UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES
GRADUATE FACULTY APPLICATION

1. Name: Mitchell R. McGill

2. UAMS Graduate Program Sponsor: Regulatory Sciences Major field: Toxicology

3. Present UAMS academic title or administrative position: Assistant Professor

Date appointed this rank/position: 8/28/17 Employed by: UAMS COPH

4. **Comments of Department Chair/Head or Program Director including: evidence of scholarly development, effectiveness as a teacher, quality of publications and reallocation of duties if this application is approved.**

Dr. McGill is a new faculty in the Department of Environmental & Occupational Health, and will have a significant role in teaching and administering the Regulatory Sciences program. He has made important research contributions to the field of drug-induced liver injuries and will continue to pursue research in this area. His background and skills will make an important contribution to the research and graduate educational endeavors at UAMS. I highly recommend him for appointment to the UAMS Graduate Faculty.

	9/22/2017	
Department Chair/Head or Program Director	Date	Graduate Council Representative

I have read the comments of my Department Chair/Head or Program Director and I do, do not (circle one) wish to supply additional information in support of my application.

Mitchell R. McGill Digitally signed by Mitchell R. McGill Date: 2017.09.08 09:28:41 -05'00'	9/8/2017
Applicant's Signature	Date

Approvals

Chair, Graduate Faculty Committee	Date
Chair, Graduate Council	Date
Dean of the Graduate School	Date

Approved 5/30/96
Updated 02/02/06

5. **List your planned involvement in graduate education (courses, theses, dissertations):**

I plan to enthusiastically serve as a research mentor to graduate students who join my laboratory to work on their thesis or dissertation. I currently have startup funds for three years, and have made room in my budget for a student stipend. I am also including at least one student stipend in the budget for all of my NIH grant proposals. I also plan to serve on other graduate student committees, and to take on short-term undergraduate or medical students for small scale research projects when reasonable to do so. Finally, I expect to teach 1-2 courses per year in my primary department after my first year, and to serve as a guest lecturer in other courses and in other departments when needed.

6. **Briefly summarize your experience in graduate-level classroom teaching:**

I served as a teaching assistant for one semester of Medical Microbiology for students pursuing an MD degree at the University of Missouri - Kansas City. I have also given brief lectures on statistics in research to undergraduate students considering PhD or MD programs at the University of Kansas.

7. **Briefly summarize your experience in research and student research mentoring:**

I have 14 years of experience in biomedical research, including my undergraduate thesis, graduate school and two postdoctoral fellowships. Broadly, my areas of expertise are toxicology, liver disease and laboratory medicine.

As the most senior member of the twelve-person lab in which I completed my first postdoc, I was partially responsible for teaching and guiding three graduate students through their dissertation projects while our PI served as department chair, in addition to completing my own work. My interactions with the students were very positive and I greatly enjoyed working with them. Altogether, those students published 15 papers on which I was a co-author due to my mentorship role. Two of the three students finished their PhD degrees, one going on to a postdoc at Duke and the other entering private industry at Bayer. The third student was further behind and is currently preparing to defend his dissertation. I have also mentored one high school student and three rotating graduate students through shorter-duration projects at various times throughout my career.

8. **Attach Curriculum Vita** showing educational background (including institutions attended, degrees awarded and dates), honors or awards received, scholarly or professional organization affiliations, teaching experience (give school, dates and advanced and graduate subjects taught), including student theses and/or dissertations supervised. Cite publications and research in progress.

Mitchell R. McGill, Ph.D.
Assistant Professor
Environmental and Occupational Health
College of Public Health
University of Arkansas for Medical Sciences
Phone: 501-526-6619
Email: mmcgill@uams.edu

EDUCATION & TRAINING

Clinical Chemistry Postdoctoral Fellowship
Washington University School of Medicine (WUSM)
2015 – 2017
Board eligible in clinical chemistry (ABCC, NRCC, ABB)

Postdoctoral Fellowship in Toxicology
University of Kansas Medical Center (KUMC)
2013 – 2015

Ph.D. in Toxicology (with Honors)
University of Kansas Medical Center (KUMC)
2007 – 2013
ADVISER: Dr. Hartmut Jaeschke
DISSERTATION TITLE: Acetaminophen Hepatotoxicity in Humans and Mice

B.A. in Biology with Chemistry minor
University of Missouri – Kansas City (UMKC)
2002 – 2007
ADVISER: Dr. George J. Thomas, Jr.
SENIOR PROJECT TITLE: Structural Effects of Distamycin Binding on Double-stranded DNA

EMPLOYMENT CHRONOLOGY

August 2017 – Present	Assistant Professor, University of Arkansas for Medical Sciences (UAMS)
July 2016 – July 2017	Chief Clinical Chemistry Fellow, WUSM
July 2015 – July 2017	Clinical Chemistry Postdoctoral Fellow, WUSM
May 2013 – June 2015	Postdoctoral Fellow, KUMC
August 2007 – May 2013	Graduate Research Assistant, KUMC
January 2007 – May 2007	Undergraduate Teaching Assistant, UMKC
October 2005 – May 2007	Research Technician, UMKC

PUBLICATIONS

Peer-reviewed journal items (Latest to earliest)

1) Kennon-McGill S, **McGill MR**†. (2017) Extrahepatic toxicity of acetaminophen: evidence and proposed mechanisms. Submitted to *Arch Toxicol*. (Review)

2) **McGill MR**†, Gronowski AM. (2017) Increased C-reactive protein in healthy controls. *Clin Chem*. In press. ("What is your guess?" featured case report)

3) Du K, Ramachandran A, **McGill MR**, Mansouri A, Asselah T, Farhood A, Woolbright BL, Ding WX, Jaeschke H. (2017) Induction of mitochondrial biogenesis protects against acetaminophen hepatotoxicity. *Food Chem Toxicol*. 108, 339-350.

