
CURRICULUM VITAE

KUN LU

University of North Carolina at Chapel Hill
Department of Environmental Sciences and Engineering
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EDUCATION

- 11/2009 Ph.D., Material Sciences, University of North Carolina at Chapel Hill
Field of study: Toxicology/DNA and protein adducts
Dissertation: Molecular binding of formaldehyde to DNA and proteins
- 08/2006 M.S., Material Sciences, University of North Carolina at Chapel Hill
Field of study: Biochemistry/proteomics
Project: Cross-linking and mass spectrometry for identifying protein-protein interaction sites in activator-multi-component protein complexes
- 07/2002 M.S., Chemistry, Beijing University of Chemical Technology, Beijing, China
Sub-major: Polymer Chemistry & Physics
Thesis: Statistical scaling of the distribution of active transition metals in biological systems
- 07/1999 B.E., Chemistry, Beijing University of Chemical Technology, Beijing, China
Sub-major: Polymer Chemistry & Engineering
Honor Thesis: Synthesis and characterization of mechanic and thermal properties of acrylonitrile-butadiene-styrene copolymer

PROFESSIONAL TRAINING AND EXPERIENCES

- 08/2018 – present Associate Professor, Department of Environmental Sciences and Engineering, UNC
- 08/2016 – 07/2018 Assistant Professor, Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill (UNC-CH)
- 12/2012 – 08/2016 Faculty, Regenerative Bioscience Center, University of Georgia (UGA)
- 10/2012 – 08/2016 Assistant Professor, Interdisciplinary Toxicology Program, UGA
- 08/2012 – 08/2016 Assistant Professor, Department of Environmental Health Science, UGA
- 10/2010 – 08/2012 Postdoctoral Associate, Massachusetts Institute of Technology (MIT)
- 12/2009 – 09/2010 Goldberg Postdoctoral Fellow, Curriculum in Toxicology, UNC-CH
- 09/2006 – 11/2009 Research Assistant, Environmental Sciences and Engineering, UNC-CH
- 08/2004 – 09/2006 Research Assistant, Department of Biochemistry and Biophysics, UNC-CH
- 09/1999 – 07/2004 Research Assistant, Beijing University of Chemical Technology (BUCT)

HONORS AND AWARDS

- 2017 “Papers of the Month” by National Institute of Environmental Health Sciences (NIEHS)
- 2016 IBM Junior Faculty Development Award, UNC-CH
- 2015 Outstanding New Environmental Scientist Award (ONES), NIEHS

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- 2015 Research Excellence Award, College of Public Health, UGA
2012 TOXI Young Investigator Award for Best Postdoctoral Presentation, American Chemical Society
2011 Board of Publications Best Paper Award, Society of Toxicology
2010 Chinese Government Award for Outstanding Student Abroad, Chinese National Scholarship Council
2010 TOXI Travel Award, Division of Chemical Toxicology, American Chemical Society
2010 Perry J Gehring Best Graduate Student Abstract Award, Society of Toxicology
2010 Leon Goldberg Memorial Travel Award, UNC-CH
2009 Graduate Education Advancement Board Impact Award, UNC-CH
2009 Student Award of Carcinogenesis Specialty Section, Society of Toxicology
2001 Bayer Fellowship, Germany Bayer Group
1999 Scholarship of Distinguished Enrolled Graduate Candidate, BUCT
1999 Outstanding Diploma Project Thesis, BUCT
1996 - 1998 People Scholarship, BUCT

PROFESSIONAL MEMBERSHIPS

American Chemical Society
Society of Toxicology
American Society for Mass Spectrometry
American Association for Cancer Research
North America Association of Metabolomics

INVITED BOOK CHAPTER

* = *Dr. Lu as Corresponding author*

A = Advisee

1. Chi Liang^A and **Lu Kun***. Biotransformation by the gut microbiome. *Comprehensive Toxicology III*, 2017, 64268, 1-15, Elsevier

PEER-REVIEWED PUBLICATION

* = *Dr. Lu as Corresponding author*

A = Advisee

Published

56. Liu Chih-Wei^A, Chi Liang^A, Tu Pengcheng^A, Xue Jinchuan^A and **Lu Kun***. Isobaric Labeling Quantitative Metaproteomics for the Study of Gut Microbiome Response to Arsenic. *Journal of Proteome Research*, 2018, *in press*
55. Xue Jinchuan^A, Lai Yunjia^A, Chi Liang^A, Tu Pengcheng^A, Leng Jiapeng, Liu Chih-Wei^A, and **Lu Kun***. Serum metabolomics reveals that gut microbiome perturbation mediates metabolic disruption induced by arsenic exposure in mice. *Journal of Proteome Research*, 2018, *in press*

