

**Christopher J. Woolverton, Ph.D.**

**CURRENT POSITION and CONTACT INFORMATION**

Professor, College of Public Health  
326 Lowry Hall, Kent State University, Kent, OH 44242-0001  
(330) 672-4648 voice; (330) 672-6505 fax; email: [cwoolver@kent.edu](mailto:cwoolver@kent.edu)  
LinkedIn Profile: [www.linkedin.com/pub/christopher-woolverton-ph-d/a/874/6a4/](http://www.linkedin.com/pub/christopher-woolverton-ph-d/a/874/6a4/)

**EDUCATION**

- Ph.D. 1986 Medical Microbiology, West Virginia University, Morgantown, WV  
*-Dissertation: Biological, physiological, and chemical modification of polymorphonuclear neutrophils by methylfurylbutyrolactone. Irvin Snyder, dissertation chair.*
- M.S. 1984 Medical Microbiology, West Virginia University, Morgantown, WV  
*-Thesis: Effects of an ascorbic acid derivative on PMN function. Irvin Snyder, thesis chair.*
- B.S. 1982 Biology (with honors), Psychology minor, Wilkes College, Wilkes-Barre, PA  
*-Honors Research: Mutation reversal using ascorbic acid. Lester Turoczi, research advisor.*

**PROFESSIONAL EXPERIENCE**

- 2019 – present Dean's Fellow, University Health Services, KSU (100% load)
- 2018 – 2019 Consultant, University Health Services, KSU (50% load)
- 2017 – present Professor, College of Public Health, (now a unified college) KSU
- 2017 – present Adjunct Graduate Faculty, Northeast Ohio Medical University, Rootstown, OH
- 2017 – 2018 Director, Office of Public Health Partnerships and Practice, KSU (12-month appointment)
- 2016 – 2017 Interim Chair, Department of Health Policy and Management, KSU (18-month appointment)
- 2013 – 2017 Professor, Department of Biostatistics, Environmental Health Sciences, and Epidemiology KSU (departments merged)
- 2009 – present Faculty, National Biosafety and Biocontainment Training Program, National Institutes of Health, Bethesda, MD
- 2009 – 2012 Professor, Environmental Health Sciences, Kent State University (Founding Faculty, College of Public Health, established 2009, tenure transferred to new College)
- 2006 – 2009 Professor, Department of Biological Sciences, Kent State University
- 2005 – present Faculty, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH
- 2004 – 2015 Director, Center for Public Health Preparedness, Kent State Univ.
- 2000 – 2006 Associate Professor, Department of Biological Sciences, Kent State
- 2000 – 2003 Director, BS/MD Cooperative Training Program, Kent State Univ.
- 1995 – 2000 & 2003 – 2009 Director, Clinical Laboratory Science Program (3+1), Kent State Univ.
- 1996 – present Graduate Faculty, Department of Biological Sciences, Kent State Univ.
- 1996 – present Graduate Faculty, School of Biomedical Sciences, Kent State University
- 1995 – 2000 Assistant Professor, Department of Biological Sciences, Kent State
- 1994 – 1995 Scientist, Holland Research Lab, American Red Cross, Rockville, MD
- 1993 – 1994 Scientist, Pharmacology Department, Scios Nova, Inc., Baltimore, MD
- 1988 – 1993 Assistant Professor, Austin College, Sherman, TX
- 1986 – 1988 Postdoctoral Scientist, University of NC at Chapel Hill, Chapel Hill, NC  
*-R. Balfour Sartor MD, mentor*

## LEADERSHIP ROLES

- 2019 – present Dean's Fellow, assigned to University Health Services, KSU
- 2018 – present Chair, Public Safety Advisory Committee, KSU
- 2017 – present Chair, Institutional Biosafety Committee, KSU
- 2018 – present Chair, College Handbook Committee, Public Health, KSU
- 2017 – present President, City of Kent (OH) Board of Health (strategic visioning, oversight of public health practice, and fiduciary responsibility)
- 2017 – 2018 Director, Office of Public Health Partnerships and Practice, College of Public Health, KSU (develop external partnerships for College support and student placement)
- 2016 – 2017 Interim Chair, Department of Health Policy and Management, College of Public Health, KSU (faculty management, strategic visioning, and oversight of \$1.5M budget)
- 2008 – 2013 Editor-in-Chief, *Journal of Microbiology and Biology Education*, American Society for Microbiology
- 2004 – 2015 Director, Center for Public Health Preparedness, Kent State University
- 2003 – present Subject Matter Expert (Infectious & Communicable Diseases, Public Health, Biohazard Preparedness, Biosecurity), Kent State University
- 2000 – 2003 Coordinator, BS/MD Training Program, Kent State University
- 1995 – 2001 & 2003 – 2009 Coordinator, Clinical Laboratory Sciences Program, Kent State University

## ADVISORY BOARDS AND COMMUNITY SERVICE

- 2017 – present Patient and Family Advisory Committee, Unity Health Network, Akron, OH
- 2017 – present Member (City Council Appointed), Kent City Board of Health, Kent, OH
  - 2017- present President of the Board
- 2017 – present Subject Matter Expert and Fellows Mentor, Health Security Partners, Washington, DC
- 2017 – present Kent Safety Ambassadors (External Advisory Board to Kent Police and Kent Firemedic Chiefs), Kent, OH
- 2010 – 2013 Member, Education Board, American Society for Microbiology, Washington, DC
- 2010 – 2012 Member, External Advisory Board, Center for Public Health Practice, School of Public Health, Ohio State University, Columbus, OH
- 2006 – present Subject Matter Expert, Medical Reserve Corp, Portage County Health Department, Ravenna, OH
- 2005 – 2015 Member (City Council Appointed), Kent City Board of Health, Kent, OH
  - 2013-2014 Member, Strategy and Action Planning Workgroup, RWJF Public Health Shared Services Project
  - 2011-2015 Vice President of the Board
  - 2010-2011 President of the Board
- 2005 – 2008 Member, Advisory Board, OH Laboratory Response Network, OH Department of Health, Columbus, OH
- 2005 – 2006 Member, Strategic Planning Committee for the OH Education and Training Plan for Public Health Preparedness, OH Department of Health, Columbus, OH
- 2004 – 2005 Member, Advisory Board, Regional Institute for Homeland Security and Public Safety, Cuyahoga Community College, Cleveland, OH
- 2000 Alternate Member, Kent City Charter Review Committee, Kent, OH
- 1998 – present Judge/Panelist; Science Fairs, Research Competitions, School Programs, Ohio
- 1996 – present Microbiology discussions/demonstrations to local schools & civic groups

## MEMBERSHIP IN PROFESSIONAL SOCIETIES

- American Association for the Advancement of Science, 1996-present
- ABSA (American Biological Safety Association) International, 2010-present
- American Society for Microbiology, 1983-present
  - July 2010-2013; Chair, Journal Standing Committee, Education Board
  - July 2009-2011; Distinguished Lecturer
  - July 2008-2013; Editor-in-Chief, *Journal of Microbiology and Biology Education*
  - May 2005; Chair, Biosecurity and Safety Symposium, General Meeting
  - May 2001; Co-chair, Conference on Undergraduate Education
  - May 2000; Conference on Undergraduate Education, Planning Committee
- International Society for Preparedness, Resilience, and Security, 2014-present
- Ohio Public Health Association, 2010-present
- Sigma Xi, The Scientific Research Society, Life Member since 1982

## PERSONAL PROFESSIONAL DEVELOPMENT (SINCE 2005)

- Introduction to Lean Six Sigma Principles, Northeastern Ohio Medical University, Rootstown, OH, March 20-27, 2020.
- Understanding You, Me, Us – The Team; Univ. Health Service Training, Kent, OH, May 13, 2019.
- Advanced BSL3 Work Practices and Procedures, Eagleson Institute Workshop, Raleigh, NC, May 1-2, 2019.
- Title IX and University Discrimination and Harassment Policy, Kent State University, Kent, OH, March 15, 2019.
- Safe Space Diversity Training, Kent State University, Kent, OH, February 8, 2019.
- Case Studies in Biocontainment Emergencies, ABSA International, Charleston, SC, October 13, 2018.
- Control of Biohazards in the Research Laboratory, Johns Hopkins University, Baltimore, MD, April 9 - 13, 2018.
- Biosafety/Biosecurity Training, Collaborative Institutional Training Initiative (online), Kent, OH November 28, 2017.
- Police Experience Academy, Kent State University Police Department, Kent, OH, Oct 19 - November 16, 2017.
- “Leadership, Training, and Culture Development in Biosafety;” ABSA International, Albuquerque, NM, October 15, 2017.
- “Institutional Biosafety Committee Basics;” ABSA International, Albuquerque, NM, October 14, 2017.
- “Biosecurity in Practice: Research, Healthcare, Agriculture, and Production” ABSA International Webinar, August 10, 2017.
- “What is Knowledge Management” KSU Webinar, September 07, 2016.
- Kent Citizen Police Academy, Kent Police Department, Kent, OH, Feb. 18 – May 05, 2016.
- Ebola in Context: Understanding Transmission, Response and Control; The London School of Hygiene & Tropical Medicine (MOOC), September 16, 2015.
- Community Preparedness; Portage County Health Department, Ravenna, OH, June 17, 2014.
- “Pandemics, Bioterrorism and International Security;” George Mason University; Fairfax, VA, July 22-24, 2013.
- Faculty Improvement Leave (sabbatical) – GOJO Industries, September-December 2012.
- FBI Academic Biosecurity Workshop, Cuyahoga Falls, OH; April 11, 2012.
- Meta-Leadership Summit for Preparedness, CDC Foundation, Independence, OH; March 1-2, 2011.
- “Pandemics and Bioterrorism: From Realistic Threats to Effective Policies;” Massachusetts Institute of Technology; Cambridge, MA, July 26-28, 2010.
- Leadership Institute for Biosafety Professionals, Emory University, Elizabeth R. Griffin Research Foundation and American Biological Safety Association; Atlanta, GA, April 12-15, 2010.

- “Pandemic Planning for Academic Institutions;” School of Public Health, University of Albany; Kent, OH, March 13, 2008.
- “Is Your Laboratory Secure?” National Laboratory Training Network; February 7, 2007.
- “Safe BSL3 Work Practices and Procedures;” Eagleson Institute, April 26-27, 2006.
- Are You Ready? Train-the-trainer Hazard Preparedness Training for Adult Learners, Ohio State University; April 19, 2006.
- Bioterrorism: Putting the Pieces Together in Ohio, Cleveland State University; May 2005.

## HONORS, AWARDS, AND RECOGNITIONS

- Jefferson Science Fellow, Jefferson Science Fellows Program, National Academies of Sciences, Engineering, and Medicine, serving the Medical Services Bureau, U.S. Department of State, Washington, D.C. expected August 17, 2020 – August 13, 2021.
- President's Faculty Excellence Award, Kent State University, April 15, 2020.
- Merit Award, Kent State University, May 1, 2018.
- Faculty Recognition Award (student nominated), University Teaching Council, Kent State University, October 23, 2016.
- Faculty Recognition Award (student nominated), University Teaching Council, Kent State University, October 23, 2015.
- 2015 Friend of Public Health Award, Portage County Combined General Health District, Ravenna, OH, March 18, 2015.
- Finalist, 2014 Alumni Association Distinguished Teaching Award (student nominated), Kent State University.
- Super Professor status at Faculty Row; December 20, 2013, [http://facultyrow.com/profiles/friend/listFeatured?xg\\_source=msg\\_feat\\_profile](http://facultyrow.com/profiles/friend/listFeatured?xg_source=msg_feat_profile)
- Faculty Row; November 11, 2013. <http://facultyrow.com/profile/ChristopherJWoolverton>
- Who's Who in Academia, March 2011 (invited).
- Book Author's Recognition, Provost's Office, Kent State University, February 22, 2011 and April 17, 2013.
- “Graduate Applause” Recognition by Graduating Students. Awarded by the University Teaching Council, Kent State University, October 2001 and October 2011.
- American Society for Microbiology Distinguished Lecturer (formerly ASM Branch Lectureship and Waksman Foundation Lectureship), 2009-2011.
- 2009 Provost's Recognition for Community Building through Community-based Pedagogy, Kent State University.
- 2009 College of Arts & Sciences Distinguished Teacher Award (student nominated), Kent State University.
- KSU Representative to the U.S. House of Representative's Committee on Homeland Security Science and Technology Fair (invitation only), Rayburn Senate Building, April 2, 2008.
- Editor-in-Chief, Journal of Microbiology and Biology Education, American Society for Microbiology, July 2008-2013.
- Co-Editor-in-Chief, Journal of Microbiology and Biology Education, American Society for Microbiology, July 2007-June 2008.
- Who's Who in Technology, Crain's Business Report, Cleveland, June 2005.
- Research/Patent recognition by Kent State University; 2004, 2007, 2010.
- Finalist, 2003 Awards of Achievement (Technology), presented by the Publishers of Northern Ohio Live Magazine, Cleveland, OH, October 2003.
- Phi Delta Epsilon Medical Fraternity (student nominated honorary member), Inducted 3/31/03, Kent State University Chapter.
- Research/Patent recognition by *Scientific American*, January 2002.
- Research recognition by *Healthcare Informatics Online*, January 2002
- NorTech Innovation Award, Cleveland, OH, May 2002.
- Who's Who in Technology, Crain's Business Report, Cleveland, June 2002.