4) Maes M, **McGill MR**, da Silva TC, Abels C, Lebosfky M, Weemhoff JL, Tiburcio T, Veloso Alves Pereira I, Willebrords J, Crespo Yanguas S, Farhood A, Beschin A, Van Ginderachter JA, Penuela S, Jaeschke H, Cogliati B, Vinken M. (2017) Inhibition of pannexin1 channels alleviates acetaminophen-induced hepatotoxicity. *Arch Toxicol*. 91, 2245-2261.

5) Bhushan B, Chavan H, Borude P, Xie Y, Du K, **McGill MR**, Lebofsky M, Jaeschke H, Kasturi P, Apte U. (2017) Dual role of epidermal growth factor receptor in liver injury and regeneration after acetaminophen overdose in mice. *Toxicol Sci*. 155, 363-378.

6) Weemhoff JL, Woolbright BL, Jenkins RE, **McGill MR**, Sharpe MR, Curry SC, Antoine DJ, Jaeschke H. (2017) Plasma biomarkers to study mechanisms of liver injury in patients with hypoxic hepatitis. *Liver Int.* 37, 377-384.

7) **McGill MR**†. (2016) The past and present of serum aminotransferases and the future of liver injury biomarkers. *EXCLI J*. 15, 817-828. (Review)

8) Gronowski AM, **McGill MR**, Domen RE. (2016) Professionalism in residency training: a compilation of desirable behaviors and a case-based comparison between pathologists in training and practice. *Acad Pathol*. 3, 1-6.

9) **McGill MR**, Vijayan A, Trulock EP, Witt CA, Kohler GD, Scott MG. (2016) Falsely elevated plasma creatinine due to an immunoglobulin M paraprotein. *Am J Kidney Dis*. 68, 789-792. (Case report)

10) Ni HM, **McGill MR**, Chao X, Woolbright BL, Jaeschke H, Ding WX. (2016) Caspase inhibition switched TNF-α-induced apoptosis to necrosis but not autophagic cell death in hepatocytes and mouse livers. *Am J Pathol*. 186, 2623-2636.

11) Ni HM, **McGill MR**, Chao X, Du K, Williams JA, Xie Y, Jaeschke H, Ding WX. (2016) Removal of acetaminophen protein adducts by autophagy protects against acetaminophen-induced liver injury. *J Hepatol*. 65, 354-362.

12) Maes M, **McGill MR**, da Silva TC, Lebofsky M, de Aruajo CM, Tiburcio T, Pereira IV, Willebrords J, Yanguas SC, Farhood A, Jaeschke H, Cogliati B, Vinken M. (2016) Involvement of connexin43 in acetaminophen-induced liver injury. *Biochim Biophys Acta.* 862, 1111-1121.

13) **McGill MR***†, Kennon-McGill S*, Durham D, Jaeschke H. (2016) Hearing, reactive metabolite formation, and oxidative stress in cochleae after a single acute overdose of acetaminophen: an in vivo study. *Toxicol Mech Methods*. 26, 104-111.

14) Hu J, Ramshesh VK, **McGill MR**, Jaeschke H, Lemasters JJ. (2016) Low dose acetaminophen induces reversible mitochondrial dysfunction associated with transient c-Jun N-terminal kinase activation in mouse liver. *Toxicol Sci*. 150, 204-215.

15) Maes M, **McGill MR**, da Silva TC, Lebofsky M, de Aruajo CM, Tiburcio T, Pereira IV, Willebrords J, Yanguas SC, Farhood A, Jaeschke H, Cogliati B, Vinken M. (2016) Connexin32: a mediator of acetaminophen-induced liver injury? *Toxicol Mech Methods.* 26, 88-96.

16) Michaut A, Le Guillou D, Moreau C, Bucher S, **McGill MR**, Martinais S, Gicquel T, Morel I, Robin MA, Jaeschke H, Fromenty B. (2016) A cellular model to study drug-induced liver injury in nonalcoholic fatty liver disease: application to acetaminophen. *Toxicol Appl Pharmacol*. 292, 40-55.

17) Woolbright BL, **McGill MR**, Yan HM, Jaeschke H. (2016) Bile acid-induced toxicity in HepaRG cells recapitulates the response in primary human hepatocytes. *Basic Clin Pharmacol Toxicol*. 118, 160-167.

18) **McGill MR**†, Du K, Weemhoff JL, Jaeschke H. (2015) Critical review of resveratrol in xenobiotic-induced hepatotoxicity. *Food Chem Toxicol*. 86, 309-318. (Review)

19) Xie Y, Woolbright BL, Kos M, **McGill MR**, Dorko K, Kumer S, Schmitt T, Jaeschke H. (2015) Direct cytotoxicity of extracellular ATP against hepatocytes: role in the mechanism of acetaminophen hepatotoxicity. *J Clin Trans Res*. 2, 100-106.

