

Saeidreza “Sam” Harirforoosh
Instructional Professor of Biomedical and Pharmaceutical Sciences
Department of Biomedical and Pharmaceutical Sciences
School of Pharmacy
Chapman University
Phone: 714-516-5667
E-mail: harirforoosh@chapman.edu
[Google Scholar Citations](#)
[Publons Peer Review Profile](#)

EDUCATION

PhD, Pharmaceutical Sciences (Pharmacokinetics), University of Alberta, 2005
PharmD, Tehran University of Medical Sciences, 1991

TEACHING AND RESEARCH EXPERIENCE

Professor, August 2022 – present
Department of Biomedical and Pharmaceutical Sciences
School of Pharmacy
Chapman University
Irvine, California 92618

Professor (Tenured), July 2019 – Aug 2022
Department of Pharmaceutical Sciences
Gatton College of Pharmacy
East Tennessee State University (ETSU)
Johnson City, Tennessee 37614

Associate Professor (Tenured), July 2013 - June 2019
Department of Pharmaceutical Sciences
Gatton College of Pharmacy
East Tennessee State University
Johnson City, Tennessee 37614

Assistant Professor, July 2007 - June 2013
Department of Pharmaceutical Sciences
Gatton College of Pharmacy
East Tennessee State University
Johnson City, Tennessee 37614

Research Assistant/Post-doctoral Fellow, June 2005 - May 2006
Pulmonary Research Group, Department of Medicine, Heritage Medical Research Centre
University of Alberta
Edmonton, Alberta, Canada

Teaching Assistant (Pharmaceutics), 2001 - 2003
Faculty of Pharmacy and Pharmaceutical Sciences
University of Alberta
Edmonton, Alberta, Canada

COURSES TAUGHT

PharmD Program, ETSU

Pharmacokinetics & Pharmacogenomics

Fall 2021, 42 hours, Course coordinator and lecturer
Fall 2020, 54 hours, Course coordinator and lecturer
Fall 2019, 54 hours, Course coordinator and lecturer
Fall 2018, 55 hours, Course coordinator and lecturer
Fall 2017, 62 hours, Course coordinator and lecturer
Fall 2016, 57 hours, Course coordinator and lecturer
Fall 2015, 62 hours, Course coordinator and lecturer
Fall 2014, 62 hours, Course coordinator and lecturer
Fall 2013, 60 hours, Course coordinator and lecturer
Fall 2012, 62 hours, Course coordinator and lecturer
Fall 2011, 62 hours, Course coordinator and lecturer
Fall 2010, 64 hours, Course coordinator and lecturer
Fall 2009, 62 hours, Course coordinator and lecturer
Fall 2008, 56 hours, Course coordinator and lecturer
Fall 2007, 68 hours, Course coordinator and lecturer

IDEALS II (Compounding and Dispensing Lab)

Spring 2022, 43 hours, Course coordinator and instructor

Integrated Series IV – Renal

Spring 2022, 2 hours, Lecturer
Spring 2021, 2 hours, Lecturer
Spring 2020, 2 hours, Lecturer
Spring 2019, 2 hours, Lecturer
Spring 2018, 2 hours, Lecturer
Spring 2017, 2 hours, Lecturer
Spring 2016, 2 hours, Lecturer
Spring 2015, 2 hours, Lecturer

Biopharmaceutics and Biotechnology

Spring 2018, 5 hours, Lecturer

Pharmaceutics and Biopharmaceutics

Spring 2013, 5 hours, Lecturer
Spring 2012, 5 hours, Lecturer

Spring 2011, 27 hours, Lecturer
Spring 2010, 32 hours, Lecturer
Spring 2009, 38 hours, Lecturer
Spring 2008, 38 hours, Course coordinator and lecturer

Compounding and Dispensing Lab

Spring 2012, 6 hours, Instructor
Spring 2011, 8 hours, Instructor
Spring 2008, 4 hours, Instructor
Summer 2007, 16 hours, Instructor

Communication Skills

Fall 2007, 23 hours, Instructor

Research/Drug Development (APPE Research Rotation)

Summer 2020, Preceptor

Writing a Pharmaceutical Sciences Research Manuscript (APPE Research Rotation)

Spring 2015, Preceptor

Capstone Experience in Pharmaceutical Research

Fall 2020, Mentor
Fall 2019, Mentor

Non-Medicinal Drug Use (Elective Course)

Spring 2022, 2 hours, Lecturer
Spring 2021, 2 hours, Lecturer
Spring 2020, 2 hours, Lecturer
Spring 2019, 2 hours, Lecturer
Spring 2018, 2 hours, Lecturer
Spring 2017, 2 hours, Lecturer
Spring 2016, 2 hours, Lecturer
Fall 2014, 2 hours, Lecturer
Spring 2013, 2 hours, Lecturer
Spring 2012, 2 hours, Lecturer
Spring 2011, 2 hours, Lecturer
Fall 2009, 2 hours, Lecturer

Pharmaceutical Sciences Research I (Elective Courses)

Fall 2011, spring 2012, spring 2014, fall 2016, spring 2107, spring 2018, fall 2018, spring 2019

Pharmaceutical Sciences Research II (Elective Courses)

Fall 2011, fall 2012, spring 2012, fall 2014, spring 2014, summer 2014, spring 2017, fall 2017, fall 2018, spring 2019

Pharmaceutical Sciences Research III (Elective Courses)

Fall 2012, spring 2013, fall 2014, spring 2015, fall 2017, spring 2018, fall 2018, summer 2019

Pharmaceutical Sciences Research IV (Elective Courses)

Spring 2015, spring 2018, spring 2019, fall 2019

Pharmaceutical Sciences Research V (Elective Courses)

Spring 2020

PhD Program, ETSU

Advanced Pharmacokinetics

Spring 2015, 36 Hours, Course coordinator and lecturer

Spring 2013, 36 Hours, Course coordinator and lecturer

Advanced Drug Metabolism

Spring 2014, 36 Hours, Course coordinator and lecturer

Special Problems in Pharmacokinetics and Pharmacogenomics (Elective Course)

Spring 2010, spring 2011, summer 2016

General Principles of Pharmacology

Summer 2010, 17 Hours, Lecturer

RESEARCH AND SCHOLARSHIP

Research Interests

Pharmacokinetic/Pharmacodynamic Modeling

Pharmacogenomics

Cardiovascular and Renal Adverse Effects of Drugs

Nanoparticle Formulation of Drugs

Ongoing Research

Sam Harirforoosh (Principal Investigator) and Steven Smith (Co-Investigator):

Research and Development Committee Major Grant, Tennessee State University. A pilot study to investigate cardiovascular adverse effects of a class of pain relievers; 2016, \$10,000

Darshan Shah (Principal Investigator), Stacy D. Brown (Co-Investigator), and **Sam Harirforoosh** (Co-Investigator): Correlation of Newborn's Clinical Course with Infant's Drug Testing and Maternal Drug Use; 2017

Completed Research

Sam Harirforoosh (Principal Investigator): Research and Development Committee Major Grant, East Tennessee State University. Reformulation and evaluation of an antidiabetic agent to reduce renal side effects; 2018-2019, \$10,000
Supported in part by a Student-Faculty Collaborative grant from the Office of Undergraduate Research & Creative Activities, ETSU Honors College, \$1,200

Sam Harirforoosh (Principal Investigator): Research and Development Committee Small Grant, East Tennessee State University. Design and Evaluation of a New Formulation of an Antihypertensive Drug; 2018, \$1,500
Supported in part by a Student-Faculty Collaborative grant from the Office of Undergraduate Research & Creative Activities, ETSU Honors College, \$1,200

David Hurley (Principal Investigator) and **Sam Harirforoosh** (Co-Investigator): Research and Development Committee Major Grant, East Tennessee State University. Personal Pharmacogenomic (PGx) analysis, problem-solving and research for first-year Pharmacy students; 2018, \$10,000

Sam Harirforoosh (Principal Investigator), Jonathan Moorman (Co-Investigator), Michelle Duffourc (Co-Investigator), Kesheng Wang (Co-Investigator), and David Cluck (Co-Investigator): Research and Development Committee Interdisciplinary Grant (a competitive and peer-reviewed program), East Tennessee State University. How Stribild action as an HIV antiretroviral drug is affected by genetic variations among patients; 2015-2017, \$50,000
Supported in part by an ETSU School of Graduate Studies Student Research Grant to Derek Murrell (PhD student), \$800

Rick Hess (Principal Investigator), John Bossaer (Co-Investigator), **Sam Harirforoosh** (Co-Investigator), James Thigpen (Co-Investigator), and Adam Welch (Co-Investigator): Validation of an OSCE Pilot to Assess Pre-APPE Readiness; 2019-2020

Sam Harirforoosh (Principal Investigator): Gatton College of Pharmacy, Department of Pharmaceutical Sciences Faculty Startup Funds. Genetic Polymorphisms as Risk Factors for Type 2 Diabetes Development; 2018-2020

Rick Hess (Principal Investigator), John Bossaer (Co-Investigator), **Sam Harirforoosh** (Co-Investigator), and Adam Welch (Co-Investigator): The Development and Validation of an OSCE Assessment to Measure Student Pharmacist Competencies of Pre-APPE Domains; 2018-2019