- Technology Funding Candidate, TechVesting Business Development Group, Cleveland, June 2002.
- Research and Teaching Recognition on Kent State University Home Page, 11/ 2000-1/2001.
- Nominee, 2000-2001 Arts and Sciences Distinguished Teaching Award, Kent State University, Kent, OH, April 2001.
- Finalist, Awards of Achievement (Health and Medicine Division), presented by the Publishers of Northern Ohio Live Magazine, Cleveland, OH, 2001.
- Who's Who Among America's Teachers (student nominated), 6<sup>th</sup> Edition, 2000.
- Nominee, 1999-2000 Arts and Sciences Distinguished Teaching Award, Kent State University, Kent, OH, April 2000.
- Undergraduate Faculty Travel Award, American Society for Microbiology, 1998.
- Who's Who in Science and Engineering, 2nd edition; 1994.
- American Men and Women of Science, 19th edition, 1994.
- Young Alumnus Award, Wilkes University, 1992.
- Phoenix Award for successful CPR. American Heart Association, Morgantown, WV, 1984.

### PROFESSIONAL ACTIVITIES (SINCE 2001)

- Ad Hoc Reviewer, BMC Public Health, 2019.
- Ad Hoc Reviewer, Toxicology Mechanisms and Methods, 2017.
- Ad Hoc Reviewer, Journal of Advances in Biology and Biotechnology, 2016.
- Ad Hoc Reviewer, Special Emphasis Panel (UC7 grant applications), National Institute of Allergy and Infectious Diseases, NIH, 2015.
- Ad Hoc Reviewer, *World Journal of Microbiology*, 2014.
- Ad Hoc Reviewer, *Clinical, Cosmetic and Investigational Dermatology*, 2013.
- Ad Hoc Reviewer, *Environmental Science & Technology*, 2012.
- Ad Hoc Reviewer, American Institute of Biological Sciences (contractor for US Department of Defense intramural grant reviews), 2010 – present.
- Ad Hoc Reviewer, Special Emphasis Panel (UC7 grant applications), National Institute of Allergy and Infectious Diseases, NIH, 2010.
- Ad Hoc Reviewer, *Sensors & Actuators: B. Chemical*, 2010.
- Editor-in-Chief, *Journal of Microbiology and Biology Education* (formerly *Microbiology Education*), American Society for Microbiology, 7/2008-12/2013.
- Ad Hoc Reviewer, National Science Foundation, 2008.
- Ad Hoc Reviewer, Engineering and Physical Sciences Research Council (UK), 2005-06.
- Ad Hoc Reviewer, *Applied and Environmental Microbiology*, September 2003, 2006 & 2008.
- Ad Hoc Reviewer, *Journal of Controlled Release*, 2003.
- Editorial Board, *Focus on Microbiology Education*, American Society for Microbiology, June 2002-2005.
- Ad Hoc Reviewer, *BioMed Central* (open access, on-line journal), 2002.
- Ad Hoc Reviewer, Office of Naval Research, 2002.
- Editorial Board, *Journal of Microbiology and Biology Education* (formerly *Microbiology Education*), American Society for Microbiology, 2001-2014.
- Ad Hoc Reviewer, *Wilderness and Environmental Medicine*, 2001-2003.

**FUNDING.** A total of ~\$5 million in extramural support obtained from federal agencies, industry, and foundations since 2003. For example:

	SOURCE	TIME	TOTAL
▪ Collaborative Research: Advanced and Applied Analytics for Connecting Health Care Providers and their Communities Woolverton, Sr. Personnel-10% effort)	NSF (pending)	9/20-8/23	\$ 574,623
▪ Mapping to Support Health Interventions in World's most Challenging Environments (co-I, 20% effort)	Kent State	06/17-5/18	\$ 25,000

▪ Biosafety Curriculum, Woolverton (100% effort)	Am. Soc. Microbiology	03/16-12/16	\$ 16,500
▪ Biocide & Antibiotic Resistance Program, Woolverton (PI-20% effort)	GOJO Industries	04/15-04/16	\$ 42,448
▪ Microbiome feasibility project Woolverton (PI-5% effort)	GOJO Industries	04/15-5/16	\$ 24,000
▪ RAPID: Assessing Social Media as a Proxy for Behavior Response and Perceived Risk to Ebola Outbreak, Woolverton (co-I)	NSF	11/14-10/15	\$ 41,197
▪ C. difficile Killing Mechanisms, Woolverton (PI)	EP Tech	06/14-12/14	\$ 46,000
▪ Identification of West Nile Virus in City of Kent Mosquitoes, Woolverton (PI)	Kent City Health Dept.	06/14-09/14	\$ 9,987
▪ SBIR (IIP-1248148): Nonthermal Plasma from Various Gas Combinations (\$150K to Sterionics, Inc., subcontract to KSU), Woolverton (PI)	NSF	1/13-06/13	\$ 50,000
▪ IGERT: Environmental Aquatic Resource Sensing: Basic Science, Business Education and Outreach. Leff, Bade, and Woolverton (co-PIs)	NSF	7/09-9/13	\$ 2,756,719
▪ Detection and Control of <i>Clostridium difficile</i> on Human Skin (preliminary assessments), Woolverton (PI)	GOJO, Industries & ICTR	8/11-4/13	\$ 20,000
▪ Use of Focused Cold Plasma to Kill Bacteria and Remove Biofilm Assemblages, Woolverton (PI)	Sterionics, Inc.	11/11-12/12	\$ 26,000
▪ Public Health Workforce Curriculum Development and Implementation. Woolverton (PI)	KSU sub-contract from OSU	4/05-6/05	\$ 38,000
▪ Research at the Biology-Liquid Crystals Frontier. Woolverton and Lavrentovich (co-PIs)	WM Keck Foundation	6/05-5/07	\$ 860,000
▪ The Northeastern OH Consortium for Biopreparedness-equipment and curriculum. Woolverton (PI)	U.S. Dept. of Education (FIPSE)	8/05-7/08	\$ 744,000
▪ The Northeastern OH Consortium for Biopreparedness. Woolverton (PI)	CDC	8/04-7/05	\$ 698,926
▪ Liquid Crystal Materials for Biosensor Development, Lavrentovich, and Woolverton (co-PIs)	NSF	9/03-8/04	\$ 100,000

#### **PATENTS ISSUED IN THE UNITED STATES**

- Patent Number 8,586,389, issued November 19, 2013. Ligand Concentrating, Liquid Crystal Biosensor System; Woolverton, inventor.
- Patent Number 7,927,827, issued April 19, 2011. Detection and Amplification of Ligands (Caged Enzyme); Niehaus, Woolverton, Doane, Lavrentovich, Schmidt and Signs, inventors.
- Patent Number 7,732,219, issued June 8, 2010. Detection and Amplification of Ligands (Amplification Systems); Woolverton, Niehaus, Doane, Lavrentovich, Schmidt and Signs, inventors.
- Patent Number 7,407,815, issued August 5, 2008. Liquid Crystal Cassette; Woolverton and Niehaus, inventors.

- Patent Number 7,267,957, issued September 11, 2007. Detection and Amplification of Ligands (Liquid Crystal Receptor-based Device); Woolverton, Niehaus, Doane, Lavrentovich, Schmidt and Signs, inventors.
- Patent Number 7,160,736, issued January 9, 2007. Detection and Amplification of Ligands (using Microspheres); Niehaus, Woolverton, Doane, Lavrentovich, Schmidt and Signs, inventors.
- Patent Number 6,395,288, issued May 28, 2002; Subversion of Bacterial Resistance by Low Solubility Antibiotics; Woolverton, C.J., W.N. Drohan and M. MacPhee, inventors.
- Patent Number 6,171,802, issued January 9, 2001; Detection and Amplification of Ligands; Woolverton, Niehaus, Doane, Lavrentovich, Schmidt and Signs, inventors.
- Patent Number 6,054,122 issued April 25, 2000; Supplemented and Unsupplemented Tissue Sealants, Methods or their Production and Use (A Self-Expanding Foam); MacPhee, Drohan, Nash, and Woolverton, inventors.

#### PEER-REVIEWED DISCIPLINARY RESEARCH PUBLICATIONS

- Hughes JW, A. Vander Horst, GC Gibson, KA Cleveland, C Wawrosch, C Hunt, M Granot, **CJ Woolverton**, COVID-19. Pandemic Exacerbates Psychological Distress of College Students. *American Journal of Public Health*, submitted May 20, 2020.
- **Woolverton CJ**, C Peeps, J Seidel, A Eng, 2020. Use of Silica Beads to Dry N95 Masks during Storage. *Applied Biosafety*, accepted for publication June 01, 2020,
- **Woolverton CJ**, RE Ferdig, A Snyder (graduate student), J Reed (graduate student), T Dodson (graduate student), S Thomas, 2020. Repurposing Surgical Wrap Textiles for Use as Protective Masks During Pandemic Response. *Applied Biosafety*, online ahead of print May 7, 2020, <https://doi.org/10.1177/1535676020925958>.
- Shook E., A. Curtis, J. Curtis, G. Gibson, A. Vander horst, V. Little, and **C.J. Woolverton**, 2019. Risk Perception and Behavioral Response to Potential Ebola Exposure: A College Campus in Northeast Ohio, USA. *Intl J Environ Res Public Health*, 16(5), 831; online at <https://doi.org/10.3390/ijerph16050831>.
- Fiester, S.E. (graduate student), S.F. Evangelista (undergraduate student), B.A. Arivett (graduate student), D.J. Adams (graduate student), R.E. Redfern (graduate student) and **C.J. Woolverton**. The Role of the Liquid Crystalline State in the Bundling of *Salmonella enterica* serovar Typhimurium Flagella. *Liquid Crystals*, 15 May 2014, online at <http://dx.doi.org/10.1080/02678292.2014.919667>.
- Shilling, M. P. (graduate student), L. Matt, E. Rubin, M.P. Visitacion, N.A. Haller, S. Gray, **C.J. Woolverton**, 2013. Antimicrobial Effects of Virgin Coconut Oil and its Medium Chain Fatty Acids on *Clostridium difficile*: A susceptibility study. *Journal of Medicinal Food* 16 (11): 1-7.
- Ferrell, J.R. (graduate student), A.S. Galov (graduate student), V.A. Gostev, B.A. Banks, S.P. Weeks, J.A. Fulton, and **C.J. Woolverton**, 2013. Pulse-Based Nonthermal Plasma: Characterization, Properties, and Applications. *Journal of Biotechnology and Biomaterials*, 3: 155. <http://dx.doi.org/10.4172/2155-952X.1000155>.
- Ferrell, J.R. (graduate student), and **C.J. Woolverton**, 2013. Pulse-Based NTP Disrupts the Structural Characteristics of Bacterial Biofilms. *Biofouling*, 89: 585-599.
- Ghosh, S. (graduate student), M. Moitra (graduate student), **C.J. Woolverton**, and L.G. Leff, 2012. Effects of remediation on the bacterial community of an acid mine impacted stream. *Can. J. Microbiol.* 58: 1–10.
- Fiester, S. (graduate student), S. Helfinstine, J. Redfearn (graduate student), R. Uribe and **C. J. Woolverton**, 2012. Electron beam irradiation dose-dependently damages the *Bacillus* spore coat and spore membrane. *International Journal of Microbiology*, 01/2012 2012:579593; <http://dx.doi.org/10.1155/2012/579593>.
- Fiester, S. (graduate student), A. Jáklí, and **C. J. Woolverton**, 2011. Optical Properties of a Self-Assembling Viral Coat Protein. *Liquid Crystals*, 38: 1153-1157.
- Blegen, M (graduate student), C. Cheatham (graduate student), N. Caine-Bish (graduate student), **C.J. Woolverton**, J. Marcinkiewicz, E. Glickman, 2008. The Immunological and Metabolic

Responses to Exercise of Varying Intensities in Normoxic and Hypoxic Environments. *J Strength Cond. Res.* **22**(5):1638-1644.