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54. Tu Pengcheng^A, Bian Xiaoming^A, Chi Liang^A, Gao Bei^A, Ru Hongyu, Thomas J Knobloch, Christopher M. Weghorst, and **Lu Kun***. A Simple Approach to Modulate Mouse Gut Microbiome by Boosting Akkermansiamuciniphila with Dietary Black Raspberries. *ACS Omega*, 2018, *in press*
53. Liu Chih-Wei^A, Tian Xu, Hartwell J. Hadley, Chi Liang^A, **Lu Kun*** and JA Swenberg*. Accurate Measurement of Formaldehyde-Induced DNA-Protein Crosslinks by High-resolution Orbitrap Mass Spectrometry. *Chemical Research in Toxicology*, 2018, *In press*
52. Chi Liang^A, Tu Pengcheng^A, Lai Yunjia^A, Ru Hongyu, Xue Jinchuan^A and **Lu Kun***. Individual susceptibility to arsenic-induced diseases: the role of host genetics, nutritional status and gut microbiome. *Mammalian Genome*, 2018, s00335-018-9736-9, 1-17
51. Chi Liang^A, Yunjia Lai^A, Tu Pengcheng^A, Jinchuan Xue^A, and **Lu Kun***. The Artificial Sweetener Neotame Affects the Gut Microbiome Profile and Fecal Metabolites in CD-1 Mice. *Molecules*, 2018, 23, 367,1-11
50. Gao Bei^A, Chi Liang^A, Tu Pengcheng^A, Bian Xiaoming^A, Jesse Thomas, Ru Hongyu, and **Lu Kun***. The Organophosphate Malathion Disturbs Gut Microbiome Development and the Quorum-Sensing System. *Toxicology Letter*, 2018, 283,52-57
49. Wu Fen, Chi Liang^A, Ru Hongyu, Parvez Faruque, Slavkovich Vesna, Eunos Mahbub, Ahmed Alauddin, Islam Tariqul, Rakibuz-Zaman Muhammad, Hasan Rabiul, Sarwar Golam, Graziano Joseph H., Ahsan Habibul, **Lu Kun**, Chen Yu. Arsenic exposure and urinary metabolomics. *Environmental Health Perspectives*, 2017, 126,1,017005,1-7
48. Chi Liang^A, Mahbub Ridwan^A, Gao Bei^A, Bian Xiaoming^A, Tu Pengcheng^A, Ru Hongyu Ru and **Lu Kun***. Nicotine alters the gut microbiome and chemical signaling of gut-brain interactions in a sex-specific manner. *Chemical Research in Toxicology*, 2017, 30, 12, 2110-2119 (**featured by the American Chemical Society press release**)
47. Chi Liang^A, Bian Xiaoming^A, Gao Bei^A, Tu Pengcheng^A, Ru Hongyu Ru and **Lu Kun***. The Effects of an Environmentally Relevant Level of Arsenic on the Gut Microbiome and its Functional Metagenome. *Toxicological Sciences*, 2017, 160, 2, 193-204
46. Bian Xiaoming^A, Chi Liang^A, Tu Pengcheng^A, Gao Bei^A, Ru Hongyu, and **Lu Kun***. Gut microbiome response to sucralose and its potential role in inducing liver inflammation in mice. *Frontiers in Physiology*, 2017, 8, 487,1-13
45. Chi Liang^A, Gao Bei^A, Bian Xiaoming^A, Tu Pengcheng^A, Ru Hongyu Ru and **Lu Kun***. Manganese-induced Sex-specific Gut Microbiome Perturbations in C57BL/6 Mice. *Toxicology and Applied Pharmacology*, 2017, 341, 142-153
44. Gao Bei^A, Tu Pengcheng^A, Bian Xiaoming^A, Chi Liang^A, Ru Hongyu Ru, and **Lu Kun***. Profound perturbation induced by triclosan exposure in mouse gut microbiome: A less resilient microbial community with elevated antibiotic and metal resistomes. *BMC Pharmacology and Toxicology*, 2017, 18,46,1-12
43. Chen D, Fang Lei, Mei S, Li H, Xu Xia, Des Marais TL, **Lu Kun**, Liu X, and Chunyuan Jin. Regulation of chromatin assembly and cell transformation by formaldehyde exposure in human cells. *Environmental Health Perspectives*, 2017, 097019, 1-14

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42. Bian Xiaoming^A, Chi Liang^A, Gao Bei^A, Tu Pengcheng^A, Ru Hongyu Ru, and **Lu Kun***. The Artificial Sweetener Acesulfame Potassium Affects the Gut Microbiome and Body Weight Gain in CD-1 Mice. *PLOS ONE*, 2017,0178426, 1-16
41. Bian Xiaoming^A, Tu Pengcheng^A, Chi Liang^A, Gao Bei^A, Ru Hongyu, and **Lu Kun***. Saccharin induced liver inflammation in mice by altering the gut microbiota and its metabolic functions. *Food and Chemical Toxicology*, 2017, 107, 530-539
40. Gao Bei^A, Bian Xiaoming^A, Mahbub Ridwan^A, and **Lu Kun***. Gender-Specific Effects of Organophosphate Diazinon on the Gut Microbiome. *Environmental Health Perspectives*, 2017, 125, 2, 198-206 (**Selected as *Papers of the Month* by the NIEHS**)
39. Gao Bei^A, Bian Xiaoming^A, Chi Liang^A, Tu Pengcheng^A, Ru Hongyu, and **Lu Kun***. Organophosphate Diazinon Altered Quorum Sensing, Cell Motility, Stress Response, and Carbohydrate Metabolism of Gut Microbiome. *Toxicological Sciences*, 2017,157, 354-364 (**selected as “*Editor’s Highlight*”**)
38. Gao Bei^A, Mahbub Ridwan^A, Chi Liang^A, Bian Xiaoming^A, Tu Pengcheng^A, Ru Hongyu, and **Lu Kun***. Multi-Omics Reveals that Lead Exposure Disturbs Gut Microbiome Development, Key Metabolites, and Metabolic Pathways. *Chemical Research in Toxicology*, 2017, 30, 4, 996-1005
37. Chi Liang^A, Bian Xiaoming^A, Gao Bei^A, Ru Hongyu, Tu Pengcheng^A, and **Lu Kun***. Sex-specific effects of arsenic on the trajectories and function of the gut microbiome. *Chemical Research in Toxicology*, 2016, 29,6, 949-951
36. Yin Lei, Yu Kevin, **Lu Kun**, and Yu Xiaozhong. Benzyl Butyl Phthalate Promotes Adipogenesis in 3T3-L1 Preadipocytes: A High Content Cellomics and Metabolomic Analysis. *Toxicology In Vitro*, 2016, 25, 32, 297-309
35. **Lu Kun***, Mahbub Ridwan^A, Fox James. Xenobiotics: Interaction with the Intestinal Microflora. *Institute for Laboratory Animal Research (ILAR) Journal*, 2015, 56, 2, 218-27 (**Invited review on microbiome**)
34. **Lu Kun***, Abo Ryan, Schlieper Katherine, Graffam Michelle, Levine Stuart, Wishnok John, Swenberg James, Tannenbaum Steven, and Fox James. Arsenic Exposure Perturbs the Gut Microbiome and Its Metabolic Profile in Mice: An Integrated Metagenomics and Metabolomics Analysis. *Environmental Health Perspectives*, 2014, 122, 3, 284-291 (**Featured in *Science Selection***)
33. **Lu Kun***, Mahbub Ridwan^A, Cable Peter, Ru Hongyu, Parry Nicola, Bodnar Wanda, Wishnok John, Styblo Miroslav, Swenberg James, Fox James, and Tannenbaum Steven. Gut Microbiome Phenotypes Driven by Host Genetics Affect Arsenic Metabolism. *Chemical Research in Toxicology*, 2014, 27, 2, 172-174
32. Nakamura Jun, Mutlu Esra, Sharma Vyom, Collins Leonard, Bodnar Wanda, Yu Rui, Lai Yongquan, Moeller Benjamin, **Lu Kun**, and Swenberg James. The Endogenous Exposome. *DNA Repair*, 2014, 19, 1, 3-13
31. **Lu Kun***, Cable Peter, Abo Ryan, Ru Hongyu, Graffam Michelle, Schlieper Katherine, Parry Nicola, Levine Stuart, Bodnar Wanda, Wishnok John, Styblo Miroslav, Swenberg James, Fox James, and Tannenbaum Steven. Gut Microbiome Perturbations Induced by Bacterial Infection Affect Arsenic Biotransformation. *Chemical Research in Toxicology*, 2013, 26, 12, 1893-903
30. Swenberg James, Moeller Benjamin, **Lu Kun**, Rager Julia, Fry Rebecca, and Starr Thomas.