Sam Harirforoosh (Principal Investigator): Research and Development Committee Small Grant (a competitive and peer-reviewed program), East Tennessee State University. Influence of a Formulation Modification on Relative Bioavailability of Aliskiren; 2015, \$1,470

Supported in part by a Student-Faculty Collaborative grant from the Office of Undergraduate Research & Creative Activities, ETSU Honors College, \$1,200

Victoria Palau (Principal Investigator) and **Sam Harirforoosh** (Key Personnel): Pharmacokinetics of two flavone isomers derived from *Gnaphalium elegans* and *Achyrocline bogotensis*; 2014-2015

Sam Harirforoosh (Principal Investigator): Research and Development Committee Major Grant (a competitive and peer-reviewed program), East Tennessee State University. Reformulating pharmaceutical delivery methods for pain relievers to reduce secondary kidney damage; 2012-2015, \$10,000

Sam Harirforoosh (Principal Investigator): Research and Development Committee Small Grant, East Tennessee State University. NSAIDs-induced cardiovascular and renal side effects: a meta-analysis; 2013-2015, \$1,430

Sam Harirforoosh (Principal Investigator): Gatton College of Pharmacy, Department of Pharmaceutical Sciences Faculty Startup Funds. Formulation of niacin loaded PLGA-based nanoparticles; 2014

Sam Harirforoosh (Principal Investigator): Gatton College of Pharmacy, Department of Pharmaceutical Sciences Faculty Startup Funds. Effect of misoprostol co-administration on cardiorenal toxicity of celecoxib in rats; 2011-2013

Sam Harirforoosh (Principal Investigator): Research and Development Committee Small Grant, East Tennessee State University & Department of Pharmaceutical Sciences Faculty Startup Funds. The effect of a mucosal-protective agent on disposition of two analgesics; 2011, \$1,500

Sam Harirforoosh (Principal Investigator): Research and Development Committee Major Grant, East Tennessee State University (2010-2011). Toxicity of pain relievers: effects of rebamipide on NSAID-induced kidney damage in rats; 2010-2011, \$9,500

Technical Skills

Software:

- Expert knowledge of WinNonlin, SAS, SPSS, Minitab, GraphPad
- Working knowledge of NONMEM, GastroPlus

Instruments:

- Expert knowledge of High-Performance Liquid Chromatography, Nanoparticle Analysis
- Working knowledge of Liquid Chromatography–Mass Spectrometry, Spectrophotometry, Blood Gas Analysis

Technologies:

- Expert knowledge of technologies applied for pharmacogenomic testing
- Working knowledge of ELISA and Western Blot tests, Drug Metabolism assays

Peer-Reviewed Publications

- 44.** Russell W. Fankhouser, Derek E. Murrell, Yaa Anane, David L. Hurley, Hadii Mamudu, and **Sam Harirforoosh**. **2022**. Type 2 Diabetes: An Exploratory Genetic Association Analysis and Effects on Cardiovascular and Renal Biomarkers. *Drug Metabolism and Personalized Therapy*
<https://doi.org/10.1515/dmpt-2021-0135>
- 43.** Enaholo Omoike, Timir Paul, Stanley Ridner, Manul Awasthi, **Sam Harirforoosh**, and Hadii Mamudu. **2019**. Association between smoking status and homocysteine levels and possible effect modification by cholesterol and estradiol. *Biomarkers*
<https://doi.org/10.1080/1354750X.2019.1705395>
- 42.** David Roane and **Sam Harirforoosh**. **2019**. De-Conflating Religiosity/Spirituality. *American Journal of Pharmaceutical Education*. 83:7
<http://www.ajpe.org/doi/pdf/10.5688/ajpe7646>
- 41.** Jim Thigpen, Brian Odle, and **Sam Harirforoosh**. **2019**. Opioids: A review of pharmacokinetics and pharmacodynamics in neonates, infants, and children. *European Journal of Drug Metabolism and Pharmacokinetics*. 44: 591-609
<https://doi.org/10.1007/s13318-019-00552-0>
- 40.** Brooks B. Pond, Stacy D. Brown, David W. Stewart, David S. Roane, and **Sam Harirforoosh**. **2019**. Faculty Applicants Attempt to Inflate CVs Using Predatory Journals. *American Journal of Pharmaceutical Education*. 83: 12-14
<https://www.ajpe.org/doi/pdf/10.5688/ajpe7210>
- 39.** Derek E. Murrell, David B. Cluck, Jonathan P. Moorman, Stacy D. Brown, Ke-Sheng Wang, Michelle M. Duffourc, and **Sam Harirforoosh**. **2019**. HIV Integrase Inhibitor Pharmacogenetics: An Exploratory Study. *Clinical Drug Investigation*. 39: 285-299
<https://doi.org/10.1007/s40261-018-0739-9>
- 38.** Derek Murrell, Jessica M. Coleman, Stacy D. Brown, and **Sam Harirforoosh**. **2018**. Formulation and *in vivo* Evaluation of Aliskiren-loaded Poly(lactic-co-glycolic) Acid Nanoparticles. *Toxicology Research and Application*. 2: 1–11
<https://doi.org/10.1177/2397847318801155>
- 37.** Hadii M. Mamudu, Pooja Subedi, Timir Paul, Ali E. Alamin, Arsham Alamian, Liang Wang, David Stewart, Antwan Jones, **Sam Harirforoosh**, Gerald Blackwell, and Matthew Budoff. **2018**. The associated risk factors for coronary artery calcium in asymptomatic patients with and without diabetes in rural Central Appalachia. *Diabetes and its Complications*. 32: 900-905
<https://doi.org/10.1016/j.jdiacomp.2018.07.006>

- 36.** Aaron J. Salwan, Nicholas E. Hagemeyer, and **Sam Harirforoosh**. **2018.** Abuse-Deterrent Opioid Formulations: A Key Ingredient in the Recipe to Prevent Opioid Disasters? *Clinical Drug Investigation*. 38: 573–577
<http://doi.org/10.1007/s40261-018-0651-3>
- 35.** Yang Chen, Chun Xu, **Sam Harirforoosh**, Xingguang Luo, and Ke-Sheng Wang. **2018.** Analysis of *PTPRK* polymorphisms in association with risk and age at onset of Alzheimer's disease, cancer risk, and cholesterol. *Journal of Psychiatric Research*. 96: 65-72
<http://dx.doi.org/10.1016/j.jpsychires.2017.09.021>
- 34.** Regan E. Sevinsky, David W. Stewart, and **Sam Harirforoosh**. **2017.** Non-Steroidal Anti-Inflammatory Drugs: Is There a Link between Cardiovascular and Renal Adverse Effects? *Journal of Integrative Nephrology and Andrology*. 4:1-2
http://dx.doi.org/10.4103/jina.jina_2_17
- 33.** Bryan R. Gunter, Kristen A. Butler, Richard L. Wallace, Steven M. Smith, and **Sam Harirforoosh**. **2017.** Non-steroidal anti-inflammatory drug-induced cardiovascular adverse events: a meta-analysis. *Journal of Clinical Pharmacy and Therapeutics*. 42: 27-38
<http://dx.doi.org/10.1111/jcpt.12484>
- 32.** Crystal L. Whitted, Victoria E. Palau, Ruben D. Torrenegra, Oscar E. Rodriguez, and **Sam Harirforoosh**. **2017.** Quantification of two isomeric flavones in rat colon tissue using reverse phase high performance liquid chromatography. *BMC Research Notes*. 10: 29
<http://dx.doi.org/10.1186/s13104-016-2358-y>
- 31.** Daniel Owusu, Yue Pan, Changchun Xie, **Sam Harirforoosh**, and Ke-Sheng Wang. **2017.** Polymorphisms in *PDLIM5* gene are associated with alcohol dependence, type 2 diabetes, and hypertension. *Journal of Psychiatric Research*. 87: 27-34
<http://dx.doi.org/10.1016/j.jpsychires.2016.09.015>
- 30.** Derek E. Murrell, Ronald L. Carico, John B. Bossaer, **Sam Harirforoosh**, and David B. Cluck. **2017.** Isavuconazonium sulfate: a triazole prodrug for invasive fungal infections. *International Journal of Pharmacy Practice*. 25: 18-30
<http://dx.doi.org/10.1111/ijpp.12302>
- 29.** **Sam Harirforoosh**, Kelsi O. West, Derek E. Murrell, James W. Denham, Peter C. Panus, and Greg A. Hanley. **2016.** Examination of the Pharmacodynamics and Pharmacokinetics of a Diclofenac Poly(lactic-co-glycolic) Acid Nanoparticle Formulation in the Rat. *European Review for Medical and Pharmacological Sciences*. 20: 5021-5031