- Helfinstine, S.L. (graduate student), O.D. Lavrentovich and **C.J. Woolverton**, 2006. Lyotropic Chromonic Liquid Crystals as Real-time Detector of Microbial Immune Complexes. *Letters Applied Microbiology* **43**:27-32.
- Shiyanovskii, S.V., O. D. Lavrentovich, T. Schneider (graduate student), T. Ishikawa, I.I. Smalyukh, **C. J. Woolverton**, G. D. Niehaus, and K. J. Doane, 2005. Lyotropic Chromonic Liquid Crystals for Biological Sensing Applications. *Mol. Cryst. Liq. Cryst.* **434**:259-270.
- Helfinstine, S. (graduate student), C. Vargas-Aburto, Roberto M. Uribe and **C. J. Woolverton**, 2005. Inactivation of *Bacillus* Endospores in Envelopes using Electron Beam Irradiation. *Applied and Environmental Microbiology* **71**, 7029-7032.
- **Woolverton, C.J.**, E. Gustely (undergraduate student), L. Li (graduate student) and O.D. Lavrentovich, 2005. Liquid Crystal Effects on Bacterial Viability. *Liquid Crystals* **32**, 417–423.
- Shiyanovskii, S.V., T. Schneider (graduate student), I.I. Smalyukh, T. Ishikawa, G. D. Niehaus, K. J. Doane, **C. J. Woolverton**, and O. D. Lavrentovich, 2005. Director Distortions and Light Transmittance around Growing Immune Complexes in a Lyotropic Chromonic Liquid Crystal: A Real-time Microbe Detector. *Phys. Rev. E.*, **71**, 020702.
- Bansal, A.K. and **C.J. Woolverton**, 2003. Applying Automatically Derived Gene-groups to Automatically Predict and Refine Metabolic Pathways. *IEEE Transactions on Knowledge and Data Engineering.* **15**: 883-894.
- **Woolverton, C.J.**, J. A. Fulton, S. Salstrom, John Hayslip (undergraduate student), Nairmeen Awad Haller, M. Wildroutd, M. MacPhee, 2001. Tetracycline Delivery from Fibrin Controls Peritoneal Infection without Measurable Systemic Antibiotic. *Journal of Antimicrobial Chemotherapy*, **48**:861-867.
- **Woolverton, C.J.**, K. Huebert (undergraduate student), B. Burkhardt (undergraduate student) and M. MacPhee, 1999. Subverting Bacterial Resistance using High Dose, Low Solubility Antibiotics in Fibrin. *Infection* **27**:28-33.
- Miekka, S.I., T. Jameson, M. Singh, **C. Woolverton**, H-M. Lin, R. Krajcik, M. MacPhee and W. N. Drohan, 1998. Novel Delivery Systems for Coagulation Proteins. *Hemophilia.* **4**:436-442.
- **Woolverton C.J.**, M. Singh, R. Brady, W. Drohan and M. MacPhee, 1995. Antibiotic Release from Fibrin Sealant. *Controlled Release of Bioactive Materials* **22**:750-751.
- **Woolverton, C.J.**, C.L. Bryson (undergraduate student), P.A Redshaw and A. Paquet, Jr. 1994. Immunomodulating Activities of Sodium-Dodecyl-Sulfate Extracted Antigens from *Actinobacillus actinomycetemcomitans* Serotype b. *Microbial Ecology in Health and Disease*, **7**:275-282.
- **Woolverton, C.J.**, L.C. Holt and R.B. Sartor. 1994. Oral Peptidoglycan-polysaccharide Stimulates Systemic Immunocompetency in Germ Free Mice. *Microbial Ecology in Health and Disease*, **7**:183-190.
- **Woolverton, C.J.**, Van B. Haywood, and Harold O. Heymann. 1993. Toxicity of Two Carbamide Peroxide Products used in Night Guard Vital Bleaching. *American Journal of Dentistry*, **6**:310-314.
- **Woolverton, C.J.** Lisa C. Holt, Deborah Mitchell, and R.B. Sartor. 1992. Isolation and Characterization of Rat Intestinal Lamina Propria cells: Consequences of Bacterial Colonization. *Veterinary Immunology and Immunopathology* **34**:127-138.
- **Woolverton, C.J.**, J.J. White, and R.B. Sartor. 1989. Intestinal Vascular Permeability Induced by Intravenous Peptidoglycan-polysaccharide Polymers. *Agents and Actions* **26**:301-310.
- Fotos, P.G., **C.J. Woolverton**, M.M. Mermigas, and M.J. Mokas. 1988. Effect of Eugenol on Prostaglandin E Levels in Serum and PMNs. *Ann. Dentistry* **47**:19-22.
- Fotos, P.G., **C.J. Woolverton**, K. VanDyke, and R.L. Powell. 1987. Effects of Eugenol on Polymorphonuclear Cell Migration and Chemiluminescence. *Journal of Dental Research* **66**:774-777.
- **Woolverton, C.J.**, P.G. Fotos, M.J. Mokas, and M. Mermigus. 1986. Evaluation of Eugenol for Mutagenicity by the Micronucleus Test. *Journal of Oral Pathology* **15**:450-453.



- **Woolverton, C.J.**, R.W. Veltri, and I.S. Snyder. 1986. Stimulation of Human PMNs *In vitro* by a Succinimide Molecular Complex of Methylfurylbutyrolactone. *Journal of Biological Response Modifiers* **5**:527-538.
- Veltri, R.W., G. Fodor, C-M. Liu, **C.J. Woolverton**, and M.W. Baseler. 1986. A New Class of Synthetic Biological Response Modifiers: The Methylfurylbutyrolactones (Nafocare B). *Journal of Biological Response Modifiers* **5**:444-461.
- **Woolverton, C.J.** and L.J. Turoczi. 1983. Studies in Mutagenesis and Antimutagenesis. II. A Modified Micronucleus Test as a Genotoxic Screen Using Vitamin C. *Proceedings of the Pennsylvania Academy of Science* **57**:185-189.

#### PEER-REVIEWED PEDAGOGY PUBLICATIONS

- Leff, L.G., D.L. Bade, J. Scaffidi, C.E. Williamson and **C.J. Woolverton**, 2013. Environmental Aquatic Resource Sensing: Basic Sciences, Business Education, and Outreach. *J Contemporary Water Res Educ.* Issue**150**: 63-71.
- Fiester, S. (graduate student), S. Helfinstine, T. Meilander and **C.J. Woolverton**, 2012. Administering needs-assessed bioterrorism curricula to public health professionals using active learning strategies. *Appl Biosafety*, **17**: 181-187.
- **Woolverton, C.J.**, 2012. Advancing the Vision: New PubMed Indexing, Creative Commons Licensing, and December Highlights. *Journal of Microbiology and Biology Education* **13**:124.
- **Woolverton, C.J.**, 2010. The Dual-use Dilemma in Life Science Research. *Journal of Microbiology and Biology Education* **11**:66-67.
- Fiester, S. (graduate student), J. Redfearn (graduate student), S. Helfinstine, T. Meilander and **C.J. Woolverton**, 2010. Lab Safety and Bioterrorism Readiness Curricula using Active Learning and Hands-on Strategies as Continuing Education for Laboratorians. *Journal of Microbiology and Biology Education* **11**:14-20.
- Meilander, T. and **C.J. Woolverton**, 2008. Engaging Teachers and Students in Microbiology Education. *Focus on Microbiology Education* **14**(3):2-3.
- Gilbert, A., T. Meilander, S. Helfinstine, and **C.J. Woolverton**, 2008. What Makes Flatulence. Microbial Discovery Activity, American Society for Microbiology, [www.asm.org/Education/index.asp?bid=35292](http://www.asm.org/Education/index.asp?bid=35292).
- **Woolverton, C.J.** and L. N. Woolverton (high school student), 2006. Are Three Sheets Enough? Using Toilet Paper to Teach Science and Mathematics, *American Biology Teacher* **68**:395 (online at <http://www.nabt.org/sub/pdf/068-07-0018.pdf>).
- **Woolverton, C. J.**, H. Hawkins, R. Anderson, E. DeAngelo, M. Jones, W. Matthai, B. Poole, J. Richardson, V. Schirone, 1999. Antibiotic Susceptibility of *E. coli* Isolates. International Curriculum Resources Collection. American Society for Microbiology. Peer reviewed Internet publication, <http://www.asmtusa.org/edusrc/library/FactSheet.asp?SubmissionID=440>.
- **Woolverton, C.J.**, 1999. Use of Veterinary Records to Teach Laboratory Thinking Skills in Biology. *American Biology Teacher* **61**:444-447.
- **Woolverton, C.J.** and J. Liliestedt (undergraduate student), 1999. Identification and Quantitation of Bacteria in Emergency Eyewash Bottles used in Science Laboratories. *American Biology Teacher* **61**:372-375.
- **Woolverton, C.J.**, 1998. Teaching Microbiology with a Little Help from the Web. *Focus on Microbiology Education* **5**:1-3.

#### PEER-REVIEWED CONFERENCE PROCEEDINGS

- Bartolo, L., Melton, A., Strah, M. (graduate student), Lowe, C. (graduate student), Feng L. (graduate student) and **Woolverton, C.J.**, 2002. An Electronic Scientific Notebook: Metadata and Database Design for Multidisciplinary Scientific Laboratory Data. *Proceedings of ICEIS 2002, 4th International Conference on Enterprise Information Systems*. ICEIS Press, Portugal, ISBN: 972-98050-6-7.
- **Woolverton, C.J.**, S.T. Lopino, J.A. Fulton and W.J. Landis, 2002. *Mimicking the Natural Tissue Environment*, In: *Tissue Engineering and Biodegradable Equivalents: Scientific and Clinical*

*Applications*, (K-U, Lewandrowski, D.L. Wise, D.J. Trantolo, J.D. Gresser, M.J. Yaszemshi and D.E. Altobelli. Eds.) Marcel Dekker, New York (invited chapter).

- Bartolo, L., Melton, A., Strah, M. (graduate student), Lowe, C. (graduate student), Feng, L. (graduate student) and **Woolverton, C.J.**, 2002, An Electronic Scientific Notebook: Metadata and Database Design for Multi-disciplinary Scientific Laboratory Data. *Proceedings of the 6<sup>th</sup> International Conference on Current Research Information Systems*, University of Kassal, Kassal, Germany.
- **Woolverton, C.J.**, J.J. White, Jr., E.J. Chapman, and R.B. Sartor. 1988. Eicosanoid Regulation of the Acute Vascular Phase of Inflammation. In: *Inflammatory Bowel Disease: Current Status and Future Approach*, Elsevier, Amsterdam, pp 309-316.
- **Woolverton, C.J.**, E.J. Chapman, P.B. Carter, and R.B. Sartor. 1988. Systemic Immunoregulation in Germ Free Mice Fed Bacterial Cell Wall Polymers. In: *Inflammatory Bowel Disease: Current Status and Future Approach*, Elsevier, Amsterdam, pp 207-212.

#### INVITED / PEER-REVIEWED BOOK CHAPTERS

- **Woolverton, C.J.** and D. Lehman, 2018. *Agents of Bioterror and Forensic Microbiology*, In: Textbook of Diagnostic Microbiology 6<sup>th</sup> Ed. (Mahon and Lehman, Eds.) Elsevier, New York. 978-0-323-61317-0
- **Woolverton, C.J.** and Abbey K. Woolverton, 2017. *Biological Safety and Security in Teaching Laboratories*, In: Biological Safety: Principles and Practices, 5<sup>th</sup> Ed. (Wooley, D and K Byers, Eds.) ASM Press, Washington, DC. ISBN 978-1-55581-620-9
- **Woolverton, C.J.**, S.T. Lopino, J.A. Fulton and W.J. Landis, 2002. *Mimicking the Natural Tissue Environment*, In: Tissue Engineering and Biodegradable Equivalents: Scientific and Clinical Applications, (K-U, Lewandrowski, D.L. Wise, D.J. Trantolo, J.D. Gresser, M.J. Yaszemshi and D.E. Altobelli. Eds.) Marcel Dekker, New York.