20) Du K, **McGill MR**, Xie Y, Jaeschke H. (2015) Benzyl alcohol protects against acetaminophen hepatotoxicity by inhibiting cytochrome P450 enzymes but causes mitochondrial dysfunction and cell death at higher doses. *Food Chem Toxicol.* 86, 253-261.

21) Xie Y, **McGill MR**, Du K, Dorko K, Kumer SC, Schmitt TM, Ding WX, Jaeschke H. (2015) Mitochondrial protein adducts formation and mitochondrial dysfunction during N-acetyl-m-aminophenol (AMAP)-induced hepatotoxicity in primary human hepatocytes. *Toxicol Appl Pharmacol*. 289, 213-222.

22) **McGill MR**, Jaeschke H. (2015) A direct comparison of methods used to measure oxidized glutathione in biological samples: 2-vinylpyridine and N-ethylmaleimide. *Toxicol Mech Methods*. 25, 589-595.

23) Du K, Xie Y, **McGill MR**, Jaeschke H. (2015) Pathophysiological significance of c-jun N-terminal kinase in acetaminophen hepatotoxicity. *Expert Opin Drug Metab Toxicol*. 11, 1769-1779. (Review)

24) Miyakawa K, Joshi N, Sullivan BP, Albee R, Brandenberger C, Jaeschke H, **McGill MR**, Scott MA, Ganey PE, Luyendyk JL, Roth RA. (2015) Platelets and protease-activated receptor-4 contribute to acetaminophen-induced liver injury in mice. *Blood*. 126, 1835-1843.

25) Xie Y, **McGill MR**†, Cook SF, Sharpe MR, Winefield RD, Wilkins DG, Rollins DE, Jaeschke H. (2015) Time course of acetaminophen-protein adducts and acetaminophen metabolites in circulation of overdose patients. *Xenobiotica*. 81, 62-70.

26) **McGill MR**†, Du K, Xie Y, Bajt ML, Ding WX, Jaeschke H. (2015) The role of the c-Jun N-terminal kinases 1/2 and receptor-interacting protein kinase 3 in furosemide-induced liver injury. *Xenobiotica*. 45, 442-449.

27) **McGill MR**, Jaeschke H. (2015) MicroRNAs as signaling mediators and biomarkers of drug- and chemical-induced liver injury. *J Clin Med*. 4, 1063-1078. (Review)

28) Du K*, **McGill MR***, Bajt ML, Xie Y, Jaeschke H. (2015) Resveratrol prevents protein nitration and release of endonucleases from mitochondria during acetaminophen hepatotoxicity. *Food Chem Toxicol.* 81, 62-70.

29) Jaeschke H, **McGill MR**. (2015) Cytochrome P450-derived versus mitochondrial oxidant stress in acetaminophen hepatotoxicity. *Toxicol Lett*. 235, 216-17. (Letter)

30) Woolbright BL, **McGill MR**, Staggs VS, Winefield RD, Gholami P, Olyaee M, Sharpe MR, Curry SC, Lee WM, Jaeschke H; Acute Liver Failure Study Group. (2014) Glycodeoxycholic acid levels as prognostic biomarker in acetaminophen-induced acute liver failure patients. *Toxicol Sci*. 142, 436-44.

31) Du K, Williams CD, **McGill MR**, Jaeschke H. (2014) Lower susceptibility of female mice to acetaminophen hepatotoxicity: role of mitochondrial glutathione, oxidant stress and c-Jun N-terminal kinase. *Toxicol Appl Pharmacol*. 281, 58-66.

32) **McGill MR**, Staggs VS, Sharpe MR, Lee WM, Jaeschke H; Acute Liver Failure Study Group. (2014) Serum mitochondrial biomarkers and damage-associated molecular patterns are higher in acetaminophen overdose patients with poor outcome. *Hepatology*. 60, 1336-45.

33) Ward J, Kanchagar C, Veksler-Lublinsky I, Lee RC, **McGill MR**, Jaeschke H, Curry SC, Ambros VR. (2014) Circulating microRNA profiles in human patients with acetaminophen hepatotoxicity or ischemic hepatitis. *Proc Natl Acad Sci USA*. 111, 12169-74.

34) Jaeschke H, Xie Y, **McGill MR**. (2014) Acetaminophen-induced liver injury: from animal models to humans. *J Clin Transl Hepatol*. 2, 153-61.

35) Xie Y, **McGill MR**, Dorko K, Kumer SC, Schmitt TM, Forster J, Jaeschke H. (2014) Mechanisms of acetaminophen-induced cell death in primary human hepatocytes. *Toxicol Appl Pharmacol*. 279, 266-274.

36) **McGill MR**, Jaeschke H. (2014) Mechanistic biomarkers in acetaminophen-induced hepatotoxicity and acute liver failure: from preclinical models to patients. *Expert Opin Drug Metab Toxicol*. 10, 1005-1017. (Review)

37) **McGill MR**, Cao M, Svetlov A, Sharpe MR, Williams CD, Curry SC, Farhood A, Jaeschke H, Svetlov SI. (2014) Argininosuccinate synthetase as a plasma biomarker of liver injury after acetaminophen overdose in rodents and humans. *Biomarkers*. 19, 222-230.