- 28. Sam Harirforoosh**, Kelsi O. West, Derek E. Murrell, James W. Denham, Peter C. Panus, and Gregory A. Hanley. **2016**. Assessment of Celecoxib Poly(lactic-co-glycolic) Acid Nanoformulation on Drug Pharmacodynamics and Pharmacokinetics in Rats. *European Review for Medical and Pharmacological Sciences*. 20: 4818-4829
- 27. Sam Harirforoosh** and David W. Stewart. **2016**. A descriptive investigation of the impact of student research projects arising from elective research courses. *BMC Research Notes*. 9: 48
<http://dx.doi.org/10.1186/s13104-016-1865-1>
- 26.** Derek E. Murrell and **Sam Harirforoosh**. **2016**. Improving the renal profile of a HIV drug combination through prodrug alteration. *Journal of Integrative Nephrology and Andrology*. 3:1-2
<http://dx.doi.org/10.4103/2394-2916.175388>
- 25.** Dustin L. Cooper, Jennifer A. Carmical, Peter C. Panus, and **Sam Harirforoosh**. **2015**. Formulation and in vitro evaluation of niacin-loaded nanoparticles to reduce prostaglandin mediated vasodilatory flushing. *European Review for Medical and Pharmacological Sciences*. 19: 3977-3988
- 24.** Derek E. Murrell, Yuyun Rahmasari, James W. Denham, Peter C. Panus, and **Sam Harirforoosh**. **2015**. Celecoxib or diclofenac hepatic status in the presence or absence of rebamipide. *European Review for Medical and Pharmacological Sciences*. 19: 3318-3325
- 23.** Crystal Whitted, Victoria E. Palau, Ruben D. Torrenegra, and **Sam Harirforoosh**. **2015**. Development of reversed-phase high performance liquid chromatography methods for quantification of two isomeric flavones and the application of the methods to pharmacokinetic studies in rats. *Journal of Chromatography B*. 1001: 150-155
<http://dx.doi.org/10.1016/j.jchromb.2015.07.039>
- 22.** Uta B. Schambra, Jeff Goldsmith, Kevin Nunley, Yali Liu, **Sam Harirforoosh**, and Heidi M. Schambra. **2015**. Low and moderate prenatal ethanol exposure of mice during gastrulation or neurulation delays neurobehavioral development. *Neurotoxicology and Teratology*. S0892-0362(15)30012-X
<http://dx.doi.org/10.1016/j.ntt.2015.07.003>
21. Derek E. Murrell, James W. Denham, and **Sam Harirforoosh**. **2015**. Histopathology and Oxidative Stress Analysis of Concomitant Misoprostol and Celecoxib Administration. *Journal of Toxicologic Pathology*. 28: 165–170
<http://doi.org/10.1293/tox.2015-0016>
- 20.** Dustin L. Cooper, Derek E. Murrell, David S. Roane, and **Sam Harirforoosh**. **2015**. Effects of formulation design on niacin therapeutics: mechanism of action, metabolism, and drug delivery. *International Journal of Pharmaceutics*. 490: 55-64

<http://dx.doi.org/10.1016/j.ijpharm.2015.05.024>

19. Derek E. Murrell, Jonathan P. Moorman, and **Sam Harirforoosh. 2015.** Stribild: a review of component characteristics and combination drug efficacy. *European Review for Medical and Pharmacological Sciences.* 19: 904-914

18. Dustin L. Cooper and **Sam Harirforoosh. 2014.** Effect of formulation variables on preparation of celecoxib loaded polylactide-co-glycolide nanoparticles. *PLoS ONE.* 9(12): e113558
<http://dx.plos.org/10.1371/journal.pone.0113558>

17. Dustin L. Cooper, Christopher M. Conder, and **Sam Harirforoosh. 2014.** Nanoparticles in Drug Delivery: Mechanism of Action, Formulation, and Clinical Application towards Reduction in Drug Associated Nephrotoxicity. *Expert Opinion on Drug Delivery.* 11: 1661-1680
<http://dx.doi.org/10.1517/17425247.2014.938046>

16. Majid Moridani and **Sam Harirforoosh. 2014.** Drug Development and Discovery: Challenges and Opportunities. *Drug Discovery Today.* S1359-6446(14)00237-2
<http://dx.doi.org/10.1016/j.drudis.2014.06.003>

15. Dustin L. Cooper and **Sam Harirforoosh. 2014.** A simple high performance liquid chromatography method for determination of rebamipide in rat urine. *MethodsX.* 1: 49-55
<http://dx.doi.org/10.1016/j.mex.2014.06.002>

14. Dustin L. Cooper and **Sam Harirforoosh. 2014.** Design and Optimization of PLGA-Based Diclofenac Loaded Nanoparticles. *PLoS ONE.* 9(1): e87326.
<http://dx.plos.org/10.1371/journal.pone.0087326>

13. Dustin L. Cooper, Derek E. Murrell, Christopher M. Conder, Victoria P. Palau, Grace E. Campbell, Shaun P. Lynch, Angela V. Hanley, Kenny W. Bullins, James W. Denham, Peter C. Panus, Krishna Singh, and **Sam Harirforoosh. 2014.** Exacerbation of celecoxib-induced renal injury by concomitant administration of misoprostol in rats. *PLoS ONE.* 9(2): e89087.
<http://dx.plos.org/10.1371/journal.pone.0089087>

12. Dustin L. Cooper, Robert C. Wood III, Jarrett E. Wyatt, and **Sam Harirforoosh. 2014.** Pharmacokinetic interactions between rebamipide and selected nonsteroidal anti-inflammatory drugs in Rats. *European Journal of Pharmaceutical Sciences.* 53: 28-34
<http://dx.doi.org/10.1016/j.ejps.2013.12.002>

11. Sam Harirforoosh, Waheed Asghar, and Fakhreddin Jamali. 2013. Adverse Effects of Nonsteroidal Anti-inflammatory Drugs: An update of Gastrointestinal, Cardiovascular, and Renal Complications. *Journal of Pharmacy & Pharmaceutical Sciences.* 16: 821-847

10. Robert C. Wood III, Jarrett E. Wyatt, Kenny W. Bullins, Angela V. Hanley, Gregory A. Hanley, James W. Denham, Peter C. Panus, and **Sam Harirforoosh**. 2013. Effects of rebamipide on nephrotoxicity associated with selected NSAIDs in rats. *European Journal of Pharmacology*. 720: 138-146
<http://dx.doi.org/10.1016/j.ejphar.2013.10.035>
9. Jarrett E. Wyatt, Wesley L. Pettit, and **Sam Harirforoosh**. 2012. Pharmacogenetics of nonsteroidal anti-inflammatory drugs. *The Pharmacogenomics Journal*. 12: 462-467
<http://dx.doi.org/10.1038/tpj.2012.40>
8. Christan M. Thomas, Robert C. Wood, Jarrett E. Wyatt, Morgan H. Pendleton, Oscar E. Rodrigues, Ruben D. Torrenegra, **Sam Harirforoosh**, Maria Ballester, Janet Lighter, Kanishka Chakraborty, and Victoria P. Ramsauer. 2012. Anti-neoplastic activity of two flavone isomers derived from *Gnaphalium elegans* and *Achyrocline bogotensis*. *PLoS ONE*. 7(6): e39806
<http://dx.plos.org/10.1371/journal.pone.0039806>
7. David G. Menter, Victoria P. Ramsauer, **Sam Harirforoosh**, Kanishka Chakraborty, Peiying Yang, Linda Hsi, Robert A. Newman, and Koyamangalath Krishnan. 2011. Differential effects of pravastatin and simvastatin on the growth of tumor cells from different organ sites. *PLoS ONE*. 6(12): e28813
<http://dx.plos.org/10.1371/journal.pone.0028813>
6. **Sam Harirforoosh**, John B. Bossaer, Stacy D. Brown, Brooks B. Pond, Victoria P. Ramsauer, and David S. Roane. 2011. Plagiarism among applicants for faculty positions. *American Journal of Pharmaceutical Education*. 75: 211
<http://dx.doi.org/10.5688/ajpe7510211>
5. **Sam Harirforoosh**, Lawrence Fleckenstein, Pramod Mahajan, Okezie I. Aruoma, Ying Huang, and Majid Moridani. 2009. The importance of including topics related to pharmacogenetics, pharmacogenomics and medical genetics in pharmacy curriculum. *American Journal of Pharmaceutical Education*. 73: 114
<http://dx.doi.org/10.5688/aj7306114>
4. **Sam Harirforoosh** and Fakhreddin Jamali. 2009. Renal adverse effects of nonsteroidal anti-inflammatory drugs. *Expert Opinion on Drug Safety*. 8: 669-681
<http://dx.doi.org/10.1517/14740330903311023>
3. **Sam Harirforoosh** and Fakhreddin Jamali. 2008. Effect of inflammation on kidney function and pharmacokinetics of COX-2 selective nonsteroidal anti-inflammatory drugs rofecoxib and meloxicam. *Journal of Applied Toxicology*. 28: 829-838
<http://dx.doi.org/10.1002/jat.1342>

2. Sam Harirforoosh, Ali Aghazadeh-Habashi, and Fakhreddin Jamali. **2006**. Extent of renal effects of nonsteroidal anti-inflammatory drugs is pharmacokinetic-dependent. *Clinical and Experimental Pharmacology and Physiology*. 33: 917-924
<http://dx.doi.org/10.1111/j.1440-1681.2006.04464.x>

1. Sam Harirforoosh and Fakhreddin Jamali. **2005**. Effect of nonsteroidal anti-inflammatory drugs with varying extent of COX-2/COX-1 selectivity on urinary sodium and potassium excretion in the rat. *Canadian Journal of Physiology and Pharmacology*. 83: 85-90
<http://dx.doi.org/10.1139/y04-129>

Manuscript in Preparation

Derek E. Murrell, Benjamin C. Kennard, Maria E. Berton, David B. Cluck, Jonathan P. Moorman, Ke-Sheng Wang, Michelle M. Duffourc, and Sam Harirforoosh. HIV Transcriptase Inhibitor Pharmacogenetics: An Investigative Study of Tenofovir Alafenamide Fumarate and Tenofovir Disoproxil Fumarate. (To be submitted to *Clinical Drug Investigation*)

Non-Peer Reviewed Publications

Derek E. Murrell and **Sam Harirforoosh**. **2013**. Efavirenz Pharmacogenomics: Progress toward Successful Personalized Medicine. *PGx Highlights (Pharmacogenomics Focus Group Newsletter, American Association of Pharmaceutical Scientists)*. 5:2-3.