#### PEER-REVIEWED BOOKS (DEVELOPED FOR UNDERGRADUATE EDUCATION)

- Wiley, Sherwood, and **Woolverton**, 2017. *Prescott's Microbiology* 10e (Primary responsibility: 100% of Chapters 8, 9, and 33-40; 20% of 16 and 50% of 32), McGraw-Hill Higher Ed Publishers, NY. ISBN 978-1-259-28159-4
- Wiley, Sherwood, and **Woolverton**, 2014. *Prescott's Microbiology* 9e (Primary responsibility: Chapters 8, 9, 50% of 32, 33-40), McGraw-Hill Higher Ed Publishers, NY. ISBN 978-0-07-340240-6.
- Wiley, Sherwood, and **Woolverton**, 2011. *Prescott's Microbiology* 8e (Primary responsibility: Chapters 8, 30-39), McGraw-Hill Higher Ed Publishers, NY. ISBN 978-0-07-337526-7.
- Wiley, Sherwood, and **Woolverton**, 2009. *Prescott's Principals of Microbiology*, McGraw-Hill Higher Ed Publishers, NY. ISBN 978-0-07-337523-6.
- Wiley, Sherwood, and **Woolverton**, 2008. *Prescott Harley and Klein's Microbiology* 7e (Primary responsibility: Chapters 30-39), McGraw-Hill Higher Ed Publishers, NY. 978-0-07-335450-7
- **Woolverton, C.J.**, 2004. *Experimental Microbiology*. 3<sup>rd</sup> Edition, Morton Publishing Co., Englewood, CO. ISBN: 0-89582-541-4.
- **Woolverton, C.J.**, 1999. *Experimental Microbiology*. 2<sup>nd</sup> Edition, Morton Publishing Co., Englewood, CO. ISBN: 0-89582-541-4.
- **Woolverton, C.J.**, 1997. *Experimental Microbiology*. Burgess Publishing, Edina, Minnesota. ISBN: 0-8087-9591-0.

#### TECHNICAL MANUALS AND REPORTS

- Pandemic Response Plan (co-authored with Shandra DeVoe, Julie Volcheck, and Lisa Dannemiller), Kent State University, revised May 21, 2020.
- University Health Services Communicable Disease Plan, Kent State University, October 2019.
- Quality Improvement Plan for the Clinical Peer Review Process, University Health Services, Kent State University, October 2019.
- Faculty Handbook (co-author), College of Public Health, Kent State University, 2020.

- University Health Services Emergency Response Plan, Kent State University, April 2019.
- University Health Services Exposure Control Plan, Kent State University, April 2019.

#### INVITED AND OP ED PUBLICATIONS

- Woolverton, C.J., Review of *Virulence Mechanisms of Bacterial Pathogens*, 5<sup>th</sup> Edition. Editors: Indira T. Kudwa, Nancy A. Cornick, Paul J. Plummer, Qijing Zhang, Tracy Nicholson and John P. Bannantine. Washington, DC: ASM Press, 2016. ISBN: 9781555819279, 871 pp.; In *Applied Biosafety*: **22** (2), 79-80. June 1, 2017 (<https://doi.org/10.1177/1535676017711689>).Woolverton, C.J., 2003. Liquid Crystals: Find Microbes at Lightning Speeds. Medical Design News, Penton Press, published on-line at <http://www.medicaldesign.com/articles/ID/6673>.
- Woolverton, C.J., 2003. Highlights of the ASM BioDefense Countermeasures Meeting. Focus on Microbiology Education Newsletter, a publication of the American Society for Microbiology, ISSN 1542-9210.
- Woolverton, C.J. and M. Johnson, 2001. Eighth ASM Undergraduate Microbiology Education Conference a Success. Focus on Microbiology Education Newsletter, a publication of the American Society for Microbiology, ISSN 1542-9210.
- Woolverton, C.J., 1991. Soviet Health Care: Enigma or Oxymoron? AC Knowledge, The Alumni Magazine of Austin College, Sherman, TX.

#### BIOSAFETY/BIOSECURITY/BIORISK MANAGEMENT TRAININGS DELIVERED (SINCE 2008)

03 October 2019	Bioterrorism Preparedness and the Clinical Laboratory, Cooperative Medical Technology Program of Akron, OH to be delivered October 3, 2019
19-23 August 2019	Raising National Awareness Training: Fostering Health Security at the Institutional and National Level, Dr. Ramelan Naval Hospital, Surabaya, Indonesia.
22-26 July 2019	Raising National Awareness Training: Fostering Health Security at the Institutional and National Level, Dr. Hardjolutito Air Force Hospital, Jogjakarta, Indonesia.
15-19 July 2019	Raising National Awareness Training: Fostering Health Security at the Institutional and National Level, Dr. Soebroto Army Hospital, Jakarta, Indonesia.
26 Sept 2018	Bioterrorism Preparedness and the Clinical Laboratory, Cooperative Medical Technology Program of Akron, OH.
05 Oct 2017	Bioterrorism Preparedness and the Clinical Laboratory, Cooperative Medical Technology Program of Akron, OH.
08 July 2017	Biosecurity Risk Management, International Fellows Program, Health Security Partners, Valencia, Spain.
08 July 2017	Prepping for a Zombie Apocalypse: A Risk Assessment and Risk Communication Tabletop Exercise, International Fellows Program, Health Security Partners, Valencia, Spain.
05 Nov 2016	Prepping for a Zombie Apocalypse: A Risk Assessment and Risk Communication Tabletop Exercise, International Fellows Program, Health Security Partners, Vienna, Austria.
20 Sep 2016	Bioterrorism Preparedness and the Clinical Laboratory, Cooperative Medical Technology Program of Akron, OH.
23 Feb 2015	Biosafety as a Design Element, Designing for Highly Infectious Contagions Symposium, Cleveland, OH.
21 Sep 2015	Bioterrorism Preparedness and the Clinical Laboratory, Cooperative Medical Technology Program of Akron, OH.
20 Nov 2014	Ebola Virus Disease and Protection from Ebola Infection, Suffield Township OH, First Responder Community, Kent, OH.
29 Oct 2014	Ebola Virus Disease and Protection from Ebola Infection, City of Kent OH, First Responder Community, Kent, OH.

29 Sep 2014	Clinical Lab Readiness: Bioterrorism vs. Emerging Infections, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH.
26 Sep 2013	Bioterrorism Readiness in the Clinical Laboratory, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH.
24-28 Jun 2013	National Biosafety and Biocontainment Training Program, (held at) Kent State University, Kent, OH.
08 May 2013	Biosafety and Biosecurity in the Clinical Lab, OH Department of Health and the National Laboratory Training Network Sentinel Laboratory Training Program, Warren, OH.
25 Sep 2012	Bioterrorism and the Hospital Laboratory, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH.
10 Apr 2011	Communicable Diseases: Issues for the Deployed Soldier, Ohio National Guard, Akron, OH.
14-18 Mar 2011	Microbiology Essentials, Lab Sterilization and Disinfection, and Agents of Bioterrorism, National Biosafety and Biocontainment Training Program, Kent State University, Kent, OH.
20 Sep 2011	Risk Assessment, Safety and Security for the Microbiology Teaching Lab, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH.
20-21 May 2010	Are You Safe in Your Lab? American Society for Microbiology Conference on Undergraduate Education, San Diego, CA
24 Sep 2010	Risk Assessment, Safety and Security for the Microbiology Teaching Lab, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH.
20 May 2009	Risk Assessment, Safety and Security for the Microbiology Teaching Lab, American Society for Microbiology Conference on Undergraduate Education, Ft. Collins, CO.
25 Sep 2009	Clinical Laboratory assessment of Bioterrorism Agents, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH
24 Sep 2008	Select Agent Identification by the Clinical Laboratory, Cooperative Medical Technology Program of Akron, Akron Children's Hospital, Akron, OH

## **TEACHING AND ADVISING RESPONSIBILITIES**

### Academic Year, Courses Taught, College of Public Health, Kent State University

2019-20	EPI 80198	Directed Research in Epidemiology
2018-19	EHS 63011	Application of Risk Analysis in Environmental Health
	EHS 63010	Risk Assessment in Environmental Health
	PH 40195	Plagues that Shaped the World (Florence, Italy)
	EPI 73027	Biological Basis of Public Health
2017-18	EHS 63010	Risk Assessment in Environmental Health
	EHS 63011	Application of Risk Analysis in Environmental Health
	EHS 50196	Individual Investigation in EHS (LAI: Salmonella)
	EPI 80198	Directed Research in Epi (1 <sup>st</sup> Responder Mental Health)
	PH 40192	Public Health Internship (12 students at KCHD)
	PH 40092	International Health Practicum (Florence, Italy)
	PH 40196	Individual Investigation (Environmental Occ. Health Safety)
	PH 40195	Plagues that Shaped the World (Florence, Italy)
2016-17	EHS 60195	Plagues that Shaped the World (Florence, Italy)
	EHS 63010	Risk Assessment in Environmental Health
	EHS 63011	Application of Risk Analysis in Environmental Health
	PH 40195	Plagues that Shaped the World (Florence, Italy)
2015-16	EHS 60195	Plagues that Shaped the World (Florence, Italy)
	BSCI 80299	Dissertation II

	EHS 63011	Application of Risk Analysis in Environmental Health
	PH 30007	Prevention and Control of Disease
2014-15	EHS 6/80195	ST: Laboratory Biosafety and Biocontainment
	BSCI 80299	Dissertation II
	EHS 63011	Application of Risk Analysis in Environmental Health
	BSCI 80299	Dissertation II
2013-14	EHS 52018	Environmental Health Concepts in Public Health
	EHS 63011	Application of Risk Analysis in Environmental Health
	BSCI 80299	Dissertation II
	PH 30007	Prevention and Control of Disease – Honors Section
	PH 30007	Prevention and Control of Disease
2012-13	BMS 80299	Dissertation II
	EPI 73025	Emerging Issues in Infectious Disease Epidemiology
	EHS 63011	Application of Risk Analysis in Environmental Health
	BSCI 80299	Dissertation II
	PH 30007	Prevention and Control of Disease
	PH 20195	ST: Zombie Outbreak (all hazard preparedness)
2011-12	BMS 80299	Dissertation II
	PH 30012	Communicable Diseases
	PH 30007	Prevention and Control of Disease
	BSCI 80299	Dissertation II
2010-11	BMS 80299	Dissertation II
	PH 30012	Communicable Diseases
	PH 30007	Prevention and Control of Disease
	BSCI 80199/80299	Dissertation
2009-10	BMS 80199	Dissertation I
	PH 30012	Communicable Diseases
	PH 30007	Prevention and Control of Disease
	BSCI 80199	Dissertation I
	BMS 80199	Dissertation I
	PH 10001	Introduction to Public Health
	PH 20006	Introduction to Environmental Health

Courses Taught, College of Arts and Sciences, Kent State University

2006-2009	BSCI 30174	General Microbiology
	BSCI 4/5/70171	Immunology
	BSCI 5/70196	ST: Microbial Physiology (w/ L. Leff)
	BSCI 40195	Individual Investigation
	BSCI 60199	Thesis I
	BSCI 60299	Thesis II
	BSCI 80198	Research
	BSCI 80199	Dissertation I
	BSCI 80299	Dissertation II
1995-2006	BSCI 30174	General Microbiology
	BSCI 20021	Basic Microbiology
	BSCI 45196	ST: Bioinformatics
	BSCI 20140	Cell Biology
	BSCI 40195	Individual Investigation
	BSCI 4/5/70171	Immunology
	BSCI 60199	Thesis I
	BSCI 60299	Thesis II

Courses Taught, Biology Department, Austin College, Sherman, TX

1988-1993

Introduction to Biology, Cell Biology, Microbiology, Immunology

Undergraduate Student Organizations Advised, Kent State University

2014-2015

Faculty Advisor, Hungry for Health (Promoting Healthy Living)

2006-2011

Faculty Advisor, Phi Delta Epsilon (premedical fraternity)

2000-2006

Assistant Advisor, Phi Delta Epsilon

**MENTORING**

Visiting Scientists

Kemal Çeber (Hurran University, Turkey), October 2000-April 2001.

Postdoctoral Scientists

Tracey Meilander, January-May 2007.

Shannon L. Helfinstine, September 2006-May 2007.

Margarita Gomez Eschalada, November 2005-August 2006.

Manish Singh, November 1994-July 1995.

