- Co-Organizer, Women in STEMM Day of Meetings (WISDOM), 2012-present
- Co-PI and Organizer, When and Where I Enter...FORWARD to Professorship Workshop, 2011
- Formal and informal mentoring of students interested in STEM disciplines with a special focus on women and students of color
- Seeking Solutions: Maximizing American Talent by Advancing Women of Color in Academia, The National Academies, Washington, DC, June 7-8, 2012 (Representative of the Association for Women in Science).
- Celebrating 10 Years of Broadening Participation and Inclusion 2011 NSF ADVANCE Meeting at the Westin Alexandria, November 14-15, 2011 (Invited by AWIS and NSF).
- Association for Women in Science Diversity Workshop at the Westin Alexandria, November 13, 2011 (Invited by AWIS).
- ADVANCE-ENG Coast-to-Coast Peer Mentoring Summit at North Carolina State University, June 15-17, 2011.
- Observer of the national FORWARD to Professorship Workshop at Gallaudet University May 30-June 2, 2010 (Part of the organization of the FORWARD to Professorship Workshop).
- Presenter, What Do Scientist Do? Lincoln Middle School, Pontiac, MI, 2003
- Invited Speaker, “The Radical Way of Life”, Rotary Club of Troy, San Marino Club, Troy, Michigan, 2002.
- Invited Speaker, “The Radical Way of Life”, Optimist Club of Birmingham, Community House, Birmingham, Michigan, 2002.
- Judge, Jack and Jill of America, Oakland University, Rochester, MI, 2001.
- Several Offices, Alpha Kappa Alpha Sorority, Inc., 1989-2001.
- Invited Speaker, “Preparing Our Youth for the Next Millennium”, Alpha Kappa Alpha Sorority, Inc., Pink and Green Scholarship Ball, Ramstein Officers Club, Ramstein, Germany, 1998.
- Creator/Presenter, Project in Math and Science, Alpha Kappa Alpha Sorority, Inc., Mu Psi Omega Chapter, Germany, 1996-1998.
- Invited Speaker, “African-American Women: Yesterday, Today and Tomorrow”, Martin Luther King Annual Freedom March, Landstuhl Regional Medical Center, Landstuhl, Germany, 1996.

Collaborators

- Dr. Lydia Contreras-Martin, University of Texas Austin, Department of Chemical Engineering, “Synthesis of modified nucleic acids for the development of probes to detect oxidative damage to RNA”.
- Dr. Christine Chow, Wayne State University, Department of Chemistry, “Synthesis of Radical Precursors of Pseudouridine”.
- Dr. David Dignam, University of Toledo College of Medicine, Toledo, Ohio, “The Study of DNA Damage Fragments”.
- Dr. Timothy Mueser, University of Toledo, Department of Chemistry, “Mechanisms Involved in the Processing of DNA Damage Fragments”.
- Dr. Desmond Murray, Andrews University, Department of Chemistry, “The Interactions of Boronic Acid Chalcones with DNA” and “The Interactions of Triarylmethane Dyes with Double Stranded DNA”.
- Dr. Michael Sevilla, Oakland University, Department of Chemistry, “Analysis of DNA Sugar Radicals and their Spin Adducts”.
- Dr. Yakov Lapinski, University of Toledo, Department of Chemical and Environmental Engineering, Customizing polyelectrolyte complex shape through photolithographic directed assembly”.