Christopher M. Conder, Charles C. Collins, and **Sam Harirforoosh**. **2013**. Pharmacogenomic Considerations in Vitamin D Deficiency. *PGx Highlights*. 5:6-7.

Dustin L. Cooper and **Sam Harirforoosh**. **2013**. Pharmacogenomics and Testosterone Replacement Therapy: The Role of Androgen Receptor Polymorphism. *PGx Highlights*. 5:10-11.

Presentations

80. Russell W. Fankhouser, Lauren E. Dickerson, Cara L. Carter, Derek E. Murrell, Darshan S. Shah, Stacy D. Brown, and **Sam Harirforoosh**. An exploratory examination of association of catechol-O-methyltransferase gene variants and neonatal abstinence syndrome outcomes (poster presentation). 80th International Pharmaceutical Federation World Congress of Pharmacy and Pharmaceutical Sciences. Seville, Spain. (Accepted)

79. Maria Berton, Benjamin Kennard, Derek Murrell, David Cluck, Jonathan Moorman, Ke-Sheng Wang, Michelle Duffourc, and **Sam Harirforoosh**. The Effect of Tenofovir Alafenamide or Tenofovir Disoproxil Fumarate on Renal Function of HIV-Infected Patients (poster presentation). 2020 American College of Clinical Pharmacy Annual Meeting. Virtual Conference. October **2020**

- 78.** Benjamin Kennard, Maria Bertoni, Derek Murrell, David Cluck, Jonathan Moorman, Ke-Sheng Wang, Michelle Duffourc, and **Sam Harirforoosh**. Differentiation of CD4 Lymphocyte Levels following Tenofovir Alafenamide or Tenofovir Disoproxil Fumarate Dosing (poster presentation). 2020 American College of Clinical Pharmacy Annual Meeting. Virtual Conference. October **2020**
- 77.** Benjamin Kennard, Maria Bertoni, Derek Murrell, David Cluck, Jonathan Moorman, Ke-Sheng Wang, Michelle Duffourc, and Sam Harirforoosh. An Analysis of CD4 Lymphocyte Levels in HIV-Infected Patients Treated with Dolutegravir, Elvitegravir, or Raltegravir (poster presentation). 2020 American College of Clinical Pharmacology Annual Meeting. Virtual Conference. September **2020**
- 76.** Maria Bertoni, Benjamin Kennard, Derek Murrell, David Cluck, Jonathan Moorman, Ke-Sheng Wang, Michelle Duffourc, and **Sam Harirforoosh**. An Evaluation of Gastrointestinal Adverse Events in Patients Receiving Tenofovir Alafenamide vs. Tenofovir Disoproxil Fumarate (poster presentation). 2020 American College of Clinical Pharmacology Annual Meeting. Virtual Conference. September **2020**
- 75.** Zhelin Liu, Derek Murrell, and **Sam Harirforoosh**. Comparison of Simulated Drug Concentrations with in-vivo Data Obtained from HIV Patients Receiving Dolutegravir-Based Therapy (poster presentation). 2020 American College of Clinical Pharmacology Annual Meeting. Virtual Conference. September **2020**
- 74.** DL Hurley, **S Harirforoosh**, V Palau, T Ensley, S Lawson, AK Lowe, M Lockhart, J Sondergaard, and M Tucker. Personal PGx analysis for all first-year PharmD students: A foundation for guided implementation (poster presentation). University of Minnesota Biennial Pharmacogenomics Conference. Virtual Conference. September **2020**
- 73.** Rick Hess, Adam Welch, John Bossaer, Jim Thigpen, **Sam Harirforoosh**, and Sam Karpen. Does P3 OSCE Performances Accurately Predict APPE Readiness? (poster presentation). 2020 American Association of Colleges of Pharmacy Annual Meeting. Virtual Conference. July **2020**
- 72.** Hadii Mamudu, Arsham Alamian, Timir Paul, Antwan Jones, David Stewart, **Sam Harirforoosh**, Liang Wang, Sylvester Orimaye, Fenose Osedeme, Amy Poole, Adeola Awujoola, Gerard Blackwell, and Matthew Budoff. Prevalence of diabetes and association between individual and multiple lifestyle risk factors and diabetes in a rural Appalachian population (poster presentation). 2019 American Public Health Association Annual Meeting and Expo. Philadelphia, PA. November **2019**
- 71.** Russell W. Fankhouser, Yaa Y. Anane, Derek E. Murrell, David L. Hurley, Hoa H. Quach, Kojo Abakah, Angela V. Hanley, Kenny W. Bullins, Hadii M. Mamudu, and **Sam Harirforoosh**. Kidney Injury Molecule-1 Blood Levels in Subjects with Type 2 Diabetes: Evaluation and Genetic Association Analysis (poster presentation). 2019 American College of Clinical Pharmacy Annual Meeting. New York, NY. October **2019**

70. Derek E. Murrell, Kojo Abakah, Hoa H. Quach, John B. Schweitzer, Yaa Y. Anane, Russell W. Fankhouser, Angela V. Hanley, Kenny W. Bullins, Greg A. Hanley, Suman Dalal, and **Sam Harirforoosh**. Evaluation of Orally Administered Poly(lactic-co-glycolic) Acid Nanoparticles on Rat Brain (poster presentation). 2019 American College of Clinical Pharmacy Annual Meeting. New York, NY. October **2019**

69. Sam Harirforoosh. Students' perspective on the use of Desire2Learn and ExamSoft platforms for examination administration: 2018 update (poster presentation). 2019 American College of Clinical Pharmacy Annual Meeting. New York, NY. October **2019**

68. Haley N. Bradshaw, Amber N. Seay, Derek E. Murrell, Brianne N. Horton, Suman Dalal, and **Sam Harirforoosh**. Polymeric nanoformulation of an antidiabetic drug, Canagliflozin (poster presentation). 2019 American College of Clinical Pharmacy Annual Meeting. New York, NY. October **2019**

67. Yaa Y. Anane, Russell W. Fankhouser, Derek E. Murrell, Kojo Abakah, Hoa H. Quach, Amber N. Seay, Angela V. Hanley, Kenny W. Bullins, David L. Hurley, and **Sam Harirforoosh**. Examination of Asymmetric Dimethylarginine Levels in the Presence and Absence of Type 2 Diabetes with Exploratory Genetic Association Analysis (poster presentation). 2019 American College of Clinical Pharmacology Annual Meeting. Chicago, IL. September **2019**

(Selected for one of the eight Student Abstract Awards & as the top Student Abstract in the area of pharmacogenomics)

66. Enaholo Omoike, Timir Paul, Stanley Ridner, Manul Awasthi, **Sam Harirforoosh**, and Hadii Mamudu. Association between Smoking Status and Homocysteine Levels and Possible Effect Modification by Cholesterol and Estradiol (poster presentation). 2019 Annual Meeting of the American College of Epidemiology, Pasadena, CA. September **2019**

65. Lauren E. Dickerson, Derek E. Murrell, Darshan S. Shah, Stacy D. Brown, Cara L. Carter, and **Sam Harirforoosh**. The Concentration of Buprenorphine and Selected Metabolites in Neonate Cord Blood: An Exploratory Pharmacogenetic Analysis (poster presentation). International Union of Toxicology (IUTOX) 15th International Congress of Toxicology (ICTXV). Meeting. Honolulu, HI. July **2019**

(Selected as the recipient of the Second Place International Congress of Toxicology IUTOX Trainee Award for best poster)

64. Russell W. Fankhouser, Derek E. Murrell, Allen S. Cofer, David L. Hurley, and **Sam Harirforoosh**. Exploratory Genetic Association of Type 2 Diabetes Occurrence using a Pharmacogenetic Panel (poster presentation). 15th International Congress of Toxicology Meeting. Honolulu, HI. July **2019**