Graduate Students (Committee Chair, Dissertation/Thesis Director)

Jared Durieux

PhD student (PH-EPI, pre-candidacy)

Cedric Mubikayi Kabasele

PhD student (PH-EPI, pre-candidacy)

LaKetta Wilson

PhD student (PH-EPI, pre-candidacy)

James Redfearn

PhD conferred 2016 (BSCI, *ftsZ* assay and physiology)

Michael Shilling

PhD conferred 2013 (BMS, *C. diff* and coconut oil)

James Ferrell

PhD conferred 2013 (BSCI, cold plasma and biofilms)

Steve Fiester

PhD conferred 2011 (BSCI, LC biopolymers)

Shannon (Miller) Helfinstine

PhD conferred 2007 (BSCI, e-beam *Bacillus*)

James Dieringer (w/ Don Palmer)

MLS conferred 2008 (GEOG, El Niño and *Hantavirus*)

Barbara (Brezina) Kuri

MS conferred 2005 (BSCI, Abx from DSCG)

Elizabeth Marino

MS conferred 2003 (BSCI, in vitro skin)

Guo Zhong

MS conferred 2000 (BSCI, phagocyte biology)

Graduate Committee, Member

Samata Shrestha

MS (AEDP) conferred 2019

Devinda Hiripitiyage

MS (BSCI) conferred 2015

Suchismita Ghosh

PhD (BSCI) conferred 2013

Rachel Leahy

PhD (BMS) conferred 2012

Sinu Paul

PhD (BSCI) conferred 2012

Christopher Paustian

PhD (BSCI) conferred 2010

Douglas Antibus

MS (BSCI) conferred 2009

Raja Vukanti

MS (BSCI) conferred 2009

Rashmi Ram

PhD (BMS) conferred 2008

Greg Farnell

PhD (EHHS) conferred 2007

Mitali Das

PhD (BSCI) conferred 2006

Ola Olapade

PhD (BSCI) conferred 2004

Song Bo

MS (BSCI) conferred 2004

Brian Heston

MAT (EHHS) conferred 2003

Joseph Kavolchin

PhD (BSCI) conferred 2003

Mark Blegan

PhD (EHHS) conferred 2001

Xu Ping

MS (BSCI) conferred 2001

Outside Graduate Committee Member, Graduate Faculty Representative, and/or Defense Moderator

Mary E. Saha

PhD (BSCI) conferred 2017

Preveena Thiagarajan

PhD (BMS) conferred 2010

Ana Carolina Vazquez	PhD (BMS) conferred 2008
Ramesh Raj Subedi	PhD (Physics) conferred 2007
Guogiang (Matt) Zhang	PhD (CPIP) conferred 2007
Leigh Murray	PhD (EHHS) conferred 2006
Hui (Patrick) Liu	PhD (CPIP) conferred 2006
Tod Schneider	PhD (CPIP) conferred 2005
Scott Howell	PhD (BSCI) conferred 1998
James Dudones	PhD (BSCI) conferred 1998

#### MPH Practicum Preceptor

Priya Midha (S2020)	MS (EPI) conferred 2020
Michael Capuano (S2020)	MPH (EHS) conferred 2019
Brian Wise (Su-F2015)	MPH (EHS) conferred 2016
Courtney Bryant (F2015-S2016)	MPH (EPI) conferred 2016
Karuna Ramchamaran (Su-F2015)	MPH (EHS) conferred 2016
Jordan Phillips (Su-F2015)	MPH (EHS) conferred 2015
Christopher Breen (Su-F2015)	MPH (EHS) conferred 2015
Neeley Meyers (Su-F2014)	MPH (EHS) conferred 2015
Carlie Rees (F2013-S2014)	MPH (EHS) conferred 2014
Samantha Pecnik (Su-F2014)	MPH (EHS) conferred 2014
Ashley Hendricks (S-Su2014)	MPH (EHS) conferred 2014
Colleen M. Dundon	MPH (NEOUCOM) conferred 2011

#### Graduate Student Directed Research/Individual Investigation Mentor

Cedric Mubikayi Kabasele (2019-2020)	University Health Infectious Disease Case Studies
Isha Grover (F 2017)	LAI: Salmonella from Teaching Labs
Cedric Mubikayi Kabasele (F2017)	First Responder Mental Health Actions
Willa Bones (F2017)	Global Health Experience

#### Undergraduate Students

##### *Honors College Thesis Advisor (A) or Thesis Committee (C)*

Joshua Ambrose (C) (S 2016)  
 Adam Drawl (C) (research advisor): (S 2012)  
 Dannika Wallace: (A) (S 2004)  
 Carla Skytta: (A) (S 2002)  
 David Quillen: (A) (S 2000)  
 Vanessa Madrigal (A with J. Blank): (S 2000)  
 Summet Kumar: (A) (S 1999)  
 Margaret Tsai: (A) (S 1998)

##### *Biology Honors Research Project or Individual Investigation*

Simon Espanoza (S 2010)  
 Ben Millard (S 2010)  
 Andrea Teodosiu (S 2009)  
 Sal Coppola (S 2009)  
 Amorya Ferrara (S 2008)  
 Jessica Karrer (S 2007)  
 Jonathon Wilson (S 2006)  
 Josh Widman (S 2005)  
 Donald Misquitta (F 2003)  
 Christopher Paustian (F 2003)  
 Paul Rothenbacher (S 2003)  
 Binh To (S 2001)

Anaeze Offodile (S & F 2001, F 2002)  
Erin Dulka (S 2001)  
Shannon Miller (S & F 2001)  
Ben Ingersol (F 1998)  
Aaron Dye (F 1997)  
Robert Lewis (S 1997 & F 1998)  
Heather Pilch (S 1997)  
Jerry Liliestedt (S 1997)  
John Hayslip (S 1997)  
Bethany Burkhart (S 1997 & S 1998)  
Kelly Hubbard (F 1996 & S 1997)  
Alan Gunther (S 1996)  
Victoria L. Brown (S 1996)

#### High School Students

David Johanson (PSEOC), Hudson High School (Summer and Fall 2014)  
Lyssa Woolverton (Biology Project), Roosevelt High School (2003)

#### **STAFF SUPERVISION**

Kathy Graves, Laboratory Technician, February 2001-June 2001.  
Paula Lavey, Laboratory Technician, September 2000-June 2001.  
Gloria Tilenni, Secretary, February 2001-November 2002.  
Heather Valentine, Laboratory Technician, September 1993-August 1994.  
Keith Laemont, Laboratory Technician, September 1993-August 1994.

#### **2009-2019: PUBLIC HEALTH CURRICULUM DEVELOPMENT AT KENT STATE UNIVERSITY**

Undergraduate Program: re-developed PH 40109 “Laboratory Safety and Hygiene;” developed special topics course “Plagues that Shaped the World” for Florence Health Institute; redesigned/developed “Prevention and Control of Disease” course to align with core competencies and online criteria; co-developed “ST: Zombie Outbreak” (all hazard preparedness course adapted from the CDC); co-developed B.S. in Public Health-Environmental and Occupational Health tract (developed “Communicable Diseases” and “Prevention and Control of Disease” courses, and co-developed “Introduction to Environmental Health” and “Sanitation and Hazardous Materials Management,” courses); co-developed B.S. in Public Health-Preparedness and Prevention tract (developed “Lab Safety & Security,” “Disaster Preparedness,” “Introduction to Forensic Epidemiology,” and “First Responder Linkages”). All curricula aligned with competencies recommended by the Association of Schools of Public Health.

Graduate Program: developed EPI 73027 “Biological Basis of Public Health,” a 3-credit hour course; developed EHS 60109 “Laboratory Safety and Hygiene,” a 3-credit hour course; designed special topics course EHS 60195 “Plagues that Shaped the World” for the Florence Health Institute; developed EHS 63010 “Risk Assessment in Environmental Health,” 3-credit hour course; developed “Biosafety and Biocontainment” program, a 3-credit hour course; developed EHS 52018 “Environmental Health Concepts in Public Health” course; developed “Emerging Issues in Infectious Disease Epidemiology” course; contributed to M.P.H. and Ph.D. in Public Health program development; co-developed Environmental Health M.P.H. concentration; developed EHS 63011 “Analysis of Risk Assessment” course. Developed Lab-Science concentration for the MPH. All curricula aligned with competencies required by the Council on Education for Public Health.

#### **1995-2008: A&S CURRICULUM DEVELOPMENT AT KENT STATE UNIVERSITY**

Undergraduate Program: co-developed B.S. in Biotechnology (interdisciplinary major); developed “Basic Microbiology,” “General Microbiology,” and “Immunology” courses for majors in biological



sciences; co-developed “Introduction to Bioinformatics” course for majors in biological sciences, mathematics and computer science.

Graduate Program: developed M.S. and Ph.D. versions of the “Immunology” course for students in graduate programs within the Department of Biological Sciences and the School of Biomedical Sciences.

### **2005-2019: WORKFORCE DEVELOPMENT AT KENT STATE UNIVERSITY**

Developed “Emergency Preparedness;” Developed “Ebola Virus Disease: History, Virulence, and Transmission and its Impact on First Responders;” “Mechanism and Interpretation of Common Public Health Laboratory Tests;” Co-developed “Safety in the Laboratory;” “Select Agent Identification;” “BSL-2 and BSL-3 Principles and Practices;” “Public Health Emergencies: Prevention, Recognition & Response;” “Laboratory Biosecurity;” “Laboratory Risk Assessment;” “Laboratory Bioterrorism Preparedness;” “Laboratory Emergency Response Planning;” “Laboratory Surge during Emergencies;” “Disinfectants and Sterilants;” and “Biosafety in the Teaching Laboratory.”

### **1995-2008: CURRICULUM TECHNOLOGY DEVELOPMENT AT KENT STATE UNIVERSITY**

Co-developed “The Microbiology Learning Center,” Instructional Web Site;” “e-Micro, an electronic resource package;” and “Computer Simulation of Select Agent Identification.”

### **1995-2011: K-12 AND ACCESSIBILITY CURRICULUM DEVELOPMENT AT KENT STATE**

Co-developed “Bioterrorism Prevention and Control” and “Germs 101” (A collection of standards-based curricular materials teaching personal hygiene, microbiology concepts and public health principles) for K-12 students and teachers, students who are deaf, and students with low reading levels.

### **RESEARCH MEETINGS/SESSIONS CHAIRED/PLANNED/PRESENTED (1998-PRESENT)**

- Symposium Planning Committee, Designing for Highly Infectious Contagions, KSU College of Architecture and Environmental Design. February 23, 2015, Cleveland, OH.
- Session Chair and Conference Planning Committee Heal OH 2010: Annual Conference on Wound Healing in OH. October 2010, Rootstown, OH.
- Conference Planning Committee, It’s not a matter of if, but when...are you prepared to lead? Northeast Central Ohio Disaster Preparedness Symposium. September 2009, Rootstown, OH.
- Session Chair and Conference Planning Committee, Heal OH 2009: Annual Conference on Wound Healing in OH. October 2009, Rootstown, OH.
- Conference Planning Committee, Hypervigilance: Fact, Fiction or Fault. President’s Research Symposium, April 2008, Kent, OH.
- Session Chair and Conference Planning Committee, Heal OH 2008: Inaugural Conference on Wound Healing in OH. November 2008, Akron, OH.
- Symposium Chairperson, Biodefense and Safety, American Society for Microbiology, General Meeting, Orlando, FL, May 2006.
- Conference Planning Committee, 2<sup>nd</sup> Annual Public Health Preparedness Symposium, Center for Public Health Preparedness, October 2006, Kent, OH.
- Conference Planning Committee, Inaugural Public Health Preparedness Symposium, Center for Public Health Preparedness, October 2005, Kent, OH.
- Scientific Advisory/Planning Board, Surgical Applications of Tissue Sealants and Adhesives Conference, preceding The American College of Surgeons Clinical Congress, 5-6 October 2002, San Francisco, CA.
- Session Chairperson, Surgical Applications of Tissue Sealants Conference, preceding The American College of Surgeons Clinical Congress, 5-6 October 2002, San Francisco, CA.
- Co-chair, Planning Committee, Undergraduate Microbiology Education Conference of the American Society for Microbiology, 18-20 May 2001 in Orlando, FL.

- Meeting Co-Chair, Undergraduate Microbiology Education Conference of the American Society for Microbiology, 18-20 May 2001 in Orlando, FL.
- Session Chairperson, Biological Systems, American Physical Society Ohio Section, 21 April 2001 in Kent, OH.
- Scientific Advisory/Planning Board, Surgical Applications of Tissue Sealants and Adhesives Conference, preceding The American College of Surgeons Clinical Congress, 6-7 October 2001 in New Orleans, LA.
- Session Chairperson, Surgical Applications of Tissue Sealants Conference, preceding The American College of Surgeons Clinical Congress, 6-7 October 2001 in New Orleans, LA.
- Meeting Planning Committee, Undergraduate Microbiology Education Conference of the American Society for Microbiology, 19-21 May 2000 in Los Angeles, CA.
- Scientific Advisory/Planning Board, Surgical Applications of Tissue Sealants Conference, preceding The American College of Surgeons Clinical Congress, 21-22 October 2000 in Chicago, IL.
- Session Chairperson, Surgical Applications of Tissue Sealants Conference, preceding The American College of Surgeons Clinical Congress, 21-22 October 2000 in Chicago, IL.
- Co-chair, Interactive Symposium on Critical Thinking Strategies in the Microbiology Laboratory, 99<sup>th</sup> General Meeting of the American Society for Microbiology, Chicago, IL, 1999.
- Co-chair, Drug and Biologic Delivery Session, Emerging Applications of Tissue Sealants Conference, San Diego, CA, 1998.
- Co-chair, Instructional Technology Concurrent Session on using the Internet in Microbiology Education, Undergraduate Microbiology Education Conference, Atlanta, GA, 1998.
- Co-chair, Curriculum Resources Concurrent Roundtable Discussion Session on Defining the Scholarship of Teaching, Undergraduate Microbiology Education Conference, Atlanta, GA, 1998.