38) Williams CD, Bajt ML, Sharpe MR, **McGill MR**, Farhood A, Jaeschke H. (2014) Neutrophil activation during acetaminophen hepatotoxicity and repair in mice and humans. *Toxicol Appl Pharmacol*. 275, 122-133.

39) **McGill MR**, Li F, Sharpe MR, Williams CD, Curry SC, Jaeschke H. (2014) Circulating acylcarnitines as biomarkers of mitochondrial dysfunction after acetaminophen overdose in humans and mice. *Arch Toxicol*. 88, 391-401.

40) Williams CD, **McGill MR**, Lebofsky M, Bajt ML, Jaeschke H. (2014) Protection against acetaminophen-induced liver injury by allopurinol is dependent on aldehyde oxidase-mediated liver preconditioning. *Toxicol Appl Pharmacol*. 274, 417-424.

41) **McGill MR**, Jaeschke H. (2013) Apoptosis or necrosis in acetaminophen-induced acute liver failure? New insights from mechanistic biomarkers. *Crit Care Med*. 41, 2653-2654. (Invited editorial)

42) Du K, Williams CD, **McGill MR**, Xie Y, Farhood A, Vinken M, Jaeschke H. (2013) The gap junction inhibitor 2-aminoethoxy-diphenyl-borate protects against acetaminophen hepatotoxicity by inhibiting cytochrome P450 enzymes and c-Jun N-terminal kinase activation. *Toxicol Appl Pharmacol*. 273, 484-491.

43) Ramachandran A, **McGill MR**, Xie Y, Ni HM, Ding WX, Jaeschke H. (2013) The receptor interacting protein kinase 3 (RIP3) is a critical early mediator of acetaminophen-induced hepatocyte necrosis in mice. *Hepatology*. 58, 2099-2108.

44) **McGill MR**, Jaeschke H. (2013) Metabolism and disposition of acetaminophen: recent advances in relation to hepatotoxicity and diagnosis. *Pharm Res*. 30, 2174-2187. (Review)

45) Williams CD, **McGill MR**, Farhood A, Jaeschke H. (2013) Fas receptor-deficient lpr mice are protected against acetaminophen hepatotoxicity due to higher glutathione synthesis and enhanced detoxification of oxidant stress. *Food Chem Toxicol*. 58C, 228-235.

46) Jaeschke H, **McGill MR**. (2013) Serum glutamate dehydrogenase – biomarker for liver cell death or mitochondrial dysfunction? *Toxicol Sci*. 134, 221-222. (Letter)

47) **McGill MR**, Lebofsky M, Murray GJ, Slawson, MH, Bajt ML, Xie Y, Williams CD, Wilkins DG, Rollins DE, Jaeschke H. (2013) Plasma and liver acetaminophen-protein adduct levels in mice after acetaminophen treatment: dose-response, mechanisms, and clinical implications. *Toxicol Appl Pharmacol*. 269, 240-249.

48) Jaeschke H, Williams CD, **McGill MR**, Xie Y, Ramachandran A. (2013) Models of drug-induced liver injury for evaluation of phytotherapeutics and other natural products. *Food Chem Toxicol*. 55, 279-289. (Review)

49) Jaeschke H, **McGill MR**, Williams CD. (2013) The pathophysiological relevance of neutrophils in acetaminophen hepatotoxicity. *Hepatology*. 57, 419. (Letter)

50) Xie Y, Williams CD, **McGill MR**, Lebofsky M, Ramachandran A, Jaeschke H. (2013) Purinergic receptor antagonist A438079 protects against acetaminophen-induced liver injury by inhibiting P450 isoenzymes not inflammasome activation. *Toxicol Sci*. 131, 325-335.

51) Woolbright BL, Ramachandran A, **McGill MR**, Yan HM, Bajt ML, Sharpe MR, Lemasters JJ, Jaeschke H. (2012) Lysosomal instability and cathepsin B release during acetaminophen hepatotoxicity. *Basic Clin Pharmacol Toxicol.* 111, 417-425.

52) Jaeschke H, Williams CD, **McGill MR**. (2012) Caveats of using acetaminophen hepatotoxicity models for natural product testing. *Toxicol Lett*. 215, 40-41. (Letter)

53) **McGill MR***, Williams CD*, Xie Y, Ramachandran A, Jaeschke H. (2012) Acetaminophen-induced liver injury in rats and mice: comparison of protein adducts, mitochondrial dysfunction, and oxidative stress in the mechanisms of toxicity. *Toxicol Appl Pharmacol*. 264, 387-394.

54) Aubert J, Begriche K, Delannoy M, Morel I, Pajaud J, Ribault C, Lepage S, **McGill MR**, Lucas-Clerc C, Turlin B, Robin MA, Jaeschke H, Fromenty B. (2012) Differences in early acetaminophen hepatotoxicity between obese ob/ob and db/db mice. *J Pharmacol Exp Ther.* 342, 676-687.

55) Ni HM, Boggess N, **McGill MR**, Lebofsky M, Borude P, Apte U, Jaeschke H, Ding WX. (2012) Liver specific loss of Atg5 protects against acetaminophen-induced liver injury. *Toxicol Sci*. 127, 438-450.

56) Antoine DJ, Jenkins RE, Dear JW, Williams DP, **McGill MR**, Sharpe MR, Craig DG, Simpson KJ, Jaeschke H, Park BK. (2012) Molecular forms of HMGB1 and keratin-18 as mechanistic biomarkers for mode of cell death and prognosis during clinical acetaminophen hepatotoxicity. *J Hepatol*. 56, 1070-1079.