- 63.** Derek Murrell, Amandeep Kaur, Ke-Sheng Wang, David Cluck, Jonathan P. Moorman, Michelle Duffourc, and **Sam Harirforoosh**. Pharmacogenetic evaluation of central nervous system adverse events across tenofovir prodrugs (poster presentation). 2019 European Congress of Clinical Microbiology & Infectious Diseases. Amsterdam. Netherlands. April **2019**
- 62.** Brienne N. Horton, Derek E. Murrell, and **Sam Harirforoosh**. The influence of initial drug loading on eprosartan PLGA nanoformulation (poster presentation). 2018 American Association of Pharmaceutical Scientists PharmSci 360 Conference. Washington, DC. November **2018**
- 61.** Derek Murrell, Ke-Sheng Wang, David Cluck, Jonathan P. Moorman, Michelle Duffourc, and **Sam Harirforoosh**. Associations of *ABCB1* polymorphisms with adverse events stratified by HIV integrase inhibitor (poster presentation). 2018 American College of Clinical Pharmacy Global Conference on Clinical Pharmacy (Selected as one of the posters offering Continuing Professional Education (CPE) during the conference). Seattle, WA. October **2018**
- 60.** Derek Murrell, Ke-Sheng Wang, David Cluck, Jonathan P. Moorman, Michelle Duffourc, and **Sam Harirforoosh**. Pharmacogenetic analysis of the gastrointestinal adverse effect profiles in HIV integrase inhibitor-based regimens (poster presentation). 2018 American College of Clinical Pharmacy Global Conference on Clinical Pharmacy. Seattle, WA. October **2018**
- 59.** **Sam Harirforoosh**. Utilization of Desire2Learn and ExamSoft as Examination Administration Platforms: Pharmacy Students' Perspective (poster presentation). 2018 American College of Clinical Pharmacy Global Conference on Clinical Pharmacy. Seattle, WA. October **2018**
- 58.** Rick Hess, John Bossaer, Adam Welch, **Sam Harirforoosh**, and Sam Karpen. The Validation of an OSCE Assessment to Measure Student Pharmacist Competencies of Pre-APPE Domains (poster presentation). 2018 American Association of Colleges of Pharmacy Annual Meeting. Boston, MA. July **2018**
- 57.** Derek E. Murrell, Ke-Sheng Wang, David B. Cluck, Jonathan P. Moorman, and **Sam Harirforoosh**. Genetic Polymorphisms of *ABCB1*, *SLC15A2*, *VKORC1* Genes are Associated with Several Adverse Events in HIV Integrase Stand Transfer Inhibitor Usage (poster presentation). 2017 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Diego, CA. November **2017**
- 56.** Allen S. Cofer, Cara L. Carter, Derek E. Murrell, James W. Denham, and **Sam Harirforoosh**. Cardiac Outcomes Following Administration of a Celecoxib Nanoparticle Formulation in Rats (poster presentation). 2017 American College of Clinical Pharmacology Annual Meeting. San Diego, CA. September **2017**

55. Cara L. Carter, Allen S. Cofer, Derek E. Murrell, James W. Denham, and **Sam Harirforoosh.** Effect of Diclofenac Nanoparticle Formulation on Rat Cardiac Tissue (poster presentation). 2017 American College of Clinical Pharmacology Annual Meeting. San Diego, CA. September **2017**

54. Derek E. Murrell, David Cluck, Jonathan P. Moorman, Sam C. Karpen, and **Sam Harirforoosh.** Comparison of Side Effect Profiles Among Integrase Strand Transfer Inhibitor Regimens (poster presentation). 2017 American College of Clinical Pharmacology Annual Meeting. San Diego, CA. September **2017**

53. Stacy D. Brown, Fessou Eke Lawson-Hellu, Derek E. Murrell, and **Sam Harirforoosh.** Simultaneous determination of five antiretroviral drugs plus cobicistat in human plasma using strong cation mixed-mode SPE and HPLC-MS/MS (poster presentation). 254th American Chemical Society National Meeting & Exposition. Washington, DC. August **2017**

52. **Sam Harirforoosh.** Assessment of student perception of several instructional approaches utilized in a pharmacokinetics course (poster presentation). 2017 American Association of Colleges of Pharmacy Annual Meeting. Nashville, TN. July **2017**

51. Derek E. Murrell, David Cluck, Jonathan P. Moorman, Sam C. Karpen, and **Sam Harirforoosh.** Evaluation of Renal and Hepatic Outcomes in HIV+ Individuals following Tenofovir Disoproxil Fumarate/Emtricitabine or Tenofovir Alafenamide/Emtricitabine plus Dolutegravir Regimens (poster presentation). 2017 Canadian Society for Pharmaceutical Sciences Annual Symposium. Montreal, QC. May **2017**

50. Derek E. Murrell, David Cluck, Jonathan P. Moorman, Sam C. Karpen, and **Sam Harirforoosh.** Comparison of Renal Effects following Elvitegravir, Cobicistat, Emtricitabine, and Tenofovir Disoproxil Fumarate or Tenofovir Alafenamide Regimens in HIV-infected Patients (poster presentation). 2017 Canadian Society for Pharmaceutical Sciences Annual Symposium. Montreal, QC. May **2017**

49. Derek E. Murrell, Stacy D. Brown, Fessou Eke Lawson-Hellu, and **Sam Harirforoosh.** Improving Relative Bioavailability of Orally Dosed Aliskiren through Poly(lactic-co-glycolic) Acid Nanoformulation in Rats (poster presentation). 2017 Canadian Society for Pharmaceutical Sciences Annual Symposium. Montreal, QC. May **2017**

48. Regan Sevinsky, David Stewart, Steven Smith, Fereshteh Gerayli, Christopher Bridges, and **Sam Harirforoosh.** A pilot study to investigate cardiovascular adverse effects of a class of pain relievers (podium presentation). 48th Southeastern Residency Conference. Athens, GA. April **2017** (Encore Presentation)

47. Regan Sevinsky, **Sam Harirforoosh, David Stewart, Fereshteh Gerayli, Christopher Bridges.** Pilot study to investigate cardiorenal adverse effects of NSAIDs (poster presentation). 2016 American Society of Health-System Pharmacists' Midyear Clinical Meeting and Exhibition. Las Vegas, NV. December **2016**

46. Crystal L. Whitted, Victoria E. Palau, Ruben D. Torrenegra, Oscar E. Rodriguez, and **Sam Harirforoosh.** The Use of Reverse Phase High Performance Liquid Chromatography to Determine 5, 7–dihydroxy-3, 6, 8–trimethoxy Flavone and 3, 5–dihydroxy-6, 7, 8–trimethoxy Flavone Concentrations in Rat Colon Tissue (poster presentation). 2016 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Denver, CO. November **2016**

45. **Sam Harirforoosh, Kelsi O. West, and Derek E. Murrell.** The Effect of Celecoxib Poly(lactic-co-glycolic) Acid Nanof ormulation on Renal and Gastrointestinal Outcomes in Rats (poster presentation). 2016 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Denver, CO. November **2016**

44. **Sam Harirforoosh, Kelsi O. West, and Derek E. Murrell.** Examination of Poly(lactide-co-glycolide) Nanoparticle Formulation on Diclofenac-associated Gastrointestinal and Renal Side Effects in Rats (poster presentation). 2016 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Denver, CO. November **2016**

43. Derek E. Murrell, Hannah V. Oakes, Jessica M. Coleman, Angela V. Hanley, Kenny W. Bullins, Greg A. Hanley, and Sam Harirforoosh. Effect of Aliskiren Nanof ormulation on Rat Kidney Function (poster presentation). 2016 Society of Toxicology Annual Meeting and Exposition. New Orleans, LA. March **2016**

42. Crystal L. Whitted, Angela V. Hanley, Kenneth W. Bullins, Derek E. Murrell, Victoria E. Palau, Ruben Torrenegra, and **Sam Harirforoosh.** Pharmacokinetics of 5,7-Dihydroxy-3,6,8-trimethoxy-2-phenyl-4H-chromen-4-one in Rats (poster presentation). 2015 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Orlando, FL. October **2015**

41. Evaluation of Kidney Histopathology and Renal Drug Concentration of Celecoxib Loaded Polylactic-co-Glycolic Nanoparticles in Rats. **Sam Harirforoosh, Dustin L. Cooper, Derek E. Murrell, James W. Denham, Peter C. Panus, Angela V. Hanley, Kenny W. Bullins, and Greg A. Hanley (poster presentation).** 2015 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Orlando, FL. October **2015**

40. Effect of Diclofenac Loaded Polylactic-co-Glycolic Nanoparticles on Kidney Histopathology in Rats. **Sam Harirforoosh, Dustin L. Cooper, Derek E. Murrell, James W. Denham, Peter C. Panus, Angela V. Hanley, Kenny W. Bullins, and Greg A. Hanley (poster presentation).** 2015 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Orlando, FL. October **2015**

39. Dustin L. Cooper, Angela V. Hanley, Kenny W. Bullins, Greg A. Hanley, Jennifer L. Hoard, Jessica M. Coleman, and **Sam Harirforoosh**. Assessment of relative bioavailability of diclofenac loaded poly(lactide-co-glycolide) nanoparticles after oral administration (poster presentation). 2015 American College of Clinical Pharmacology Annual Meeting. San Francisco, CA. September **2015**