Formaldehyde Carcinogenicity Research: 30 Years and Counting for Mode of Action, Epidemiology, and Cancer Risk Assessment. *Toxicologic Pathology*, 2013, 41, 2, 181-189

29. Knutson Charles, Mangerich Aswin, Zeng Yu, Raczynski Arkadiusz, Liberman Rosa, Kang Pilsoo, Ye Wenjie, Prestwich Erin, **Lu Kun**, Wishnok John, Korzenik Joshua, Wogan Gerald, Fox James, Dedon Peter, and Tannenbaum Steven. Features of Innate Immunity Dominate Serum and Tissue Protein and Cytokine Profiles in Both Mouse and Human Inflammatory Bowel Disease. *Proceedings of the National Academy of Sciences of the United States of America*, 2013, 110, 26, E2332-41

28. Cui Liang, Lee YieHou, Kumar Yadunanda, Xu Fengguo, **Lu Kun**, OoiEngEong, Tannenbaum Steven, and Ong Choon Nam. Serum Metabolome and Lipidome Changes in Adult Patients with Primary Dengue Infection. *PLOS Neglected Tropical Diseases*, 2013, 7, 8, 1-13

27. **Lu Kun**, Knutson Charles, Wishnok John, Fox James, and Tannenbaum Steven. Serum Metabolomics in a Helicobacter Hepaticus Mouse Model of Inflammatory Bowel Disease Reveals Important Changes Originating in the Microbiome, Serum Peptides, and Intermediary Metabolism. *Journal of Proteome Research*, 2012, 11, 10, 4916-4926

26. **Lu Kun**, Craft Sessaly, Nakamura Jun, Moeller Benjamin, and Swenberg James. Use of LC-MS/MS and Stable Isotopes to Differentiate Hydroxymethyl and Methyl DNA Adducts from Formaldehyde and Nitrosodimethylamine. *Chemical Research in Toxicology*, 2012, 25, 3, 664-675 (**Featured In This Issue by the Editor**)

25. **Lu Kun**, Gul Husamettin, Upton Patricia, Moeller Benjamin, and Swenberg James. Formation of Hydroxymethyl DNA Adducts in Rats Orally Exposed to Stable Isotope Labeled Methanol. *Toxicological Sciences*, 2012, 126, 1, 28-38

24. **Lu Kun**, Moeller Benjamin, Doyle-Eisele Melanie, McDonald Jacob, and Swenberg James. Molecular Dosimetry of N^2 -Hydroxymethyl-dG DNA Adducts in Rats Exposed to Formaldehyde. *Chemical Research in Toxicology*, 2011, 24, 2, 159-161 (**Featured In This Issue by the Editor**)

23. Swenberg James, **Lu Kun**, Moeller Benjamin, Gao Lina, Upton Patricia, Nakamura Jun, and Starr Thomas. Endogenous Versus Exogenous DNA Adducts: Their Role in Carcinogenesis, Epidemiology, and Risk Assessment. *Toxicological Sciences*, 2011, 120, 1, S130-S145

22. Moeller Benjamin, **Lu Kun**, Doyle-Eisele Melanie, McDonald Jacob, Gigliotti Andrew, and Swenberg James. Determination of N^2 -Hydroxymethyl-dG Adducts in the Nasal Epithelium and Bone Marrow of Nonhuman Primates Following $^{13}\text{CD}_2$ -Formaldehyde Inhalation Exposure. *Chemical Research in Toxicology*, 2011, 24, 2, 162-164

21. **Lu Kun**, Moeller Benjamin, and Swenberg James. Further Considerations for the Implausibility of Leukemia Induction by Formaldehyde. *Toxicological Sciences*, 2011, 120, 1, 233

20. **Lu Kun**, Collins Leonard, Ru Hongyu, Bermudez Edilberto, and Swenberg James. Distribution of DNA Adducts Caused by Inhaled Formaldehyde is Consistent with Induction of Nasal Carcinoma but not Leukemia. *Toxicological Sciences*, 2010, 116, 2, 441-451 (**Highlighted by a Special Editor-in-Chief Commentary**)

19. **Lu Kun**, Ye Wenjie, Zhou Li, Collins Leonard, Chen Xian, Gold Avram, Ball Louise, and Swenberg James. Structural Characterization of Formaldehyde-Induced Cross-Links Between Amino Acids and Deoxynucleosides and Their Oligomers. *Journal of the American Chemical Society*, 2010, 132, 10, 3388-

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18. **Lu Kun**, Ye Wenjie, Gold Avram, Ball Louise, and Swenberg James. The Formation of S-[1-(N²-Deoxyguanosinyl)Methyl]Glutathione Between Glutathione and DNA During the Detoxification of Formaldehyde. *Journal of the American Chemical Society*, 2009, 131, 10, 3414-3415
 17. **Lu Kun**, Boysen Gunnar, Gao Lina, Collins Leonord, and Swenberg James. Formaldehyde-Induced Histone Modifications In Vitro. *Chemical Research in Toxicology*, 2008, 21, 8, 1586-1593
 16. Li Qifang, **Lu Kun**, Yang Qingquan, and Jin Riguang. The Effect of Different Metallic Catalysts on the Coreaction of Cyanate/Epoxy. *Journal of Applied Polymer Science*, 2006, 100, 3, 2293-2302
 15. Li Qifang, **Lu Kun**, Zhou Qing, Bai Doo Hyuan. A Study on Interfacial Mechanisms and Structure of Poly(ethylene-Co-Methacrylic Acid)/Copper with Reflection–Absorption Infrared Spectroscopy. *Journal of Materials Science*, 2006, 41, 24, 8271–8275
 14. Zhao Junfeng, **Lu Kun**, and Li Qifang. Study on Properties of Acrylonitrile Butadiene Styrene (ABS)/LGF and ABS/LGF/SMA Composites. *Modern Plastics Processing and Applications*, 2004, 16, 2, 1-5
 13. Jin Riguang, **Lu Kun**. The JRG-Fourth Statistics Scale on the Distribution Law of Biopolymer Element Active Centers in Chinese Medicine (ii): The Relationship Between the Distribution Law of Power Elements of Cardiovascular Chinese Medicines and the Sub-Cluster Parameters According to Atomic Number. *Journal of Beijing University of Chemical Technology*, 2003, 28, 1, 40-44
 12. Li Qifang, **Lu Kun**, Jin Dongji, and Jin Riguang. Mechanical Properties and Morphology of Super Tough Nylon-11. *Polymeric Materials Science and Engineering*, 2002, 18, 5, 181-184
 11. Jin Riguang, **Lu Kun**. The JRG-Fourth Statistics Scale on the Distribution Law of Biopolymer Element Active Centers in Traditional Medicines (i): The Relationship Between the Distribution Law of Life Elements of Anticancer Chinese Traditional Medicine and the Sub-Cluster Parameters According to Atomic Numbers. *Journal of Beijing University of Chemical Technology*, 2002, 29, 6, 46-49
 10. **Lu Kun**, Wang Xiaodong, Gao Yu, and Li Qifang. Research on the Performance of ABS/SAN/SMA Ternary Polymer. *Plastics Science and Technology*, 2002, 30, 4, 29-32
 9. **Lu Kun**. Advance on Preparation on Microcellular Macromolecules and Related Theory. *Modern Plastics Processing and Applications*, 2002, 14, 4, 53-56
 8. Gao Yu, **Lu Kun** and Li Qifang. The Research on Properties of ABS/SAN/PMMA Copolymer. *Synthetic Resins and Plastics*, 2002, 19, 1, 14-16
 7. Li Qifang, Kim Dong Gil, Wu Dezhen, **Lu Kun** and Jin Riguang. Effect of Maleic Anhydride Graft Ratio on Mechanical Properties and Morphology of Nylon-11/Ethylene-Octene. *Polymer Engineering & Science*, 2001, 41, 2, 2155-2161
 6. **Lu Kun**, Li Qifang, Tian Ming and Zhang Liqun. Blending Ratio and Property of Acrylonitrile Butadiene Styrene/Poly(Methyl Methacrylate). *Plastics Industry*, 2001, 29, 2, 32-33
 5. Li Qifang, **Lu Kun**, Tian Ming and Zhang Liqun. Study on Properties of Acrylonitrile Butadiene Styrene (ABS)/Styrene Maleic Anhydride (SMA) and ABS/SMA/Poly(Methyl Methacrylate) (PMMA)