57) **McGill MR**, Sharpe MR, Williams CD, Taha M, Curry SC, Jaeschke H. (2012) Mechanisms of acetaminophen hepatotoxicity in humans and mice involve mitochondrial damage and nuclear DNA fragmentation. *J Clin Invest.* 122, 1574-1583.

58) Jaeschke H, **McGill MR**, Ramachandran A. (2011). Oxidant stress, mitochondria and intracellular death mechanisms in drug-induced liver injury. *Drug Metab Rev.* 44, 88-106. (Review)

59) Jaeschke H, **McGill MR**, Ramachandran A. (2011). Pathophysiological relevance of proteomics investigations of drug-induced hepatotoxicity in HepG2 cells. *Toxicol Sci*. 121, 428-430. (Letter)

60) Jaeschke H, **McGill MR**, Williams CD, Ramachandran A. (2011). Current Issues with acetaminophen hepatotoxicity – a clinically relevant model to test the efficacy of natural products. *Life Sci*. 16, 2448-2450. (Review)

61) **McGill MR***, Yan HM*, Ramachandran A, Murray GJ, Rollins DE, Jaeschke H. (2011). HepaRG cells: a human model to study mechanisms of acetaminophen hepatotoxicity. *Hepatology*. 53, 974-982.

62) Jaeschke H, Williams CD, **McGill MR**, Farhood A. (2010). Herbal extracts as hepatoprotectants against acetaminophen hepatotoxicity. *World J Gastroenterol.* 16, 2448-2450. (Letter)

63) Katayama H, **McGill M**, Kearns A, Brzozowski M, Degner N, Harnett B, Kornilayev B, Matkovic-Calogovic D, Holyoak T, Calvet JP, Gogol EP, Seed J, Fisher MT. (2009) Strategies for folding of affinity tagged proteins using GroEL and osmolytes. *J Struct Funct Genomics*. 10, 57-66.

*Co-first authors. †Corresponding author.

Book Chapters (Latest to earliest)

1) **McGill MR**, Woolbright BL, Weemhoff JL, Jaeschke H. (2017) Mechanistic Biomarkers in Liver Diseases. In *Biomarkers in Liver Disease*. Preedy VR (Ed.) Heidelberg: Springer. In press.

2) **McGill MR**, Jaeschke H. (2015) Oxidative Stress in Acute Liver Failure. In *Studies on Hepatic Disorders*. Albano E, Parola M (Eds.) Heidelberg: Springer.

3) **McGill MR**, Xie Y, Jaeschke H. (2015) Oxidative Stress and Signaling in the Liver. In *Signaling Pathways in Liver Diseases.* Dufour JF, Clavien PA (Eds.) Hoboken: Wiley.

4) **McGill MR**, Jaeschke H. (2015) Biomarkers of mitochondrial damage in the liver. In *Mitochondria in Liver Disease*. Dominic H, Kaplowitz N (Eds). Boca Raton: CRC Press.

5) **McGill MR**, Jaeschke H. Early Biomarkers of Hepatocyte Death. (2015) In *Single Cell Sequencing and Systems Immunology (Translational Bioinformatics Series).* Wang X (Ed.) Heidelberg: Springer.

6) Woolbright BL, Williams CD, **McGill MR**, Jaeschke H. (2015) Liver Toxicity. In *Encyclopedia of Human Biology, 3rd Edition*. Dulbecco R (Ed.) Elsevier.

7) **McGill MR**, Williams CD, Jaeschke H. (2015) Liver Toxicology. In *Mammalian Toxicology*. Abou-Donia M (Ed.) Hoboken: Wiley.

8) **McGill MR**, Ramachandran A, Jaeschke H. (2014) Oxidative Stress and Drug-induced Liver Injury. In *Systems Biology of Free Radicals and Antioxidants*. Laher I (Ed). Heidelberg: Springer.

9) **McGill MR** and Jaeschke H. (2013) Antioxidants in Liver Disease. In *Drug-induced Liver Injury, 3rd Edition*. Kaplowitz N, DeLeve LD (Eds). Elsevier.

MEETING ABSTRACTS (Latest to earliest)

1) **McGill MR**, Ashby L, Eby SC, Gronowski AM, Scott MG. Impact of total laboratory automation on turnaround times for chemistry and hematology tests at a major academic medical center. July 2017. *American Association for Clinical Chemistry Annual Meeting*, San Diego, CA.

2) Du K, Ramachandran A, **McGill MR**, Mansouri A, Woolbright BL, Jaeschke H. Induction of mitochondrial biogenesis via PPARγ co-activator 1α signaling protects against acetaminophen hepatotoxicity. March 2017. *Society of Toxicology Annual Meeting*, Baltimore, MD.

3) Guitierrez-Aguilar M, McCommis KS, Schneider B, **McGill MR**, Finck BN. Mitochondrial transaminase Gpt2 regulates hepatic gluconeogenesis and contributes to hyperglycemia in diabetic and obese mice. January 2017. *Keystone Symposia Conference on Diabetes*, Keystone, CO.

4) Liss DB, Eifling K, Arroyo-Plasencia A, **McGill MR**, Schwarz E, Mullins M. Case report of a false positive cocaine screen by immunoassay in a patient taking levomilnacipran. September 2016. *North American Congress of Clinical Toxicology Annual Meeting*, Boston, MA.