#### **PRESENTATIONS AT PROFESSIONAL MEETINGS (1995-PRESENT)**

- Knight, K. and C.J. Woolverton. Problem-Based Learning (PBL) in Public Health Education: A Systematic Review. American Public Health Association 2018, Annual Meeting and Expo, San Diego, CA, November 10-14, 2018.
- Tsai, C., L. Kienast, D. Patrak, J. Bingham, J. Redfearn, S. Pecnik, S. Kalghatgi, C.J. Woolverton, D. Pappas and R. Gray. Rapid Inactivation of Bacterial Spores Using Plasma Activated Water: Development, Species Identification and Sporicidal Mechanism. ISPC 22 - 22nd International Symposium on Plasma Chemistry, Antwerp, Belgium, presented July 10, 2015.
- Redfearn, J. and C.J. Woolverton. A New Method for the In Vitro Reconstitution of Bacterial Cytogenesis. Ohio Branch of the American Society for Microbiology, Elyria, OH, April 18, 2015.
- Meyers, NA and C.J. Woolverton. West Nile Detection through Mosquito Surveillance: Kent, OH 2014. Ohio Branch of the American Society for Microbiology, Elyria, OH, April 18, 2015.
- Rees, C. and C.J. Woolverton. Risk of Bacterial Contamination within the Community. Ohio Branch of the American Society for Microbiology, Elyria, OH, April 18, 2015.
- Redfearn, J. and C.J. Woolverton. A New Method for the In Vitro Reconstitution of Bacterial Cytokinesis. Graduate Research Symposium, Kent State University, Kent, OH, May 11, 2014.
- Woolverton, C.J. The Journal of Microbiology and Biology Education: History and Impact. American Society for Microbiology Conference on Undergraduate Education, Englewood, CO, May 17, 2013.
- Staley, J.A. and C.J. Woolverton. Zombie Outbreak: Case-based and Flipped. NSF Science Case Networking Meeting, Englewood, CO, May 16, 2013.
- Shilling, M.P., S. Grey, and C.J. Woolverton. Antimicrobial Effects of Virgin Coconut Oil and its Medium Chain Fatty Acids on *Clostridium difficile*. Ohio Branch of the American Society for Microbiology, Ashland, OH, April 13, 2013.
- Ferrell, J.R. and C.J. Woolverton. Nonthermal Plasma Disrupts Membrane Stability and Functionality of Penicillin-binding Proteins in Methicillin-resistant *Staphylococcus aureus*. Ohio Branch of the American Society for Microbiology, Ashland, OH, April 13, 2013.

- Redfearn, J.C. and C.J. Woolverton. An Artificial Cell for the Study of Bacterial Cytokinesis in vitro. Ohio Branch of the American Society for Microbiology, Ashland, OH, April 13, 2013.
- Ferrell, J.R. and C.J. Woolverton. Methicillin-Resistant *Staphylococcus aureus* Displays Increased Susceptibility to Methicillin following Exposure to Nonthermal Plasma (2682). 112<sup>th</sup> General Meeting, American Society for Microbiology, San Francisco, CA, June 19, 2012.
- Ferrell, J.R. and C.J. Woolverton. Spark-based Nonthermal Plasma Reduces Viability and Disrupts Established Structure of Constructed Bacterial Biofilms. Interscience Conference on Antimicrobial Agents and Chemotherapy, Chicago, IL, September 17, 2011.
- Ferrell, J. and C.J. Woolverton. The Use of Spark-Based Nonthermal Plasma for Sterilization of *In-Vitro* Constructed Biofilms. Ohio Branch of the American Society for Microbiology, Athens, OH, April 9, 2011.
- Shilling, M. and C.J. Woolverton. *Clostridium difficile* and Toxin recovery from Feces Preserved with ETM. Ohio Branch of the American Society for Microbiology, Athens, OH, April 9, 2011.
- Fiester, S.E. and C.J. Woolverton. Formulation of Chitin as a Liquid Crystal Biosensor. Ohio Branch of the American Society for Microbiology, Cincinnati, OH. April 17, 2010
- Woolverton, C. J. Active Learning Redefined: Education for, and by, the Adult Learner. 110<sup>th</sup> General Meeting of the American Society for Microbiology, San Diego, CA, 24 May 2010.
- Ghosh, S., M. Moitra, C.J. Woolverton, L. G. Leff. Effects of chemical remediation on an acid mine drainage impacted microbial community. 95<sup>th</sup> Annual Meeting of the Ecological Society of America, Pittsburgh, PA, 1-6 August 2010.
- Fiester, S.E., A. Jakli, and C.J. Woolverton. Liquid Crystalline Properties of g8p, The Major Coat Protein of *fd* Bacteriophage. 84th Colloid & Surface Science Symposium, Akron, OH, 20-23 June 2010.
- Ghosh, S., M. Moitra, D. Antibus, C.J. Woolverton, L. Leff, 2008. Microbial Communities of a Low Order, Acid Mine Impacted Stream. 108<sup>th</sup> General Meeting of the American Society for Microbiology, Boston, MA.
- Woolverton, C.J., S.L. Helfinstine and R. Uribe, 2008. Dose-dependent Electron Beam Irradiation Damages Bacterial Spore Coat and DNA. 17<sup>th</sup> Annual Meeting, Council on Ionizing Radiation Measurements and Standards. NIST, Gaithersburg, MD.
- Meilander, T., S. Fiester, S. Helfinstine, and C. J. Woolverton, 2007. Hands-On Biosafety Level III Laboratory Workshop Improves Knowledge and Skills in Laboratory Personnel. 107<sup>th</sup> General Meeting of the American Society for Microbiology, Toronto.
- S. Helfinstine, R. Uribe and C. J. Woolverton, 2007. Effects of Electron Beam Irradiation on *Bacillus* Spore DNA and Outer Protective Structures. 107<sup>th</sup> General Meeting of the American Society for Microbiology, Toronto.
- Lavrentovich, O.D., Yu.A. Nastishin, K. Antion, Hui Liu, V.G. Nazarenko, R. Vasyuta, S.V. Shiyonovskii, and C.J. Woolverton, Lyotropic Chromonic Liquid Crystals: Physical properties and emerging applications, PMSE 430, American Chemical Society annual meeting, Atlanta, Georgia, March 26-March 31, 2006.
- Meilander, T., S. Helfinstine and Woolverton, C.J, 2006. Using a Bioterrorism Simulation to Teach Select Agent Identification. 2006 ASM Conference for Undergraduate Educators. Orlando, FL.
- Meilander, T., S. Helfinstine and Woolverton, C.J, 2006. Using a Bioterrorism Simulation to Teach Select Agent Identification. 106<sup>th</sup> General Meeting of the American Society for Microbiology. Orlando, FL.
- Woolverton, C.J, 2006. Optical Amplification of Liquid Crystal Distortion Detects Microorganisms. SPIE Great Lakes Photonics Symposium, Dayton, OH.
- Tortora, L., H. S. Park, K. Antion, C. Woolverton, O. D. Lavrentovich, D. Finotello 2006. A Study of the Effects of Salts and Polyamines on Phase Diagrams of Lyotropic Chromonic Liquid Crystals. 21<sup>st</sup> International Liquid Crystal Conference. Denver, CO.
- Cowan, B., M. Gangoda, M. Gomez-Escalada, R. Gregory, S. Helfinstine, R. M. Uribe, C. Woolverton, P. Loar, M. Nickelson, J. De Jesus, E. Filppi and C. Garcia, 2006. Dose Measurements in Sludge Treatment by an Electron Beam. 15<sup>th</sup> Annual Meeting of the Council on Ionizing Radiation Measurements and Standards, NIST, Gaithersburg MD.

- Lavrentovich, OD and CJ Woolverton, 2005. Real-time Microbe Detection based on Director Distortions and Light Transmittance around Growing Immune Complexes in Lyotropic Chromonic Liquid Crystals. American Physical Society. Los Angeles, CA.
- Woolverton, CJ, S. Helfinstine, H. Liu, Y. Nastyshin & OD Lavrentovich. Liquid Crystal Director Distortions Report Microbe Capture by Antibody. Gordon Research Conference on Liquid Crystals. New London, NH, 22 June 2005.
- Woolverton, C.J., S. Miller-Helfinstine, T. Schneider, I. Smalyukh, and OD Lavrentovich. Liquid Crystal Biosensor Detects Anthrax Stimulant in Real Time, Abstracts of the 104<sup>th</sup> General Meeting, American Society for Microbiology, New Orleans, LA, 25 May 2004.
- Woolverton, C.J., T. Schneider, I.I. Smalyukh, G. D. Niehaus and O.D. Lavrentovich. Biosensors based on Lyotropic Chromonic Liquid Crystals (LCLC). Abstracts of the 1<sup>st</sup> ASM Biodefense Research Conference; Baltimore, MD, 9-12 March 2003.
- L.M. Bartolo, L. Feng, C.S. Lowe, A.C. Melton, C.J. Woolverton. Flexible Lab tool for a Digital Library of Reusable Materials Science Microstructures. Joint Conference on Digital Libraries, Houston, TX, May 27-31, 2003.
- Niehaus, GD, CH Block, CJ Woolverton, OD Lavrentovich, and KJ Doane, 2003. Sensitivity of a Liquid Crystal-based Biosensor. Abstracts of the Experimental Biology Meeting, San Diego, CA, April 11-15, 2003.
- Bartolo, L., Melton, A., Strah, M., Lowe, C., Feng L. and Woolverton, C.J. An Electronic Scientific Notebook: Metadata and Database Design for Multidisciplinary Scientific Laboratory Data. Proceedings, 4th International Conference on Enterprise Information Systems. Ciudad Real, Spain, 3-6 April 2002.
- Woolverton, C.J., Lavrentovich, O.D. and Niehaus, G. A Liquid Crystal Biosensor for Virus Detection. Abstracts of the 102<sup>nd</sup> General Meeting of the American Society for Microbiology, Salt Lake City, UT, 20 May 2002.
- Bartolo, L., Melton, A., Strah, M., Lowe, C., Feng L. and Woolverton, C.J., An Electronic Scientific Notebook: Metadata and Database Design for Multidisciplinary Scientific Laboratory Data. Proceedings of the 6<sup>th</sup> International Conference on Current Research Information Systems, University of Kassal, Kassal, Germany, 29-31 August 2002.
- Niehaus, G.D., K.J. Doane, T. Ishikawa, O.D. Lavrentovich and C. J. Woolverton (presenter). Liquid Crystal Biosensor for Microbes. Abstracts of the Experimental Biology Meeting. Orlando, FL, 4 April 2001.
- Woolverton, C.J., Ishikawa, T., Lavrentovich, O.D., Doane, K.J. and Niehaus, G. A Near-Real Time Microbial Biosensor. Abstracts of the Experimental Biology Meeting. Orlando, FL, 4 April 2001.
- Arroyo, A., M. Wildroutd, E. Marino, E. Dulka, C.J. Woolverton, W. Landis and J. Fulton. Skin Bilayer Formation with Varied Cell Culture Methods. Abstracts of the Surgical Applications of Tissue Sealants and Adhesives Conference, New Orleans, LA, 6-7 October 2001.
- Woolverton, C.J. The Virtual Poster as an Active Learning Strategy in Microbiology Education. Abstracts of the 7<sup>th</sup> Undergraduate Microbiology Education Conference, American Society for Microbiology. Ontario, CA, 19-21 May 2000.
- Woolverton, C.J. "Bioinformatics in the Classroom: DNA to Digital" to the 7<sup>th</sup> ASM Undergraduate Microbiology Education Conference, California Polytechnic State University, Pomona, CA, 20 May 2000.
- Woolverton, C.J., J. Fulton, M. MacPhee, Antibiotics Delivered from Fibrin Sealant Control Antibiotic-Resistant *Staphylococcus aureus*. Proceedings of the Surgical Applications of Tissue Sealants Conference, American College of Surgeons Clinical Congress, Chicago, IL, 21-22 October 2000.
- Woolverton, C.J., W.N. Drohan and M. MacPhee, Infection Control Using Low Solubility Antibiotics in Fibrin Sealant. Proceedings of the Plasma Product Biotechnology Meeting. Queensland, Australia, 27-30 March 1999.
- Woolverton, C.J., Critical Thinking in the Microbiology Laboratory. Abstracts of the 99<sup>th</sup> General Meeting of the American Society for Microbiology, Chicago, IL, 31 May 1999.