Macromolecules. *China Plastics*, 2001, 16, 5, 35-37

4. **Lu Kun**, Li Qifang. Compatibility of Blends of Maleic Anhydride Grafted Macromolecules for Polyamide. *Plastics Science and Technology*, 2001, 29, 2, 18-21
3. **Lu Kun**, Li Qifang and Qiao Liyan. Study on the Property of Acrylonitrile Butadiene Styrene/ Poly(Methyl Methacrylate). *Modern Plastics Processing and Applications*, 2001, 13, 3, 10-12
2. Gao Yu, **Lu Kun** and Li Qifang. The Effect of Maleic Anhydride Grafting Ratio of Polyolefin Elastomer on Toughness of PA11/POE/POE-G-MAH. *Modern Plastics Processing and Applications*, 2001,13, 4, 8-10
1. **Lu Kun**. Physical and Chemical Mechanisms in Toughening Macromolecules. *Modern Plastics Processing and Applications*, 2000, 12, 4, 50-53

CONFERENCE ABSTRACTS AND POSTER PRESENTATIONS

* = *Dr. Lu as the Corresponding author*

A = *Advisee*

33. Tu Pengcheng^A, Bian Xiaoming^A, Chi Liang^A, Gao Bei^A, Ru Hongyu, Thomas J Knobloch, Christopher M. Weghorst, and **Lu Kun***. A Simple Approach to Modulate Mouse Gut Microbiome by Boosting Akkermansiamuciniphila with Dietary Black Raspberries. Microbiome. Consortium Conference, RTP, NC, May 2018
32. Pengcheng Tu^A, Bei Gao^A, Liang Chi^A, Yunjia Lai^A, and **Kun Lu***. Subchronic Low-dose 2,4-D Exposure Changed Plasma Acylcarnitine Levels and Induced Gut Microbiome Perturbations in Mice. The 57th Annual Meeting of Society of Toxicology, San Antonio, TX, March 11-15, 2018
31. Chi Liang^A, Xue Jingchuan^A, Tu Pengcheng^A, Lai Yunjia^A, Bian Xiaoming^A, Gao Bei^A, Ru Hongyu, and **Lu Kun***. The Gut Microbiome Affects the Arsenic Biotransformation and Liver toxicity in Mouse. The 57th Annual Meeting of Society of Toxicology, San Antonio, TX, March 11-15, 2018
30. Awoniyi Mu, Y. Popov, **Lu Kun**, Lai Yunjia^A, Montgomery S and Sartor Balfour. Antibiotic Depletion Reveals Multifaceted Protective and Detrimental Effects of Resident Microbiota on Hepatobiliary Inflammation in a PSC Mouse Model, The American Association for the Study of Liver Diseases annual meeting, Washington DC, October 2017
29. Sharma Vyom, **Lu Kun**, Walker J. Nigel, and Swenberg James. Understanding the formation and repair of PARP1-AP Cross-links on Exposure to PCBs, Fanconi Anemia Symposium, Atlanta, GA, October 2017
28. Chi Liang^A, Bian Xiaoming^A, Gao Bei^A, Tu Pengcheng^A, and **Lu Kun***. The Artificial Sweetener Acesulfame Potassium Affects the Gut Microbiome and Body Weight Gain in CD-1 Mice. NC Microbiome Consortium Conference, RTP, NC, May 2017
27. Tu Pengcheng^A, Bian Xiaoming^A, Chi Liang^A, Gao Bei^A and **Lu Kun***. Saccharin induced liver inflammation in mice by altering the gut microbiota and its metabolic functions. NC Microbiome Consortium Conference, RTP, NC, May 2017