5) **McGill MR**, Scott MG. Pseudohypercreatininemia due to a monoclonal IgM paraprotein. July 2016. *American Association for Clinical Chemistry Annual Meeting*, Philadelphia, PA.

6) **McGill MR**, Kennon-McGill S, Durham D, Jaeschke H. The effect of acute acetaminophen overdose on hearing: auditory brainstem responses, protein binding and oxidative stress in cochleae. March 2016. *Society of Toxicology Annual Meeting*, New Orleans, LA.

7) Poudel S, Manley MW, Bhushan B, **McGill MR**, Jaeschke H, Apte U. Paradoxical role of yes-associated protein (YAP) in liver injury and regeneration following acetaminophen overdose. April 2016. *Experimental Biology Annual Meeting*, San Diego, CA.

8) Maes M, **McGill M**, Cristina da Silva T, Lebofsky M, Maria C, de Araujo M, Tiburcio T, Oliveira AG, Marques PE, Menezes GB, Pereira IVA, Willebrords J, Yanguas SC, Penuela S, Jaeschke H, Cogliati B, Vinken M. Inhibition of pannexin 1 channels alleviates paracetamol-induced hepatotoxicity in mouse. May 2015. *18th Forum of Pharmaceutical Sciences, Belgian Society of Pharmaceutical Sciences*, Blankenberge, Belgium.

9) **McGill MR**, Du K, Bajt ML, Jaeschke H. Resveratrol protects against acetaminophen hepatotoxicity by inducing stress genes and inhibiting release of apoptosis-inducing factor (AIF) from mitochondria. March 2015. *Society of Toxicology Annual Meeting*, San Diego, CA.

10) Xie Y, **McGill MR**, Cook SF, Sharpe MR, Williams CD, Wilkins DG, Rollins DE, Jaeschke H. Acetaminophen metabolites and protein adducts in human plasma after overdose and relation to the time of clinical presentation. March 2015. *Society of Toxicology Annual Meeting*, San Diego, CA.

11) Liu HK, **McGill MR**, Curry SC, Walker DI, Uppal OO, Chandler J, Banton S, Li S, Jaeschke H, Jones DP. Metabolome wide association study of acetaminophen overdose. March 2015. *Society of Toxicology Annual Meeting*, San Diego, CA.

12) Weemhoff JL, **McGill MR**, Jaeschke H. Comparison of regular and cryopreserved HepaRG cells for studies of acetaminophen toxicity. March 2015. *Society of Toxicology Annual Meeting*, San Diego, CA.

13) Du K, **McGill MR**, Mansouri A, Xie Y, Jaeschke H. Induction of mitochondrial biogenesis in acetaminophen hepatotoxicity and regeneration. March 2015. *Society of Toxicology Annual Meeting*, San Diego, CA.

14) McGreal S, Bhushan B, Walesky C, **McGill MR**, Jaeschke H, Zhang Z, Tan EP, Slawson C, Apte U. Increased hepatic O-GlcNAcylation aggravates acetaminophen-induced liver injury. March 2015. *Society of Toxicology Annual Meeting*, San Diego, CA.

15) Ni HM, **McGill MR**, Jaeschke H, Ding WX. SQSTM1/p62-mediated autophagic removal of acetaminophen-protein adducts and damaged mitochondria protects against acetaminophen-induced liver injury. November 2014. *AASLD, The Liver Meeting*. Boston, MA.

16) **McGill MR**, Staggs VS, Sharpe MR, Lee WM, Jaeschke H. Serum biomarkers of mitochondrial damage in survivors and non-survivors of acetaminophen-induced acute liver failure: implications for mechanisms and prognosis. October 2014. *Central States Society of Toxicology Annual Meeting*, Kansas City, MO. Poster.

17) **McGill MR**, Lee WM, Jaeschke H; Acute Liver Failure Study Group. Serum biomarkers of mitochondrial damage in survivors and non-survivors of acetaminophen-induced acute liver failure: implications for the mechanism of hepatotoxicity in humans. March 2014. *Society of Toxicology Annual Meeting*, Phoenix, AZ. Poster.

18) **McGill MR**, Williams CD, Bajt ML, Jaeschke H. Intracellular signaling and inflammation in the mechanisms of furosemide hepatotoxicity. March 2014. *Society of Toxicology Annual Meeting*, Phoenix, AZ. Poster.

19) Williams CD, **McGill MR**, Jaeschke H. Allopurinol protects against acetaminophen-induced liver injury by aldehyde oxidase-mediated preconditioning. March 2014. *Society of Toxicology Annual Meeting*, Phoenix, AZ. Poster.

20) Xie Y, **McGill MR**, Dorko K, Kumer S, Schmitt, Forster J, Jaeschke H. Mechanisms of acetaminophen-induced cell death in primary human hepatocytes. March 2014. *Society of Toxicology Annual Meeting*, Phoenix, AZ. Poster.

21) Du K, Williams CD, **McGill MR**, Jaeschke H. Lower susceptibility of female mice to acetaminophen hepatotoxicity: role of mitochondrial glutathione and c-Jun N-terminal kinase. March 2014. *Society of Toxicology Annual Meeting*, Phoenix, AZ. Poster.