- Woolverton, C.J., W. Drohan and M. MacPhee, 1998. Antibiotics Delivered from Fibrin Overcome Antibiotic Resistance. Proceedings of the 3<sup>rd</sup> Annual International Cambridge Healthtech Symposia on Emerging Applications of Tissue Sealants. San Diego, CA, 3 May 1998.
- Woolverton, C.J. K.R. Finer, D. Gerbig, C. Hanousek, A. Leff and C.E. Wickstrom. The Microbiology Learning Center: A Web-based Resource Proceedings of the 5<sup>th</sup> Undergraduate Microbiology Education Conference, Atlanta, GA, 16 May 1998.
- Woolverton, C.J. K.R. Finer, D. Gerbig, C. Hanousek, A. Leff and C.E. Wickstrom, 1998. The Microbiology Learning Center: A Web-based Resource. Proceedings of the 98<sup>th</sup> General Meeting of the American Society for Microbiology, Atlanta, GA, 19 May 1998.
- Woolverton, C.J., W.N. Drohan and M. MacPhee, Control of Antibiotic Resistant Bacteria with Low-Solubility Antibiotics in Fibrin Sealant. Proceedings of the Emerging Applications of Tissue Sealants-Europe Meeting. Lisbon, Portugal, 19-20 November, 1998.
- Woolverton, C.J., W.N. Drohan and M. MacPhee. Antibiotic Release from Fibrin: Delivery Kinetics and Bioactivity. Proceedings of the Second International Antibacterial Drug Discovery Summit. Princeton, NJ, 24 March 1997.
- Woolverton, C.J., W.N. Drohan and M.J. MacPhee, 1997. Antibiotics Delivered in Fibrin Subvert Bacterial Resistance. Proceedings of the XVI<sup>th</sup> Congress of the International Society on Thrombosis and Haemastasis. Florence, Italy, 9 June 1997.
- Woolverton, C.J., M. Singh, W. Drohan and M. MacPhee. Long-term Antibiotic Release from Fibrin Sealant. Proceedings of the International Cambridge Symposia on Tissue Sealants: Current Practice, Future Uses. La Jolla, CA, 31 March 1996.
- Woolverton C.J., M. Singh, R. Brady W. Drohan and M. MacPhee. Antibiotic Release from Fibrin Sealant. Controlled Release Society, Seattle, WA, 2 August 1995.

#### **INVITED PRESENTATIONS**

- “Pandemic Planning as part of Pharmacy Practice” to the Faculty and Students of Palm Beach Atlantic University School of Pharmacy, to be delivered February 13, 2020.
- “Disaster Preparedness,” to the Portage County Amateur Radio Service, January 14, 2019.
- “Personal Emergency Preparedness” to the Kent State University Wellness Community, Kent, OH, September 19, 2018.
- “Disaster Preparedness and Pharmacy Practice” to the Faculty and (P1) Students of Palm Beach Atlantic University School of Pharmacy, April 26, 2018.
- “Promotion to Full Professor” Mid-career Focus Group to Kent State University faculty, Kent, OH, April 13, 2017.
- “Managing Your Promotion to Full Professor” Mid-career Focus Group to Associate Professors of Kent State University, Kent, OH, November 16, 2016.
- “My Thoughts on Science and Faith” to senior STEM students, Cuyahoga Valley Christian Academy, Cuyahoga Falls, OH, May 3, 2016.
- “Prepping for Zombies, Ebola, and More” to Biology Department, Youngstown State University, Youngstown, OH, April 1, 2016.
- “Insights into Microbiology Textbook Authorship” to General Microbiology, Biology Department, Youngstown State University, Youngstown, OH, April 1, 2016.
- “Ebola Scare at KSU!” to PH 40195 ST: Ebola Past and Present (Professor T. Smith), Kent State University, Kent, OH, scheduled for March 29, 2016.
- “Graduate Research: Asking Good Questions, Communicating Meaningful Results” to CS 6/89191: Graduate Seminar (Professor A. Melton), Kent State University, Kent, OH, December 4, 2015.
- “The Ebola Outbreak that Wasn’t” to Phil 30015: Medicine and Morality (Professor L. Williams), Kent State University, Kent, OH, November 10, 2015.
- “Ebola: Lessons Learned” to the Western Ohio Environmental Health Association, Sandusky, OH, October 16, 2015.
- “Infection Control Basics for Radiologists” to the Akron Children’s Hospital Radiology School, Akron, OH, September 2, 2015.

- “Controlling Infectious Disease at the Source” to the 59<sup>th</sup> Annual SAS/ACS/MSNO May Conference, John Carroll University, Cleveland, OH, May 20, 2015.
- “Outbreak Ebola: Lessons Learned” to the Eastern Ohio Environmental Health Association, Dublin, OH, April 24, 2015.
- “Zombies, Ebola, and More, Oh My!” (Key Note Address) to the Ohio Branch, American Society for Microbiology, Elyria, OH, April 17, 2015.
- “Ebola in NE Ohio, or not!” to PH 40195 ST: Ebola Past and Present (Professor T. Smith), Kent State University, Kent, OH, March 17, 2015.
- “We Have Met the Enemy and He is Us (Microbiologists)” to the Division of Clinical Microbiology, Department of Pathology and Laboratory Medicine, Indiana University School of Medicine, Indianapolis, IN, December 18, 2014.
- “Public Health Disease Detection: Common Lab Tests Revisited” to the OH Public Health Association Nursing Conference, Dublin, OH, December 1, 2014.
- “Lab Safety and Bioterrorism Readiness Curricula” to the 2014 National Association of Biology Teachers Professional Development Conference, Cleveland, OH, November 13, 2014.
- “Ebola Facts” to the Kent State University community (faculty, staff, and student assemblies to overcome fear and misinformation), Kent, OH, October 15-24, 2014.
- “Infection Control Basics” to the Akron Children’s Hospital Radiology School, Akron, OH, August 18, 2014.
- “Everything You Ever Wanted to Know about Lab Results but were Afraid to Ask!” to the Ohio Public Health Nurses Association North East District Region, Mogadore, OH, August 8, 2014.
- “Microbiology 101” to the Akron Children’s Hospital Radiology School, Akron, OH, August 26, 2013.
- “Preparing Clinical Laboratorians in an Age of Bioterrorism” to the Maryland Branch of the American Society for Microbiology, Baltimore, MD, February 3, 2011; as ASM Branch Lecturer.
- “BioSensor Technology Overview” to the IGERT Sensor Symposium (webinar), Kent State University, Kent, OH, March 1, 2011.
- “Out From Under the Microscope: Detecting Microorganisms the iPhone Way” to John Carroll University, University Heights, OH, February 24, 2011.
- “Microbiology meets Materials Science: Detecting Microbes in Real Time” to the Ohio Branch American Society for Microbiology, Athens, OH, April 9, 2011.
- “Microbiology 101: Infection Control Basics” to the Akron Children’s Hospital Radiology School, Akron, OH, August 24, 2011.
- “Careers in Public Health,” to Senior Seminar Course, Biology Department, Central State University, OH, September 23, 2011.
- “Kent State University Perspectives of the H1N1 Pandemic” to the Portage County Community H1N1 Response After-Action Conference. Rootstown, OH, February 25, 2010.
- “A Liquid Crystal Biosensor for the Detection of Bacteria and Virus” to the South Carolina Academy of Sciences and South Carolina Junior Academy of Sciences in conjunction with South Carolina Branch of the American Society for Microbiology, Charleston, SC, April 16-17, 2010; as ASM Branch Lecturer.
- “Detection of Bacteria and Virus using a Liquid Crystal Sensor” to the Rocky Mountain Branch of the American Society for Microbiology, Fort Collins, CO, April 23-24, 2010; as ASM Branch Lecturer.
- “Infection Control Basics” to the Akron Children’s Hospital Radiology School, Akron, OH, August 31, 2010.
- “The Hidden Become Revealed: Metagenomic Approaches to Wound Care” to the 2010 Heal Ohio Conference, Rootstown, OH, October 21, 2010.
- “Microbiology Out From Under the Microscope: Detecting Microorganisms Using Cell Phone Technology” to Niagara University, Niagara, NY, October, 15, 2010.
- “H1N1 Update” (with Kelly Engelhart, Portage County Health Department) as Grand Rounds to Robinson Memorial Hospital, Ravenna, OH, September 2, 2009.

- “H1N1 Update” to Kent State University Chairs, Directors and Faculty, Kent State University, Kent, OH, September 4 and 8, 2009.
- “Epidemiology of Vector-borne Diseases.” Guest lecture to BSCI 40196: Special Topics - Medical Entomology, Kent State University, Kent, OH, September 2009.
- “Wound Healing: Infection and Inflammation” to the 2009 Heal OH Conference, Rootstown, OH, October 22, 2009.
- “Research 101” Introduction to Research Rationale, Methods and Communication” to the Cooperative Medical Technology Program of Akron, Akron Children’s Hospital, Akron, OH, April 2008.
- “Microbiology 101: Infection Control Basics” to the Akron Children’s Hospital Radiology School, Akron, OH, September 2008.
- “Detection of Microorganisms in Real Time.” 2008 Heal OH: 1<sup>st</sup> Annual Conference on Wound Healing in OH. Akron, OH, October 2008.
- “Graduate and Career Opportunities in Microbiology and Public Health” to the Senior Seminar Course, Biology Department, Central State University, OH, November 7, 2008.
- “Research 101” Introduction to Research Rationale, Methods and Communication” to the Cooperative Medical Technology Program of Akron, Akron Children’s Hospital, Akron, OH, April 2007.
- “Microbiology 101: Infection Control Basics” to the Akron Children’s Hospital Radiology School, Akron, OH, May 2007.
- “Graduate and Career Opportunities in Microbiology and Public Health” to the Senior Seminar Course, Biology Department, Central State University, OH, October 24, 2007.
- “Optical Amplification of Liquid Crystal Distortion Detects Microorganisms” to the 2006 SPIE Great Lakes Photonics Symposium, Dayton Convention Center, Dayton, OH, 14 June 2006
- “Microbiology 101: Infection Control Basics” to the Akron Children’s Hospital Radiology School, Akron, OH, September 2006.
- “The Northeastern Ohio Consortium for Biopreparedness” to the Academic Support for Ohio Homeland Security" at the 2005 Ohio Homeland Security Symposium and Trade Show, Franklin County Veterans Memorial, Columbus, OH, 20 April 2005.
- “Real Time Pathogen Detection using the Liquid Crystal Biosensor” to the OH Society for Clinical Laboratory Science, Hudson, OH, 6 May 2004.
- “Sanitizing US Mail by Electron Beam Irradiation” to the OH Society for Clinical Laboratory Science, Hudson, OH, 7 May 2004.
- “ACT/SGER: Liquid Crystal Materials for Biosensor Development” to the Approaches to Combat Terrorism Principal Investigator Workshop, National Science Foundation, Arlington, VA, 8 June 2004.
- “Lyotropic Chromonic Liquid Crystals Enhance Microbe Detection” to Great Lakes Photonics Symposium (Sensors Session), Cleveland, OH, 9 June 2004.
- “Lyotropic Chromonic Liquid Crystals for Sensing Biological Agents” to Great Lakes Photonics Symposium (Chemical, Biological, radiological and Nuclear Countermeasures Session), Cleveland, OH, 10 June 2004.
- “Bioterrorism and the Role of the Clinical Laboratory” to the Cooperative Medical Technology Program of Akron, Akron Children’s Hospital, Akron, OH, 15 September 2004.
- “Amplification of Receptor-Ligand Binding Events using Liquid Crystals” to the Biology Department, University of Akron, Akron, OH, 20 February 2003.
- “Biological and Biomedical Research at KSU” to the Life Sciences Symposium, Polymer Sciences Department, University of Akron, Akron, OH, 21 March 2003.
- “Liquid Crystal Biosensors” to the Retired KSU Faculty group, Kent State University, Kent, OH, 19 November 2003.
- “Biotechnology at Kent State University” to Senator Amstutz and select members of the Ohio Department of Development, Kent State University, 18 January 2002.
- “The Integrated Life Sciences Program at Kent State University” to the Kent State University Board of Trustees, 24 January 2002.