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26. Chi Liang ^A, Bian Xiaoming ^A, Gao Bei ^A, Tu Pengcheng^A, and **Lu Kun***. Arsenic exposure induces oxidative stress and DNA damage and perturbs the carbohydrate metabolism in gut microbiome. The 56th Annual Meeting of Society of Toxicology, Baltimore, MD, March 12-16, 2017
 25. Gao Bei^A, Chi Ling^A, Mahbub Ridwan^A, Bian Xiaongming^A, Tu Pengcheng^A, and **Lu Kun***. Multi-Omics Reveals Lead Exposure Disturbs Gut Microbiome Development, Key Metabolites and Metabolic Pathways. The 56th Annual Meeting of Society of Toxicology, Baltimore, MD, March 12-16, 2017
 24. Tu Pengcheng^A, Chi Liang^A, Xiaoming Bian^A, Gao Bei^A and **Lu Kun***. Profound Perturbation Induced By Triclosan Exposure In Mouse Gut Microbiome. MEDx-IBIEM Joint Symposium: Frontiers in Microbiome Dynamics and Engineering, Durham, NC, March 2017
 23. Chi Liang ^A, Bian Xiaoming ^A, Gao Bei ^A, Tu Pengcheng ^A, and **Lu Kun***. Arsenic exposure alters bacterial genes related to pathogenicity. MEDx-IBIEM Joint Symposium: Frontiers in Microbiome Dynamics and Engineering, Durham, NC, March 2017
 22. Gao Bei^A, Bian Xiaoming^A, Chi Liang^A, Tu Pengcheng^A, **Lu Kun***. Metagenomics Analysis Reveals Compound-Specific Impacts of Organophosphate Malathion and Carbamate Aldicarb on Gut Microbiome and its Functional Capacity. NIEHS Environmental Health Science FEST, Durham, NC, December 6-8, 2016
 21. Bian Xiaoming ^A, Gao Bei ^A, ChiLiang ^A, Tu Pengcheng ^A, Mahbub Ridwan ^A, and **Lu Kun ***. Cadmium exposure perturbs the gut microbiome and its metabolic profile in mice. NIEHS Environmental Health Science FEST, Durham, NC, December 6-8, 2016
 20. Tu Pengcheng ^A, Mahbub Ridwan ^A, ChiLiang ^A, Bian Xiaoming ^A, Gao Bei ^A, and **Lu Kun ***. Effects of Nicotine on the Gut Microbiome and Its Metabolic Functions. NIEHS Environmental Health Science FEST, Durham, NC, December 6-8, 2016
 19. ChiLiang ^A, Bian Xiaoming^A, Gao Bei^A, Tu Pengcheng ^A, and **Lu Kun***. Arsenic exposure increases pathogenicity of gut bacteria. NIEHS Environmental Health Science FEST, Durham, NC, December 6-8, 2016
 18. Gao Bei^A, Bian X^A, Chi L^A, Tu P^A, and **Lu Kun***. Metatranscriptomics Reveals Functional Effects of Diazinon Exposure on Gut Microbiome. The 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016
 17. Bian Xiaoming^A, Gao Bei^A, Chi Liang^A, Mahbub Ridwan^A, and **Lu Kun***. Gut microbiome and metabolome response to artificial sweeteners, The 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016
 16. Tu Pengcheng^A, Chi Liang^A, Mahbub Ridwan^A, Gao Bei^A and **Lu Kun***. The effects of nicotine on the gut microbiome and its metabolic functions, The 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016
 15. Chi Liang^A, Bian Xiaoming^A, Gao Bei^A, Tu Pengcheng^A, and **Lu Kun***. Gender-specific effects of arsenic on the trajectories of gut microbiome and its function, The 252nd American Chemical Society National Meeting, Philadelphia, PA, August 21-25, 2016
 14. Amosu Mayowa, Wallace Shelley, Majumder Anirban, Bian Xiaoming^A, **Lu Kun**, Stice Steven, and Smith Mary Alice. Comparison of Human Neural Progenitor and Differentiated Human Neuronal Cells for In Vitro Tests of Neurotoxicity, Birth Defects Research Part A-Clinical and Molecular Teratology.

2015, 103, 5, 432-432, The 55th Teratology Annual Meeting, Montréal, Canada, June 2015

13. Smith Mary Alice, Amosu Mayowa, Bian Xiaoming^A, **Lu Kun**, Stice Steven, Henderson William, Wallace Shelley, and Majumder Anirban. Using Human-Derived Neural Cells As an In Vitro Model for Developmental Neurotoxicity following Exposure to Pesticides. The 54th Annual Meeting of Society of Toxicology, San Diego, CA, March 2015
12. Gao Bei^A, Bian Xiaoming^A, Mahbub Ridwan^A, and **Lu Kun***. Effects of Organophosphate Diazinon on the Gut Microbiome and its Function. The 250th National Meeting of American Chemical Society, Boston, MA, August 2015
11. Bian Xiaoming^A, Smith Mary Alice, Amosu Mayowa, Stice Steven, Henderson William, Wallace Shelley and **Lu Kun***. Metabolomics- and Human Neural Stem Cells-Based Assays for Toxicity Test. The 250th National Meeting of American Chemical Society, Boston, MA, August 2015
10. **Lu Kun**, Moeller Benjamin, Doyle-Eisele Melanie, McDonald Jacob, and Swenberg James. Molecular Dosimetry and Half Life of *N*²-Hydroxymethyl-dG DNA Adducts in Rats Exposed to Formaldehyde. The 50th Annual Meeting of Society of Toxicology, Washington, DC, March 2011
9. Gul Husamettin, **Lu Kun**, Upton Pat and Swenberg James. Formaldehyde-Induced Hydroxymethyl DNA Adducts in Rats Exposed to Isotope Labeled Methanol. The 50th Annual Meeting of Society of Toxicology, Washington, DC, March 2011
8. Moeller Benjamin, **Lu Kun**, Doyle-Eisele Melanie, McDonald Jacob, Gigliotti Andrew, and Swenberg James. Molecular Dosimetry of *N*²-Hydroxymethyl-dG Adducts Following Formaldehyde Exposure to Non-Human Primates. The 50th Annual Meeting of Society of Toxicology, Washington, DC, March 2011
7. **Lu Kun**, Ye Wenjie, Gold Avram, Ball Louise, and Swenberg James. Structural Characterization of Formaldehyde-Induced DNA-Protein Cross-Links. The 240th National Meeting of American Chemical Society, Boston, MA, August 2010
6. **Lu Kun**, Collins Leonard, Ru Hongyu, Bermudez Edilberto, and Swenberg James. Distribution and Molecular Dose of Inhalation-Derived and Endogenous DNA Adducts Support Causation of Nasal Carcinoma but not Leukemia. The 49th Annual Meeting of Society of Toxicology, Salt Lake City, UT, March 2010
5. **Lu Kun**, Ye Wenjie, Gold Avram, Ball Louise, and Swenberg James. Identification of Glutathione-DNA Adducts Induced by Formaldehyde. The 48th Annual Meeting of Society of Toxicology, Baltimore, MD, March 2009
4. **Lu Kun**, Ye Wenjie, Zhou Li, Collins Leonard, Chen Xian, and Swenberg James. Structure Elucidation of Formaldehyde-Induced DNA-Protein Cross-Links by Mass Spectrometry and NMR. The 56th Annual Meeting of American Society of Mass Spectrometry, Denver, CO, June 2008
3. **Lu Kun**, Ye Wenjie, Zhou Li, Gold Avram, Ball Louise, Chen Xian, and Swenberg James. Analysis of Formaldehyde Induced Lysine-Deoxyguanosine Cross-Links by Mass Spectrometry. The 238th National Meeting of American Chemical Society, Philadelphia, PA, August 2008
2. **Lu Kun**, Boysen Gunnar, Gao Lina, Collins Leonard, and Swenberg James. Identification of Formaldehyde Induced Histone Modifications *In Vitro* by Mass Spectrometry. The 55th Annual Meeting of American Society of Mass Spectrometry, Indianapolis, IN, June 2007