22) **McGill MR**, Xie Y, Bajt ML, Yang M, Williams CD, Jaeschke H. Multiple mechanisms for the appearance of acetaminophen-protein adducts in plasma: basic science and clinical implications. March 2013. *Society of Toxicology Annual Meeting*, San Antonio, TX. Poster.

23) Williams CD, Sharpe MR, **McGill MR**, Bajt ML, Jaeschke H. Sterile inflammation and neutrophil activation during injury resolution following acetaminophen overdose in mice and humans. March 2013. *Society of Toxicology Annual Meeting*, San Antonio, TX. Poster.

24) Xie Y, Williams CD, **McGill MR**, Lebofsky M, Ramachandran A, Jaeschke H. Purinergic receptor antagonist A438079 protects against acetaminophen-induced liver injury by inhibiting P450 isoenzymes not inflammasome activation. March 2013. *Society of Toxicology Annual Meeting*, San Antonio, TX. Poster.

25) **McGill MR**, Lebofsky M, Murray GJ, Rollins DE, Bajt ML, Williams CD, Jaeschke H. Kinetics and dose-response of plasma and liver acetaminophen-protein adducts and liver glutathione levels in mice: basic science and clinical implications. October 2012. *Central States Society of Toxicology Annual Meeting*, Manhattan, KS. Poster.

26) Williams CD, Sharpe MR, **McGill MR**, Bajt ML, Jaeschke H. Neutrophil activation during injury resolution following acetaminophen overdose in mice and humans. June 2012. *Henry and Lillian Stratton Basic Research STC on Mitochondria and Hepatotoxicity, American Association for the Study of Liver Diseases*, Atlanta, GA. Poster.

27) **McGill MR**, Lebofsky M, Murray GJ, Rollins DE, Williams CD, Jaeschke H. Changing paradigms in acetaminophen toxicity: plasma protein adducts and liver glutathione levels in mice. March 2012. *Society of Toxicology Annual Meeting*, San Francisco, CA. Poster.

28) Borude P, Edwards G, Walesky C, **McGill MR**, Jaeschke H, Apte U. Activation of mechanisms involved in initiation of liver regeneration precedes cell death following acetaminophen overdose. March 2012. *Society of Toxicology Annual Meeting,* San Francisco, CA. Poster.

29) Williams CD, **McGill MR**, Yan HM, Jaeschke H. Reduced acetaminophen-induced liver injury in lpr mice is dependent on increased glutathione synthesis and enhanced detoxification of oxidant stress. March 2012. *Society of Toxicology Annual Meeting*, San Francisco, CA. Poster.

30) **McGill MR**, Yan HM, Ramachandran A, Jaeschke H. HepaRG cells: a novel human model for the study of drug hepatotoxicity. September 2011. *8th World Congress on Alternatives and Animal Use in Life Sciences*, Montreal, QC, CAN. Poster.

31) **McGill MR**, Sharpe MR, Williams CD, Taha M, and Jaeschke H. Acetaminophen hepatotoxicity in humans: mitochondrial injury and DNA fragmentation in overdose patients. March 2011. *Society of Toxicology Annual Meeting*, Washington, D.C. Poster.

32) **McGill MR**, Yan HM, Jaeschke H. Acetaminophen-induced injury in HepaRG cells: a novel human cell line for studies of drug hepatotoxicity. April 2010. *Experimental Biology*, Anaheim, CA. Poster.

33) **McGill MR**, Yan HM, Jaeschke H. HepaRG cells: a new human model for the study of acetaminophen hepatotoxicity. March 2010. *Society of Toxicology Annual Meeting,* Salt Lake City, UT. Poster.

ORAL PRESENTATIONS (Latest to earliest)

1) Urine drug screening: basic principles, principal problems, and future directions. July 2017. Roundtable session, *American Association for Clinical Chemistry Annual Meeting*, San Diego, CA.

2) Psuedohypercreatininemia due to a monoclonal IgM kappa of undetermined significance. November 2016. *AACC Midwest Local Section Webinar*.

3) Emerging biomarkers of liver injury and disease. July 2016. Roundtable session, *American Association for Clinical Chemistry Annual Meeting*, Philadelphia, PA.

4) The opioid crisis and the clinical laboratory. May 2016. *Laboratory and Genomic Medicine Grand Rounds*, WUSM, St. Louis, MO.

5) Psuedohypercreatininemia due to a monoclonal IgM paraprotein. April 2016. *Pathology Trainee Research Day*, WUSM, St. Louis, MO.

6) Measuring toxicity biomarkers in mouse models and other small-volume samples. Part I. Laboratory methods. November 2014. *Current Protocols.* Webinar. Invited.

7) Serum biomarkers of mitochondrial damage are higher in acetaminophen overdose patients with poor outcome. April 2014. *Residents, Postdocs, and Fellows Research Forum*, KUMC, Kansas City, KS.

8) Mechanistic biomarkers of mitochondrial dysfunction in drug hepatotoxicity. March 2014. *Drug-induced Liver Injury (DILI) Conference XIV*, University of Maryland Conference Center, College Park, MD. Invited.

9) Serum acylcarnitines as biomarkers of mitochondrial dysfunction in humans and mice. April 2013. *Student Research Forum*, KUMC, Kansas City, KS.

10) Acetaminophen toxicity: from mice to men. February 2013. *Internal Medicine Grand Rounds*, KUMC, Kansas City, KS.