- "Development of a Liquid Crystal Biosensor for Pathogen Detection" to the Liquid Crystal Institute & ALCOM membership, Kent State University, 3 April 2002.
- "Detecting Infectious Agents before They Cause Disease: A Case Study of Successful University Technology Transfer" to the Canton Rotary Club, Canton, OH, 23 August 2002.
- "Liquid Crystal Biosensors: Where Biology, Chemistry and Physics Meet" to the Department of Biological Sciences, Kent State University, Kent, OH, 17 October 2002.
- "Liquid Crystal Biosensors: A Lesson in Physical Chemistry" to the Biochemistry Research Group, Kent State University, Kent, OH, 22 October 2002.
- "Immunologic Implications of Pregnancy." Guest lecture to BSCI 4/5/70435, Reproductive Physiology of Mammals, Kent State University, 8 & 13 March 2001.
- "Bacterial Gene Expression and Regulation." Guest lecture to BSCI 30156 Elements of Genetics, Kent State University, 16 March 2001.
- "New Techniques for the Detection of Human Pathogens." Guest lecture to ILS 22091 Seminars in Medicine, Kent State University, 22 March 2001.
- "New Uses for Plasma Clotting Factors" to the Ohio Society for Clinical Laboratory Sciences, Morley Health Center, Akron, OH, 28 April 2001.
- "Pathogen Detection in Near-Real Time" to Akron Wound Healing Society, Calhoun Research Center, Akron General Medical Center, 13 June 2001.
- "Wound Healing and Infection Control" to the School of Exercise, Leisure and Sports, Kent State University, Kent, OH, 25 February 2000.
- "Infection Control in the New Millennium" to the Department of Microbiology and Immunology, North Eastern Ohio University College of Medicine, Rootstown, OH, 29 February 2000.
- "Advanced Hemostasis and Infection Control" to the Ohio Society for Clinical Laboratory Sciences, Morley Health Center, Akron, OH, 11 March 2000.
- "Y2K Advances in Infection Control" to the Cleveland Clinic Foundation, Cleveland, OH, 4 April 2000.
- "Teaching, Learning and the Link to Critical Thinking in the Classroom" to the to the Woodrow Wilson Foundation Leadership Program for Teachers, Lawrenceville, NJ, 26-27 July 2000.
- "Immune-endocrine Interactions" Guest Lecture to BSCI 5/70432 Endocrinology, Kent State University, 21 November 2000.
- "Career Choices in the Biological Sciences" to the Student Medical Association, Kent State University, Kent, OH, 23 February 1999.
- "Hemostasis and Drug Delivery Using a Commercial Fibrin Product" to the Annual Meeting of the Northern Ohio Medical Technology Educators and Affiliates, Kent, OH, 8 October 1999.
- "Liquid Crystal Amplification of Biological Signals" to the Biochemistry Research Group, Kent State University, Kent, OH, 06 October 1999.
- "Teaching Microbiology in the Digital Age" to Kent State University (Moulton Hall Workshop on Multimedia in Education), Kent, OH, 21 November 1999.
- "Sex in the 90's: The Germs My Mother Never Told Me About" to the Phi Delta Epsilon Premedical Fraternity, Kent State University, Kent OH, 26 February 1998.
- "Fibrin: A New Weapon in the Ongoing Fight to Control Infection" to the Wound Healing Research Focus Group, North Eastern Ohio University College of Medicine, Rootstown, OH, 2 March 1998.
- "Infection Control using Antibiotic-supplemented Fibrin" to Slippery Rock University, Slippery Rock, PA, 9 October 1998.
- "Localized Infection Control Mediated by Antibiotics Delivered from Fibrin" to the Biochemistry Research Group, Kent State University, Kent, OH, 08 December 1998.
- "Fibrin: It's Not Just for Clotting Blood Anymore" to Human Anatomy and Physiology Society, Canton, OH, 1 March 1997.
- "HIV and other Sexually-transmitted Diseases" to the Inter-residence Hall Staff, Kent State University, Kent, OH, 8 December 1997.
- "Messing with Bacterial Physiology" to Department of Biological Sciences, Kent State University, 26 September 1996.



- “Fibrin: Foe Turned Ally in the Ongoing Fight to Control Infection” to Department of Physiology, North Eastern Ohio University College of Medicine, Rootstown, OH, 16 December 1996.
- “Bacterial Induction and Regulation of Host Immunity” to Department of Biological Sciences, Kent State University, 5 October 1995.
- “AIDS 101 Revisited: What Have We Learned?” to Kent State University, Wellness Seminar, 30 November 1995.

## **SERVICE ACTIVITIES**

### University Level, Kent State University

- 2020 – present KSU Reopening (from pandemic) Steering Committee
  - Academic Affairs/Student Affairs sub-committee
  - Curriculum development sub-committee
  - Research and Creative Activities sub-committee
  - Athletics sub-committee
- 2020 – present KSU Pandemic Planning and Response Committee
- 2019 – present KSU Mental Health Vision Committee
- 2019 – present Kent State of Wellness Strategic Planning Committee
- 2019 – present Micro-credentials Feasibility Committee
  - micro-credentials steering committee/working group
- 2019 – present University Commencement Committee
- 2019 Announcer, One University Commencement
- 2019 Emcee, Undergraduate Research Awards Ceremony
- 2018 – 2020 Public Safety Advisory Committee
  - 2018-2020, Chair
- 2018 Announcer, One University Commencement
- 2018 Emcee, Undergraduate Research Awards Ceremony
- 2017 – present Institutional Biosafety Committee
  - 2017-present, (Inaugural) Chair
  - Wrote IBC Charter, organized founding committee
- 2017 – 2018 Strategic Opportunity for Academic Reach and Success Committee
- 2017 Announcer, One University Commencement
- 2017 – 2019 Ohio Percent for Art Committee
- 2016 – 2018 Space Planning & Campus Environment Committee
- 2016 – 2017 President’s Advisory Council
- 2016 Announcer, Spring Commencement Ceremony
- 2015 Provost’s Advisory Council
- 2014 – 2016 CPH Dean’s review committee
- 2014 – 2015 Provost’s Promotion Advisory Board
- 2014 – 2015 Provost’s Advisory Council
- 2013 – 2014 Provost’s Promotion Advisory Board
- 2013 – 2019 Public Safety Advisory Committee
  - 2015-2016 Chair
  - 2016-2019 Alternate
- 2012 – 2016 Committee to Develop a University Handbook
- 2012 – 2015 Faculty Ethics Committee (Alternate)
- 2011 – 2012 Provost’s Tenure Advisory Board
- 2011 – 2012 Evaluation Committee, Campus Environment and Operations, Facilities,
  - Planning and Operations
- 2010 – 2011 Provost’s Advisory Council
- 2010 – 2011 Provost’s Promotion Advisory Board
- 2010 – 2012 Sexual Assault Response Team
- 2010 – 2011 Evaluation Committee, College of Technology graduate degree program

- 2009 – 2010 Provost's Advisory Council
- 2009 – 2010 Provost's Promotion Advisory Board
- 2008 – 2009 Provost's Promotion Advisory Board
- 2002 – 2004 Member, University Planning & Budgets Committee
- 2000 – 2006 University Patent and Copyright Board
- 1998 – 2000 Celebration of Scholarship Planning Committee
- 1998 – 1999 Consortial MPH Organizing Committee
- 1998 – 2000 University Strategic Planning Steering Committee
- 1998 – 2000 Co-chair, Health Related Programs Cluster of the University Strategic
  - Planning Committee
- 1997 – 2000 University Health Affairs Council (UHAC)
- 1997 – 2000 Chair, Continuing Education Committee of UHAC
- 1996 – 2005 Committee on Hazardous and Radioactive Materials
- 1995 – 2015 University Biosafety Committee
  
- College, School, and Departmental Level; Kent State University
- 2018 – 2020 College Handbook Committee (wrote and negotiated handbook)
  - Chair
- 2017 – 2019 PhD Advisory Committee
- 2017 – present College Advisory Committee, College of Public Health
- 2017 – present College Reappointment, Promotion, and Tenure Committee
- 2017 – present College Curriculum Committee, College of Public Health
- 2017 – 2018 Center for Public Health Practice and Partnerships
- 2016 – present Global Health Committee, College of Public Health
- 2014 – 2015 College Advisory Committee, College of Public Health
- 2015 Department Chairperson Review Committee, Chair
- 2014 – present Laboratory Safety Committee, College of Public Health
- 2013 – 2017 Graduate Student Advisory Committee, Department of Biostatistics,
  - Environmental Health Science and Epidemiology
- 2013 – 2014 Faculty Advisory Committee, Department of Biostatistics, Environmental
  - Health Science and Epidemiology
- 2013 – 2015 BSPH Capstone and Internship Committee
- 2013 College Advisory Committee, College of Public Health
- 2011 – 2012 College of Public Health Research Committee
- 2011 – 2012 College of Public Health Committee on Community Practice
- 2009 – 2015 College Reappointment, Promotion and Tenure Review Committee
- 2006 – 2009 Biology Reappointment, Promotion and Tenure Review Committee
- 2002 – 2006 Biotechnology Advisory Committee
- 2002 – 2003 Medical Students Subcommittee, LCME/NCA accreditation review
- 2001 – 2004 Graduate Admissions Sub-committee, Cell and Molecular Biology
  - Program Area, School of Biomedical Sciences (BMS)
- 2000 – 2004 Co-chair, Cell and Molecular Biology Program Area, BMS
- 2000 – 2003 Integrated Life Sciences FAC, Chairperson
- 1999 – 2004 Executive Committee, School of Biomedical Sciences
- 1999 – 2000 Secretary, BSCI Faculty Advisory Committee
- 1999 – 2000 Co-Chair, Ad Hoc Committee to Develop a Biotechnology Program
- 1999 – 2000 BSCI Undergraduate Curriculum Committee
- 1998 – 1999 BS/MD Admissions Committee
- 1998 – 2003 BSCI *ad hoc* Computer Support Committee
- 1997 – 2001 BSCI Faculty Advisory Committee
- 1997 – 1998 BSCI Undergraduate Curriculum Committee

- 2018 – 2019 Biosafety EHS Specialist
- 2018 Chief University Physician
- 2017 Biosafety EHS Specialist
- 2015 – 2016 Vice President for Student Affairs
- 2011 – 2012 Senior Vice President and Provost
- 2010 Senior Faculty, College of Public Health
- 2010 Chief University Physician
- 2009 – 2010 Dean, College of Public Health
- 2008 – 2009 Chief University Physician
- 2007 – 2008 Biological Sciences Faculty Member
- 2007 Two Faculty Members (joint search Biology and Chemical Physics)
- 2004 – 2005 Committee, Chair, Biology Faculty Member
- 2004 Technology Transfer Manager Position
- 2003 – 2004 Committee Chair, Biology Faculty Member
- 2003 Biology Faculty Member, Ashtabula Campus
- 2001 – 2003 NTT faculty member, Biological Sciences
- 1997 – 1998 Biological Sciences Faculty Member

## HOBBIES

- Amateur Radio
  - Portage County Amateur Radio Service, member since 2016
  - American Radio Relay League; member since 2014
- Bujinkan Budō Taijutsu (Japanese Martial Art)
  - *Founding Member, Kent State University Bujinkan Budō Taijutsu Dojo, Kent, OH, 1997.*
- Cycling (Indoor and Mountain)
- Small and Long Arms Target Competition
- Ultra-light Backpacking and Camping

## LICENSES, NON-ACADEMIC TRAININGS AND CERTIFICATIONS (since 2009)

- Tactical First Aid Training, Akron, OH, March 9, 2019
- AHA Basic Life Support (CPR/AED) Training, N. Canton, OH, valid through December 2019
- CITI Laboratory/Biosafety/Biosecurity Training, Kent, OH, valid through December 2021
- Alert, Lockdown, Information, Counter and Evacuation (ALICE) Training, September 12, 2017
- ICS 100, US Department of Homeland Security, Kent, OH, June 6, 2017
- OH Peace Officer Firearms Certification, West Union, OH, April 2, 2017; March 31, 2019
- SKYWARN Weather Spotter, NWSCLE, Ravenna, OH, March 20, 2017
- Mental Health First Aid Certification, Kent State University, Kent, OH, February 22, 2017
- Amateur Radio General Class License, FCC License N1CJW, issued June 17, 2014
- Wilderness and Remote First Aid Certification, Akron, OH, completed November 2010
- Spinning® Instructor Certification; Madd Dog Athletics, issued February 2009

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