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1. **Lu Kun**, Petrotchenko Evgeniy, and Borchers Christoph. Cross-Linking and Mass Spectrometry for Identifying Protein-Protein Interaction Sites in Activator-Multi-Component Protein Complexes. The 54th Annual Meeting of American Society of Mass Spectrometry, Seattle, WA, June 2006

INVITED TALKS

Keynote speaker

26. *Effects of Heavy Metals on the Gut Microbiome*. National Academy of Science Microbiome Symposium, Environmental and Health: What's the Human Microbiome Have to Do With It? Washington, DC, January 2016

Other invited talks

25. Functional interaction of arsenic and gut microbiome. Annual ONES meeting at the NIEHS, RTP, NC, May 2018
26. *Artificial sweeteners, gut microbiome and host metabolism*. Center for Gastrointestinal Biology and Disease, Chapel Hill, NC, November 2017
24. *Mass spectrometry based less-invasive biomarker development for inflammatory bowel diseases*, Center for Gastrointestinal Biology and Disease, Chapel Hill, NC, June 2017
23. *The gut microbiome toxicity and omics approaches*. The Bortree Lecture, Center of Molecular Toxicology and Carcinogenesis Pennsylvania State University, State College, PA, February, 2017
22. *Multi-omics to study the microbiome toxicity induced by environmental chemicals*. The NIEHS Environmental Health Science FEST, RTP, NC, December 2016
21. *The gut microbiome toxicity induced by heavy metals*. The 10th Metal Toxicity and Carcinogenesis Meeting, Lexington, KY, October 2016
20. *Gut microbiome, arsenic biotransformation and toxicity*. International Congress of Toxicology, Merida, Mexico, October 2016
19. *Interactions between Environmental Exposure and Gut Microbiome: From 16S to Functional Characterization*. UGA Microbiome Seminar Serials, Athens, GA, March 2016
18. *Use of Animal Models Infected with Helicobacter Spp. to Study Chronic Inflammation and Metal Toxicity*. Department of Infectious Diseases, College of Veterinary Medicine, UGA, February 2016
17. *The Role of Gut Microbiome in Chemical Toxicity*. The 245th National Meeting of American Chemical Society, Boston, MA, August 2015
16. *Biomarker Discovery of Inflammatory Bowel Diseases*. The Exposome and Systems Biology Workshop. Georgia Tech, Atlanta, GA, May 2015
15. *Biomarker Discovery: From 1 to 1000s Molecules*. College of Public Health, Ohio State University, Columbus, OH, May 2015
14. *System-Level Approach to Study the Gut Inflammation*. Department of Pharmaceutical Science, University of Colorado, CO, February 2015

13. *Arsenic Exposure and Gut Microbiome for Toxicity and Individual Response*. The 244th National Meeting of American Chemical Society, San Francisco, CA, August 2014
12. *Functional Interaction between Gut Microbiome and Arsenic Exposure*. NIEHS Superfund Arsenic Workshop, Expert Panel, RTP, NC, March 2014
11. *The Effects of Gut Microbiome in Obesity and Potential Roles of Chemical Exposure on the Gut Microbiome*. UGA Obesity Initiative, Athens, GA, January 2014
10. *Modulation of Arsenic Toxicity in Animals with Different Gut Microbiome Phenotypes*. UGA Department of Animal and Dietary Science, Athens, GA, November 2013
9. *The Role of Gut Microbiome in Environmental Exposure and Human Disease*. UGA Department of Pharmacology and Physiology, Athens, GA, October 2013
8. *Omics-Based Biomarker Discovery for Inflammatory Bowel Disease: From Animal Models to Patients*. The 242nd National Meeting of American Chemical Society, Philadelphia, PA, August 2012
7. *Integration of Targeted and System-Level Approaches to Understand Environmental Exposure and Human Disease*. Superfund Research Program Seminar, Brown University, Providence, RI, February 2012
6. *Biomarker Discovery for Evaluating Chemical Exposure and Human Disease*. Department of Environmental Health Science, University of Massachusetts, Amherst, MA, January 2012
5. *Structural Characterization of Formaldehyde-Induced DNA-Protein Cross-Links*. The 240th National Meeting of American Chemical Society, Boston, MA, August 2010
4. *Analysis of Formaldehyde-induced DNA and Protein Damage*. The National Institute of Environmental Health Sciences, Research Triangle Park, NC, July 2010
3. *Quantitative Biomarkers to Understand Formaldehyde Genotoxicity*. Massachusetts Institute of Technology, Boston, MA, May 2010
2. *Molecular Binding of Formaldehyde to DNA and Protein and its Application in Risk Assessment*. Vanderbilt University, Nashville, TN, April 2010
1. *Identification of a Novel Formaldehyde-induced Glutathione-DNA Adduct*. The 48th Annual Meeting of Society of Toxicology, Baltimore, MD, March 2008

TEACHING ACTIVITIES

Detailed Record of Courses taught

Semester	Course#	Title	Credit hours	Role	Student enrolled
2018 Spring	TOXI 707	Advanced Toxicology	3	Director	11
2018 Spring	TOXI 707	Advanced Toxicology	3	Co-director	6
2017 Fall	ENVR 430	Health effects of environmental agents	3	Instructor	38
	TOXI 442	Biochemical and Molecular Toxicology	3	Co-Instructor (2 lectures)	10

	ENVR 630	Systems Biology in Environmental Health	3	Guest lecturer (1 lecture)	14
2017 Spring	ENVR 400	In house seminar series	1	Guest lecturer	-
2016 Fall	TOXI 442	Biochemical and Molecular Toxicology	3	Co-Instructor (1 lecture)	12
	ENVR 630	Systems Biology in Environmental Health	3	Guest lecturer (2 lectures)	15
2016 Spring	EHSC 8650	Advanced Environmental Chemistry	4	Instructor	7
	EHSC 8800	Special Problems in Environmental Health Sciences	3	Instructor	1
2015 Fall	EHSC4350/4350L	Environmental Chemistry	4	Instructor	11
	EHSC 8010	Advanced topics in Environmental Health Sciences	3	Co-instructor (1 of 4)	6
2015 Spring	EHSC 7010	Fundamentals of Environmental Health Science	3	Guest lecturer (1 lecture)	40
	EHSC 8800	Special Problems in Environmental Health Sciences	3	Instructor	1
	EHSC 8110	Fundamentals of Chemical and Microbial Risk Assessment	3	Co-Instructor (1 of 4)	18
2014 Fall	EHSC 8800	Special Problems in Environmental Health Sciences	3	Instructor	2
	EHSC 4350/6350 4350L/6350L	Environmental Chemistry and Lab	4	Instructor	10
2014 Spring	EHSC 8800	Special Problems in Environmental Health Sciences	3	Instructor	3
	EHSC 4960	Undergraduate Research in Biology	4	Instructor	1
	EHSC 7010	Fundamentals of Environmental Health Science	3	Guest lecturer	45
	EHSC 8020	Advanced topics in Environmental Health Sciences II	3	Co-instructor (1 of 4)	10
2013 Fall	EHSC4350/6350	Environmental Chemistry	3	Instructor	11
	EHSC 2020	Orientation to Environmental Health Science	1	Guest lecturer (1 lecture)	25
2012 Fall	EHSC 2020	Orientation to Environmental Health Science	1	Guest lecturer (1 lecture)	22

Major courses at UGA received an average score of 4.69/5.0 in student evaluations (5.0 is the best).