38. Bryan R. Gunter, Kristen A. Butler, Richard L. Wallace, Nakia Woodward, Steven M. Smith, and **Sam Harirforoosh**. NSAIDs-induced cardiovascular adverse effects: a meta-analysis (poster presentation). 2015 American Pharmacists Association Annual Meeting & Exposition. San Diego, CA. March **2015**

37. Crystal L. Whitted, Dustin L. Cooper, Victoria E. Palau, Ruben Torrenegra, and **Sam Harirforoosh**. A Reversed-phase high performance liquid chromatography method for the quantitative determination of a flavone in rat plasma (poster presentation). 2015 American Pharmacists Association Annual Meeting & Exposition. San Diego, CA. March **2015**

36. Jessica M. Coleman, Dustin L. Cooper, and **Sam Harirforoosh**. Formulation and optimization of aliskiren loaded poly(lactide-co-glycolide) nanoparticles (poster presentation). 2015 American Pharmacists Association Annual Meeting & Exposition. San Diego, CA. March **2015**

35. Derek E. Murrell and **Sam Harirforoosh**. Analysis of concomitant rebamipide influence on celecoxib concentration in the rat liver (poster presentation). 2015 American Pharmacists Association Annual Meeting & Exposition. San Diego, CA. March **2015**

34. Derek E. Murrell, Yuyun Rahmasari, John D. Harrell, James W. Denham, Kenneth W. Bullins, Angela V. Hanley, Peter C. Panus, and **Sam Harirforoosh**. An Examination of Hepatic Effects during Diclofenac or Celecoxib Administration in the Presence or Absence of Rebamipide (poster presentation). 2014 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Diego, CA. November **2014**

33. Dustin L. Cooper, Angela V. Hanley, Kenny W. Bullins, Greg A. Hanley, Jessica M. Coleman, and **Sam Harirforoosh**. Polylactic-co-glycolic nanoparticle encapsulation improves oral bioavailability of celecoxib in rats (poster presentation). 2014 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Diego, CA. November **2014**

32. Dustin L. Cooper, Jennifer, A. Carmical, Peter C. Panus, and **Sam Harirforoosh**. Effects of niacin loaded polymeric nanoparticles on *in vitro* prostaglandin expression (poster presentation). 2014 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Diego, CA. November **2014**

31. Derek E. Murrell, Dustin L. Cooper, and **Sam Harirforoosh**. The effect of concomitant misoprostol on hepatic celecoxib concentration (poster presentation). 2014 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Diego, CA. November **2014**

30. Crystal Whitted, Dustin Cooper, Victoria Palau, Ruben Torrenegra, and **Sam Harirforoosh**. Development of a high performance liquid chromatography method for quantification of a flavone in rat plasma (poster presentation). 2014 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Diego, CA. November **2014**

29. Derek E. Murrell and **Sam Harirforoosh**. A Quantitative Model for Prediction of Hepatic Diclofenac Concentration following a Single Oral Dose (poster presentation). The 5th American Conference on Pharmacometrics. Las Vegas, NV. October **2014**

28. Derek E. Murrell, John Harrell, Yuyun Rahmasari, Dustin L. Cooper, Angela V. Hanley, Kenneth W. Bullins, and **Sam Harirforoosh**. Evaluation of hepatic oxidative stress in rats following celecoxib and misoprostol concomitant administration (poster presentation). 2014 American College of Clinical Pharmacology Annual Meeting. Atlanta, GA. September **2014**

27. Dustin L. Cooper and Sam **Harirforoosh**. Characterization of PVA and DMAB based Celecoxib Loaded Polymeric Nanoparticles (poster presentation). 41st Annual Meeting & Exposition of the Controlled Release Society. Chicago, IL. July **2014**

26. Jennifer A. Carmical, Dustin L. Cooper, **Sam Harirforoosh**. Formulation and Characterization of Niacin Loaded PLGA-Based Nanoparticles (poster presentation). 41st Annual Meeting & Exposition of the Controlled Release Society. Chicago, IL. July **2014**

25. Jennifer Carmical, Dustin Cooper, and **Sam Harirforoosh**. Niacin loaded PLA nanoparticles: preparation and physiochemical characterization (poster presentation). 2014 Appalachian Research Student Forum. Johnson City, TN. April **2014**

24. Dustin Cooper and **Sam Harirforoosh**. Effect of drug amount and emulsifier on the characterization of celecoxib polymorphic nanoparticles (podium presentation). 2014 Appalachian Research Student Forum. Johnson City, TN. April **2014**

23. Derek Murrell, Dustin Cooper, James Denham, Yuyun Rahmasari, John Harrell, Maxwell Lee, Kelsey Bolling, and **Sam Harirforoosh**. Hepatic effects of concomitant administration of celecoxib and misoprostol in rats (poster presentation). 2014 Appalachian Research Student Forum. Johnson City, TN. April **2014**

22. Dustin L. Cooper, Peter C. Panus, and **Sam Harirforoosh**. Effect of Diclofenac on Urinary Concentration and Excretion of Rebamipide (poster presentation). **2014**

American Society for Clinical Pharmacology and Therapeutics Annual Meeting. Atlanta, GA. April **2014**

21. Derek E. Murrell, Dustin L. Cooper, Christopher M. Conder, Grace E. Campbell, Shaun P. Lynch, Angela V. Hanley, Kenneth W. Bullins, Krishna Singh, James W. Denham, Peter C. Panus, Gregory A. Hanley, and **Sam Harirforoosh**. Effects of misoprostol on celecoxib-induced renal toxicity and cardiac levels of celecoxib (poster presentation). 2013 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Antonio, TX. November **2013 (Selected to receive a travelship from the Clinical Pharmacology and Translational Research Section of AAPS)**

20. Dustin L. Cooper, Kenneth W. Bullins, Angela V. Hanley, and **Sam Harirforoosh**. Effects of selected non-steroidal anti-inflammatory drugs on the pharmacokinetics of rebamipide in rats (poster presentation). 2013 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Antonio, TX. November **2013**

19. Dustin L. Cooper, Derek E. Murrell, Christopher M. Conder, Grace E. Campbell, Shaun P. Lynch, Angela V. Hanley, Kenneth W. Bullins, James W. Denham, Peter C. Panus, Gregory A. Hanley, Krishna Singh, Janet W. Lightner, Rhett N. Byrne, Jennifer L. Hoard, and **Sam Harirforoosh**. Exacerbation of renal injury associated with celecoxib by concomitant administration of misoprostol in rats: effect of misoprostol on kidney celecoxib levels (poster presentation). 2013 American College of Clinical Pharmacology Annual Meeting. Bethesda, MD. September **2013**

18. Dustin Cooper, Christopher Conder, Grace Campbell, Shaun Lynch, Derek Murrell, Angela Hanley, and **Sam Harirforoosh**. Effect of concomitant administration of misoprostol on celecoxib plasma levels in rats (podium presentation). 2013. Johnson City, TN. April **2013**

17. Dustin Cooper, Christopher Conder, Grace Campbell, Shaun Lynch, Derek Murrell, and **Sam Harirforoosh**. Effect of rebamipide on plasma protein binding of celecoxib or diclofenac (poster presentation). 2013 Appalachian Research Student Forum. Johnson City, TN. April **2013**

16. Dustin L. Cooper, Christopher M. Conder, Grace E. Campbell, Shaun P. Lynch, Rhett N. Byrne, Angela V. Hanley, Kenneth W. Bullins, Gregory A. Hanley, Jennifer L. Hoard, Krishna Singh, and **Sam Harirforoosh**. Effect of an EP receptor agonist on cardiorenal toxicity of celecoxib in rats (podium and poster presentation). 2013 American Pharmacists Association Annual Meeting & Exposition. Los Angeles, CA. March **2013**.