11) Dose-response of plasma acetaminophen-protein adducts and liver glutathione levels in mice: basic science and clinical impact. March 2012. *Student Research Forum,* KUMC, Kansas City, KS.

12) Mitochondrial damage, nuclear DNA fragmentation, and caspase activity after acetaminophen overdose in humans: new translational insights from novel mechanistic biomarkers. June 2012. *Henry and Lillian Stratton Basic Research Conference on Mitochondria and Hepatotoxicity, American Association for the Study of Liver Diseases*, Atlanta, GA.

13) Mechanisms of acetaminophen-induced injury and nuclear DNA fragmentation in HepaRG cells. September 2011. *Central States Society of Toxicology*, Omaha, NE.

14) Translating acetaminophen hepatotoxicity: markers of mitochondrial injury and DNA fragmentation in plasma of overdose patients. March 2011. *Student Research Forum,* KUMC, Kansas City, KS.

15) Translating acetaminophen hepatotoxicity: markers of mitochondrial injury and DNA fragmentation in plasma of overdose patients. November 2010. *Central States Society of Toxicology*, Iowa City, IA.

16) Characterization of HepaRG cells as a new human model of acetaminophen hepatotoxicity. March 2010. *Student Research Forum,* KUMC, Kansas City, KS.

PROFESSIONAL SOCIETY MEMBERSHIPS

2015 – Present	American Association for Clinical Chemistry (AACC)
2010 – Present	Society of Toxicology (SOT)
2009 – Present	Central States Society of Toxicology (CS-SOT)
2009 – 2014	American Society for Pharmacology and Experimental Therapeutics (ASPET)

HONORS & AWARDS

2016, 2017	Richard Marshall Travel Award, Midwest Section, AACC
2016	Distinguished Abstract Award, National Academy of Clinical Biochemistry
2016	Travel award, Mass Spectrometry Applications in the Clinical Laboratory (MSACL)
2014	Outstanding Poster Award (Postdoc category), CS-SOT
2014	Postdoc Research Award, Clinical and Translational Toxicology Section, SOT
2013	Awarded Ph.D. with Honors
2012	Outstanding Poster Award (Student), CS-SOT
2012	Daniel Azernoff Travel Award, KUMC
2011	Ph.D. Research Gold Medal, KUMC
2011	Student Travel Award, SOT
2011	Student Union Corp. Travel Award, KUMC
2010	Student Travel Award, ASPET

SERVICE & OUTREACH

2015 – 2017	Postdoc Representative, Clinical and Translational Toxicology Section,

	SOT
2014 – 2016	Web Designer, Society for Neuroscience Kansas City, http://www.sfnkc.org
2014	Ad-hoc grant reviewer, Czech Health Research Council
2014	Faculty Search Committee Member (Postdoc Representative), Dept. of Pharmacology, Toxicology and Therapeutics, KUMC
2014	Volunteer, Brain Discovery Fair (educational event for children), KUMC
2013 – Present	Textbook Reviewer, Doodys, Inc.
2013	Poster Judge, Student Research Forum, KUMC
2012 – 2013	Graduate Student Representative, Central States Society of Toxicology
2010 – 2014	Web and Database Administrator, International Society for Hepatic Sinusoidal Research, http://www.ishsr.net
2010 – Present	Reviewer for more than twenty journals, including *Biomarkers in Medicine*, *Biomedical Research International, British Journal of Pharmacology*, *Clinical Toxicology, Critical Care Medicine*, *Current Drug Safety*, *Environmental Toxicology and Pharmacology, Expert Opinion on Drug Metabolism and Toxicology, Hepatology*, *International Journal of Experimental Pathology, International Journal of Molecular Sciences, Journal of Applied Laboratory Medicine, Journal of Hepatology*, *Liver International*, *Phytotherapy Research*, *Proteomics*, *Redox Report*, *Scientific Reports, Toxicology and Applied Pharmacology, Toxicological Sciences* and *Xenobiotica*

FUNDING (Latest to earliest)

Institute for Clinical and Translational Sciences Core Facility Usage Grant (WUSM intramural)
Role: Trainee (conceived project and wrote proposal)
PI: Brian N. Finck, Ph.D.
Title: Phosphatidic acids as biomarkers of liver regeneration
Amount: $1,850
Status: Funded, on-going.

Post-doctoral Training Grant Fellowship
NIEHS T32 ES007079-26A2
Role: Trainee (conceived sub-project and wrote proposal)
PI: Bruno Hagenbuch, Ph.D.
Title: Training program in environmental toxicology
Sub-project: Effects of natural products on mitochondrial dynamics in acetaminophen toxicity.
Amount: 80% of salary.
Status: Completed, 2015.

Pre-doctoral Training Grant Fellowship
NIEHS T32 ES007079-26A2
Role: Trainee (conceived sub-project and wrote proposal)
PI: Bruno Hagenbuch, Ph.D.
Title: Training program in environmental toxicology
Sub-project: Cage to clinic: intracellular events in acetaminophen hepatotoxicity in man.
Amount: 100% of stipend.
Status: Completed, 2013.

Industry Grant from McNeil Consumer Health
Role: Conceived project / wrote grant
PI: Hartmut Jaeschke, Ph.D.
Title: Identification of serum acetaminophen-protein adducts
Amount: $100,000

Status: Completed, 2012.