ADVISING ACTIVITIES

I have advised 12 trainees, including 5 PhD students, 1 Master's student, 3 undergraduate students, 2 post-doctoral researchers, and 1 visiting student. I have also served in 11 student committees of other research groups.

A. Ph.D or Master Students with me as the Advisor

Current (three PhD students)

- Chi Liang, PhD student, UNC-CH, ESE, 2015-present
Dissertation title: Decipher the functional interaction between arsenic exposure and the gut microbiome
- Tu Pengcheng, PhD student, UNC-CH, ESE, 2015-present
Dissertation title: Development of microbiome-based intervention methods to reduce toxicity of environmental chemicals
- Yunjia Lai, PhD students, UNC-CH, ESE, 2017-present
Dissertation title: Development of exposome mapping approaches to study microbiome-exposure interaction and human diseases

Graduated (two PhD students, one master student)

- Gao Bei, PhD student, UGA, Environmental Health Science, graduated December 2016
Dissertation title: Understanding the role of gut microbiome in pesticide-induced toxicity
- Bian Xiaoming, PhD student, UGA, Environmental Health Science, graduated April 2017
Dissertation title: Effects of artificial sweeteners on gut microbiome, metabolome and inflammation
- Mahbub Ridwan, MS student, UGA, Environmental Health Science, graduated May 2015
Thesis title: The effects of nicotine on the gut microbiome and the serum metabolic profile of mice

B. Ph.D or Master Students with me as a Committee Member

Current

- Pati Sumitra, PhD student, UGA, Pharmaceutical and Biomedical Science, 2013-present
Dissertation: Cocaine-induced lipidomics alterations for the study of addictive behaviors
- Paige Bommarito, PhD student, UNC-CH, ESE, 2017-present
Dissertation: Cadmium exposure, microRNA signaling and preeclampsia
- Martha Scott Tomlinson, PhD student, UNC-CH, ESE, 2017-present
Dissertation: Extremely low gestational age newborns (ELGAN) study, bacteria in the placenta and epigenetic modifications
- Jennifer Griggs, PhD student, UNC-CH, ESE, 2017-present
Dissertation: Bioaccessibility of arsenic from different types of contaminated soils

Completed

- Zhenyu Tian, PhD student, UNC-CH, ESE, 2017
Dissertation: Structural characterization and toxicity of degradation products of PHA in soil
- Sloane Tilley, Master Student, UNC-CH, ESE, 2017

Thesis: Analysis of Bladder Cancer Tumor CpG Methylation and Gene Expression within The Cancer Genome Atlas Identifies GRIA1 as a Prognostic Biomarker for Basal-Like Bladder Cancer

- Lee Sun Hye, PhD student, UGA, Nutrition, 2013-2017
Dissertation title: Preserving the intestinal epithelial barrier against inflammation
- Li Jiaojiao, PhD student, UGA, Molecular Biology, Florida International University, 2013-2017
Dissertation title: The effects of hAS3MT genetic polymorphisms on arsenic biomethylation
- Wang Jincheng, PhD student, UGA, Toxicology, 2012-2016
Dissertation title: Interaction between the microbiome and aflatoxin/green tea polyphenols
- Myer Mark, MS student, UGA, Environmental Health Science, 2013-2015
Thesis title: Effects of multi walled carbon nanotubes and sediment on the toxicity and bioavailability of diphenhydramine
- Chan Monica, MS student, UGA, Environmental Health Science, 2014-2016
Thesis title: Prevalence and location of Cronobacter species and Enterobacteriaceae in households

C. Undergraduate Students

- Kim Erica, UGA, Environmental Health Science, Undergraduate Research, 2014
Project title: Evaluate the effects of ergothioneine on modulating the DNA oxidation products using LC-MS
- Crider Robert, UGA, Environmental Health Science, Summer Research, 2015
Project title: Characterization of pesticide-induced metabolic perturbation in C57/BL6 mice by mass spectrometry
- Min Andreana, UGA, Biology, Undergraduate Research, 2014
Project title: Analysis of oxidative stress biomarkers in urine of mice exposed to arsenic in drinking water

D. Post-doctoral Researchers

- Jingchuan Xue, Postdoctoral Associate, UNC-CH, ESE, 2017-present
Project title: Development of mass spectrometry based exposome mapping methods for drugs and emerging environmental contaminants.
- Chih-Wei Liu, Postdoctoral Associate, UNC-CH, ESE, 2017-present
Project title: Development of high-resolution mass spectrometry based metaproteomics and pipeline to analyze the functional changes of the gut microbiome.

E. Visiting Students

- Fei Ding, Chemistry, visiting PhD student, Chinese Agriculture University, 2012
Project title: Use of mass spectrometry to identify and characterize protein modifications induced by lipid peroxidation and oxidative stress.

E. Academic Advising

- I regularly provided academic advising for undergraduate students (~6 students per semester) at UGA.