15. Dustin L. Cooper, Kenneth W. Bullins, Angela V. Hanley, Gregory A. Hanley, John A. Ewing, Clarence D. Gwanbobmuga, Christopher M. Conder, and **Sam Harirforoosh**. Pharmacokinetic of selected nonsteroidal anti-inflammatory drugs in the presence or absence of rebamipide (poster presentation). The 5th Annual Nanotechnology Symposium. Louisville, KY. September **2012**

- 14. Robert Wood**, Jarrett Wyatt, Kenneth Bullins, Angela Hanley, Gregory Hanley, Kimberly Henson, James Ledford, John Ewing, Justin Connor, **Sam Harirforoosh**. NSAID's renal effect following concomitant rebamipide administration (poster presentation). 2012 American College of Clinical Pharmacology Annual Meeting. San Diego, CA. September **2012**
- 13. Jarrett Wyatt**, Robert Wood, Kenneth Bullins, Angela Hanley, Gregory Hanley, Kimberly Henson, James Ledford, John Ewing, Justin Connor, **Sam Harirforoosh**. NSAID's renal effect following concomitant rebamipide administration (podium presentation). 2012 Appalachian Research Student Forum. Johnson City, TN. April **2012**
- 12.** Robert Wood, Kenneth Bullins, Angela Hanley, Jarrett Wyatt, Kimberly Henson, James Ledford, John Ewing, Justin Connor, **Sam Harirforoosh**. Effect of rebamipide on the renal toxicity of celecoxib or diclofenac in rats (poster presentation). 2011 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Washington, DC. October **2011**
- 11. Jarrett Wyatt**, Robert Wood, Kenneth Bullins, Angela Hanley, Gregory Hanley, Kimberly Henson, James Ledford, John Ewing, Justin Connor, **Sam Harirforoosh**. Effects of rebamipide on nephrotoxicity associated with diclofenac administration (poster presentation). American College of Clinical Pharmacology 40th Annual Meeting. Chicago, IL. September **2011 (Selected for one of the eight Student Abstract Awards)**
- 10. Katherine Morris**, Paul Forsythe, **Sam Harirforoosh**, Ryan Hoeve, Ron Mathison, A. Dean Befus. Regulation of secretion of anti-inflammatory prohormone SMR1 by autonomic stimulation in rat submandibular glands. The Canadian Allergy, Asthma and Immunology Foundation Annual Scientific Meeting, Edmonton. Alberta, September **2007**
- 9. Sam Harirforoosh**, Paul Forsythe, Mavanur R. Suresh, and A. Dean Befus. Characterization of SMR-1 in lysates of rat submandibular glands (poster presentation). Department of Medicine Research Day. Edmonton, Alberta. **2006**
- 8. Sam Harirforoosh**, Paul Forsythe, Mavanur R. Suresh, and A. Dean Befus. Neuroendocrine control of allergic inflammation: characterization of antibodies to the prohormone SMR-1 in lysates of rat submandibular glands (poster presentation). AllerGen's First Annual Research Conference: Innovation from Cell to Society. Toronto, Ontario. October **2005**
- 7. Sam Harirforoosh** and Fakhreddin Jamali. Effect of COX-2-selective nonsteroidal anti-inflammatory drugs (NSAIDs) on kidney function of inflamed rats (poster presentation). 8th Canadian Society for Pharmaceutical Sciences Annual Symposium. Toronto, Ontario. May **2005**

6. **Sam Harirforoosh**, Ali Aghazadeh-Habashi, and Fakhreddin Jamali. The extent of Renal effects of nonsteroidal anti-inflammatory drugs (NSAIDs) is pharmacokinetic-dependent (poster presentation). 7th Canadian Society for Pharmaceutical Sciences Annual Symposium. Vancouver, British Columbia. June **2004**
5. **Sam Harirforoosh** and Fakhreddin Jamali. The effect of chronic inflammation on pharmacokinetics of rofecoxib and meloxicam in the Rat (poster presentation). Faculty of Pharmacy Research Day. Edmonton, Alberta. **2004**
4. **JM Gamble**, **Sam Harirforoosh**, and Fakhreddin Jamali. Effects of celecoxib on kidney function (poster presentation). 6th Canadian Society for Pharmaceutical Sciences Annual Symposium. Montreal, Quebec. May **2003**
3. **Sam Harirforoosh** and Fakhreddin Jamali. Higher trough rofecoxib concentrations are associated with higher degrees of sodium retention in rats (poster presentation). Faculty of Pharmacy Research Day. Edmonton, Alberta. **2003**
2. **Sam Harirforoosh** and Fakhreddin Jamali. The effects of COX-2 inhibitors on renal sodium and potassium excretion in rats (poster presentation). 2002 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. Toronto, Ontario. November **2002**
1. **Sam Harirforoosh** and Fakhreddin Jamali. Kidney side effects of COX-2 inhibitors are not COX-1/COX-2 ratio related (poster presentation). 5th Canadian Society for Pharmaceutical Sciences Annual Symposium. Banff, Alberta. June **2002**

PHARMACEUTICAL CONSULTING EXPERIENCE

Contract Research Organization, Amarex Clinical Research, LLC, MD, United States, March 2022 - Present

PROFESSIONAL SERVICE

Professional Affiliations

American Heart Association (AHA)
American College of Clinical Pharmacology (ACCP)
American Association of Colleges of Pharmacy (AACCP)
Alberta College of Pharmacy (ACP)

Editorial Board Memberships

Clinical Pharmacokinetics, March 2017 - Present
European Journal of Drug Metabolism and Pharmacokinetics, June 2017 - Present
Heliyon, March 2017 - June 2019
Journal of Integrative Nephrology and Andrology, August 2015 - June 2019

Invited Oral Presentations

Transdermal Drug Delivery Systems. Chapman University School of Pharmacy and Pharmaceutical sciences. Irvine, California. July 15, 2022

Are cardiorenal adverse events associated with non-steroidal anti-inflammatory drugs linked to their pharmacokinetics? University of California, Irvine School of Pharmacy & Pharmaceutical Sciences. Virtual Seminar. May 6, 2022

Clinical pharmacology of prescription opioids, heroin, and fentanyl and their adverse effects The Opioid Overdose Epidemic: Trends, Harms and Treatment. 2020 American College of Clinical Pharmacology Annual Meeting. Virtual Conference. September 22, 2020

Pharmacogenetics of HIV Drugs: A focus on Integrase Inhibitors. Latest advances in treatment, prophylaxis and pharmacogenomics of HIV. 2019 American College of Clinical Pharmacology Annual Meeting. Chicago, Illinois. September 16, 2019

Pharmacokinetic Models: A Focus on One Compartment Model Following Intravenous Bolus Injection. California Northstate University College of Pharmacy. Sacramento, California. August 23, 2018

Clinical Pharmacology of Opioids and Their Adverse Effects. Opioid Abuse and Misuse: a Rising Epidemic in America. 2017 American College of Clinical Pharmacology Annual Meeting. San Diego, California. September 19, 2017

Opioid Analgesics and Antagonists. West Coast University. Los Angeles, California. July 28, 2017

The prevention of Renal Adverse Effects of NSAIDs. Keck Graduate Institute. Claremont, California. October 20, 2016

Pharmacogenetics of HIV Drugs. Workshop 2: HIV/AIDS: Treatment, Pharmacogenetics & Pre-Exposure Prophylaxis Pharmacogenetics of HIV Drugs. 2016 American College of Clinical Pharmacology Annual Meeting. Bethesda, Maryland. September 24, 2016

Pharmacogenomics: Genomics and Drug Response. Personalized Anticancer Strategy: from Innovation to Impact. 2016 International Pharmaceutical Federation World Congress of Pharmacy & Pharmaceutical Sciences. Buenos Aires, Argentina. August 30, 2016

Pharmacogenomics of HIV Medications. An Update on HIV Treatment, Prevention and Drug Development. 2015 American College of Clinical Pharmacology Annual Meeting. San Francisco, California. September 28, 2015

GLP and GMP Requirements: What They Mean. Short course on Drug Development and Discovery by FDA Standards. 2014 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Diego, California. November 2, 2014

GMP Requirement: What It Means. Short course on Drug Development and Discovery by FDA Standards. 2013 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Antonio, Texas. November 10, 2013

Effect of an EP Receptor Agonist on Renal Toxicity of Celecoxib in Rats. Internal Medicine Research Seminar Series, East Tennessee State University. Johnson City, Tennessee. February 26, 2013

Exacerbation of diclofenac-induced nephrotoxicity in rats by rebamipide. Philadelphia College of Osteopathic Medicine. Suwanee, Georgia. July 24, 2012.

Principles of non-linear pharmacokinetics. West Coast University. Los Angeles, California. July 11, 2012

Effects of rebamipide on nephrotoxicity associated with selected NSAIDs. Internal Medicine Research Seminar Series, East Tennessee State University. Johnson City, Tennessee. February 28, 2012

Renal adverse effects of nonsteroidal anti-inflammatory drugs. Internal Medicine Research Seminar Series, East Tennessee State University. Johnson City, Tennessee. September 22, 2009

Renal effects of COX-2-selective inhibitors. East Tennessee State University, College of Pharmacy. February 28, 2007

Invited Chair or Co-chair at Scientific Meetings

Chair – The Opioid Overdose Epidemic: Trends, Harms and Treatment. 2020 American College of Clinical Pharmacology Annual Meeting. Virtual Conference. September 22, 2020

Chair – Latest advances in treatment, prophylaxis and pharmacogenomics of HIV. 2019 American College of Clinical Pharmacology Annual Meeting. Chicago, Illinois. September 16, 2019

Co-chair – Opioid Abuse and Misuse: a Rising Epidemic in America. 2017 American College of Clinical Pharmacology Annual Meeting. San Diego, California. September 19, 2017

Co-chair – Workshop 2: HIV/AIDS: Treatment, Pharmacogenetics & Pre-Exposure Prophylaxis Pharmacogenetics of HIV Drugs. 2016 American College of Clinical Pharmacology Annual Meeting. Bethesda, Maryland. September 24, 2016

Co-chair – Symposium 5: An Update on HIV Treatment, Prevention and Drug Development. 2015 American College of Clinical Pharmacology Annual Meeting. San Francisco, California. September 28, 2015

Co-chair – Short course on Drug Development and Discovery by FDA Standards. 2013 American Association of Pharmaceutical Scientists Annual Meeting and Exposition. San Antonio, TX. November 10, 2013