RESEARCH GRANTS

Ongoing Research Support

1. RO1, NIH (Lu, PI) 02/2015-12/2019
 Title: Functional interactions between gut microbiome and arsenic exposure
 Description: Using metabolomics, next generation sequencing and targeted biomarkers to investigate the role of the gut microbiome in arsenic toxicity
 Role: PI
2. P01, NIH (Lu, PI of UNC subcontract) 2018-2021
 Title: Pathophysiology and Treatment of Fanconi Anemia
 Description: Measurement of formaldehyde-induced DNA adducts in children with Fanconi Anemia
 Role: UNC Subcontract PI
3. CEHS Pilot grant, NIH (Lu, Co-I) 2018-2019
 Title: Susceptibility to arsenic-induced diabetes: The role of As3mt polymorphisms and the microbiome
Description: Study how genetics and microbiome variation contribute to arsenic-induced diabetes
 Role: Co-I

Completed Research Grants

1. RO1-S1, NIH (Lu, PI) 09/2016-12/2017
 Title: Functional interaction between the gut microbiome and arsenic exposure Administrative Supplement
 Description: The supplement will examine the role of sex in gut microbiome response to arsenic exposure using animal models.
 Role: PI
2. CEHS Interdisciplinary Pilot Grant (Redinbo, PI) 06/2017-07/2018
 Title: Alleviating environmental toxin damage via the gut microbiota
 Description: Using metabolomics to understand how gut bacterial enzyme inhibition reduces cancer incidence and progression
 Role: Co-I
3. Center for Human Health and the Environment Pilot Grant (Lu, Co-PI) 06/2017-07/2018
 Title: Exposome mapping in inflammatory bowel disease
 Description: Develop analytical and statistical method to map exposome in human inflammatory bowel disease patients.
 Role: Co-PI
4. IBM Junior Faculty Development Award, UNC (Lu, PI) 01/2017-12/2017
 Title: IBM Junior Faculty Development Award
 Description: Study the effects of pesticides on the gut microbiome, its development trajectory and neurotoxicity
 Role: PI

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5. CEHS Pilot Grant (Lu, PI) 09/2016-09/2017
 Title: Interaction between infectious disease and environmental exposure
 Description: Study the impact of bacterial infection on the liver toxicity of arsenic exposure in mice.
 Role: PI
6. RO3, NIH (Lu, PI) 06/2014-06/2016
 Title: Biomarker of formaldehyde based on DNA-protein cross-links
 Description: Develop novel biomarkers of formaldehyde exposure based on proteins cross-linked with DNA using highly sensitive mass spectrometry.
 Role: PI
7. STAR Grant, EPA (Stice, PI) 10/2013-10/2016
 Title: Neural stem cell adverse outcome pathways for endocrine disrupting chemicals (EDCs)
 Description: Development of GC-MS-based metabolomics approach to examine the toxicity of EDCs in neural stem cell *in vitro* assays,
 Role: Co-I
8. SBIR R43 Grant, NIH (Smith, PI) 06/2014-06/2015
 Title: Metabolic assays utilizing neurodevelopmental cells derived from human pluripotent stem cells
 Description: Developing mass spectrometry-based metabolomics for neurotoxicity test using stem cells
 Role: Co-I
9. FRG Grant, UGARF (Lu, PI) 07/2013-06/2015
 Title: Characterization of chemical-induced perturbations in the gut microbiome and its functions
 Description: Examine the effects of a number of important environmental chemicals on the gut microbiome profiles and metabolic functions.
 Role: PI
10. CPH Grant, UGA (Lu, PI) 01/2013-01/2014
 Title: The effects of arsenic exposure on the gut microbiome and its functions
 Description: Examine the time- and dose-dependent effects of arsenic in drinking water on the gut microbiome community structures.
 Role: PI
11. Pilot Grant of MIT CEHS Center Grant (P30), NIH (Tannenbaum, Fox, Lu, PI) 02/2012-02/2013
 Title: Functional interactions between gut microbiome and arsenic exposure
 Description: Using 16S sequencing, metabolomics and arsenic speciation to investigate the functional interaction between arsenic exposure and gut microbiome in C57BL/6 mice.
 Role: Co-PI

PROFESSIONAL SERVICES

1. National or International (other than grant reviewing)
 - Guest editor, the special issue on biomarker of environmental toxicants, Toxics Editorial Office, Switzerland, 2017
 - *Environmental Chemicals, the Human Microbiome, and Health Risk: A Research Strategy*, joint effort of the US EPA, NIEHS and National Academies of Sciences, Engineering and Medicine, 2017 (serve to review the report)

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- National Academy of Science Microbiome Symposium, *Environmental and Health: What's the Human Microbiome Have to Do With It?* Washington DC, 2016 (serve as keynote speaker and panelist)
 - American Chemical Society, 256th National Conference, Division of Chemical Research in Toxicology, Section Chair, Boston, MA, 2015
 - National Institute of Environmental Health Science workshop on health effects of arsenic, RTP, NC, 2014 (serve as expert panelist on microbiome)
2. National or International (grant review panels)
- 2018 Review panel for career development K grants, NIH/NIEHS
 - 2018 Review panel for small business grants, NIH/CSR
 - 2018 Review panel for SIEE study section, NIH/CSR
 - 2018 Review panel for ONES grants, NIH/NIEHS
 - 2017 Review panel for R13 grants, NIH/NIEHS
 - 2017 PAR Review Panel: DNA Adducts, NIH/CSR
 - 2017 Review panel for career development K grants, NIH/NIEHS
 - 2017 PAR Review Panel: DNA Adducts, NIH/CSR
 - 2017 COBRE Review Panel, NIH/NIGMS
 - 2017 PAR Review Panel: Fogarty Global Brain Disorders, NIH/CSR
 - 2017 Review Panel of Outstanding New Environmental Scientist Award, NIH/NIEHS
 - 2017 Review Panel ViCTER, NIH/NIEHS
 - 2017 External grant reviewer for the Hong Kong Baptist University
 - 2016 External grant reviewer for the Swiss Federal Institute of Technology, Switzerland
 - 2016 Review Panel of Outstanding New Environmental Scientist Award, NIH/NIEHS
 - 2016 Superfund Project Review Panel, NIH/NIEHS
 - 2016 COBRE Review Panel, NIH/NIGMS
 - 2015 Review Panel of Outstanding New Environmental Scientist Award, NIH/NIEHS
 - 2015 Superfund Project Review Panel, NIH/NIEHS
 - 2013 Superfund Project Review Panel, NIH/NIEHS
 - 2013 External Grant Reviewer for the New York University CEHS
3. School or University
- University Library Committee at UGA (2016)
 - UGA Microbiome Initiative (2015-2016)
 - UGA Obesity Initiative (2013-2016)
 - The Diversity Committee, College of Public Health, UGA (2014-2015)
4. Department
- Departmental Graduate Admission Committee, EHS, UGA (2013-2016)
 - Departmental Faculty Search Committee, EHS, UGA (2013)
5. Regular reviewers for over 30 journals, including:

Nature Communication, Environmental Health Perspectives, Nanotoxicology, Toxicology Letter, Toxicology in vitro, Molecular Biosystems, Toxicology, Toxicology and Applied Pharmacology, Mutagenesis, Cancer Research, Carcinogenesis, Chemical Biology Interaction, Rapid Communications in Mass Spectrometry, PLOS ONE, Vaccine, PLOS genetics, Anaerobe, Chemical Research in Toxicology, Toxicological Sciences, Environmental Microbiology, Archives of Toxicology, Microbiome, Water Research, Environmental Science and Technology, etc.