Served as a Grant Reviewer for:

2020 Research Development Committee Major Grants, East Tennessee State University

2019 Research Development Committee Small Grants, East Tennessee State University

2019 Research Development Committee Interdisciplinary Grants, East Tennessee State University

2018 Research Development Committee Major Grants, East Tennessee State University

2016 Research Development Committee Interdisciplinary Grants, East Tennessee State University

2014 Research Development Committee Major Grants, East Tennessee State University

2013 Research Development Committee Small Grants, East Tennessee State University

2012 Research Development Committee Major Grants, East Tennessee State University

2012 Research Development Committee Small Grants, East Tennessee State University

2011 Research Development Committee Major Grants, East Tennessee State University

Served as a Peer Reviewer* for:

American Journal of Pharmaceutical Education

Biomedicine & Pharmacotherapy

BMC Geriatrics

Clinical Drug Investigation

Clinical and Experimental Pharmacology and Physiology

Clinical Pharmacokinetics

Clinical Pharmacology & Therapeutics

Current Clinical Pharmacology

Current Drug Metabolism

Current HIV Research

DNA and Cell Biology

Drug Development and Industrial Pharmacy

Drug Metabolism Letters

Drugs

European Journal of Drug Metabolism and Pharmacokinetics

Expert Opinion on Drug Safety

Food and Chemical Toxicology

International Journal of STD & AIDS

Journal of Drug Issues

Journal of Integrative Nephrology and Andrology

Journal of International Medical Research

Journal of Microencapsulation
Journal of Pain Research
Journal of Pharmacokinetics and Pharmacodynamics
Journal of Pharmacy and Pharmaceutical Sciences
Journal of Pharmacy and Pharmacology
Molecular Pharmaceutics
Pharmaceutical Biology
Pharmacogenomics
PLoS ONE
Postgraduate Medicine
The Open AIDS Journal
The Pharmacogenomics Journal
Toxicology Research and Application

**Recognized by the Publons Board as one of the top 10% of researchers contributing to the peer review of the field of Pharmacology, Toxicology, and Pharmaceutics in 2016*

Served as a Judge at;

2017 Canadian Society of Pharmaceutical Sciences Annual Symposium, Montreal, Quebec
2017 Appalachian Student Research Forum, Johnson City, Tennessee
2015 Appalachian Student Research Forum, Johnson City, Tennessee
2013 Appalachian Student Research Forum, Johnson City, Tennessee
2012 Appalachian Student Research Forum, Johnson City, Tennessee

Served as a Track Screening Chair for Clinical Pharmacology, Chemical Entities for;

2018 AAPS Annual Meeting

Served as an Abstract Screener for;

2017 AAPS Annual Meeting
2016 AAPS Annual Meeting
2015 AAPS Annual Meeting
2014 AAPS Annual Meeting
2013 AAPS Annual Meeting (Two rounds)
2012 AAPS Annual Meeting
2011 AAPS Annual Meeting
2010 FIP PSWC/AAPS Annual Meeting

Served as a Reviewer for Book or Journal Proposals

Principles of the Human Genome and Pharmacogenomics (Book)
Trends in Pharmacogenetics and Pharmacogenomics (Journal)

INSTITUTIONAL SERVICE

East Tennessee State University

Institutional Review Board Search Committee, 2015
Center for Inflammation, Infectious Disease, and Immunity, 2014 to present
ETSU/VA Medical Campus Institutional Review Board, 2009 to present

Gatton College of Pharmacy

Teaching, Learning, and Technology Committee, 2021 to present
College Tenure and Promotion Committee
Chair, 2020 & 2021
Research Track Oversight Committee, 2020 to present
Objective Structured Clinical Examination (OSCE) Development Subcommittee, 2017 to present
Equity and Inclusion Council, 2020
Scholarship & Awards Committee, 2007 to 2021
Admission Committee, 2007 to present
Departmental Tenure and Promotion Committee, 2016
Third Year Review Committee, 2014
College Tenure and Promotion Committee, 2013, 2014, 2016, and 2017
Pharmaceutical Sciences Search Committee, 2008 to 2011 and 2017
Chair, 2010 to 2011
Technology Committee, 2009 to 2011 - 2015 to 2018
Assessment Committee, 2008 to 2009

MENTORING EXPERIENCE

PhD Student Advisor for;

Derek Murrell
Fall 2012 – summer 2018
Graduation date: August 2018

Dustin Cooper
Fall 2011 – summer 2015

PharmD Student Research Advisor for;

Amber Seay	Spring 2019
Zhelin Liu	Spring 2019
Hoa Quach	Spring 2019
Benjamin Kennard	Spring 2019
Lauren Dickerson	Fall 2018 and spring 2019
Russell Fankhouser	Fall 2018, spring 2019, summer 2019, fall 2019, and spring 2020
Kojo Abakah	Fall 2018 and spring 2019

Yaa Anane	Spring 2018, summer 2018, fall 2018, and spring 2019
Deep Patel	Spring 2018 and fall 2018
Cara Carter	Spring 2017, fall 2017, and spring 2018
Allen Cofer	Fall 2016, spring 2017, fall 2017, and spring 2018
Maxwell Lee	Spring 2014
Kristen Butler	Spring 2014, summer 2014, fall 2014, and spring 2015
Kristen Lester	Spring 2014 and summer 2014
Jennifer Carmical	Spring 2014
Kelsey Bolling	Spring 2014
Yuyun Rahmasari	Spring 2014, fall 2014, and spring 2015
Russ Gunter	Spring 2014 and summer 2014
JD Harrell	Spring 2014
Christopher Conder	Spring 2012, summer 2012, fall 2012, and spring 2013
Gracie Campbell	Spring 2012, fall 2012, and spring 2013
Shaun Lynch	Spring 2012, fall 2012, and spring 2013
Rhett Byrne	Spring 2012
Clarence Gwanbobmuga	Fall 2011
Jarrett Wyatt	Spring 2011, fall 2011, and spring 2012
Robert Wood	Spring 2011 and spring 2012
John Ewing	Spring 2011 and fall 2011
Kimberly Henson	Spring 2011
James Ledford	Spring 2011
Justin Connor	Spring 2011
Wesley Pettit	Spring 2010

Honors Scholar Research Advisor for;

Haley Bradshaw	Spring 2018, fall 2018, and spring 2019
Jessica Coleman	Summer 2014, fall 2014, and spring 2015

Undergraduate Student Research Advisor for;

Brieanne Horton	Spring 2018
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Laboratory Rotation Mentor for;

Hannah McNeill	Summer 2015
PhD student	

Preceptor for;

Amandeep Kaur	Spring 2018
Epidemiology MPH student	

Kelsi West	Spring 2016
Epidemiology MPH student	

Research Associate Supervisor for;

Dr. Derek Murrell
Fall 2018– Spring 2019

Served on PhD Advisory Committee for;

Crystal Whitted
Fall 2012 – fall 2016

OTHER ACTIVITIES

PHARMACY EXPERIENCE

Pharmacist, Edmonton, Alberta, Canada, 2001 to 2007
Pharmacist, Iran, 1991 to 1998

SPECIALIZED COURSES & CERTIFICATIONS

Safe Zone Training for Faculty and Staff - Online Training, East Tennessee State University, 2022

Biomedical Research Investigators and Key Personnel (VA), Collaborative Institutional Training Initiative, 2009, 2011, 2013, 2015, 2018, 2021

Preventing Harassment and Discrimination: Supervisors with Title IX/Clery Module - Online Training, East Tennessee State University, 2021

HIPAA Training Part 2: The Security Rule - Online Training, East Tennessee State University, 2017, 2018, 2019, 2020, 202, 2022

HIPAA Training Part 1: The Privacy Rule - Online Training, East Tennessee State University, 2016, 2017, 2018, 2019, 2020, 2021

Preventing Harassment and Discrimination: Non-Supervisors with Title IX/Clery Module - Online Training, East Tennessee State University, 2020

Emergency Preparedness Training - Online Training, East Tennessee State University, 2020, 2021

Lab Safety #2 - Online Training, East Tennessee State University, 2017, 2018, 2019, 2020, 2021

Portable Fire Extinguishers - Online Training, East Tennessee State University, 2020, 2021

Bloodborne Pathogens - General - Online Training, East Tennessee State University, 2020, 2021

Hazard Communication - Online Training, East Tennessee State University, 2020, 2021

Hazardous Waste - Online Training, East Tennessee State University, 2020, 2021

COVID-19 Safety Pledge - Online Training, East Tennessee State University, 2020

Emergency Preparedness Training - Mountain Home VA Campus - Online Training, East Tennessee State University, 2020, 2021

Security Awareness Proficiency Assessment - Online Training, East Tennessee State University, 2020

Biosafety Lab - Online Training, East Tennessee State University, 2018, 2020, 2021, 2022

Harassment and Discrimination Prevention - Online Training, East Tennessee State University, 2019

Working with the IACUC, Collaborative Institutional Training Initiative, 2010, 2019

ETSU Environmental Health and Safety - Online Training, East Tennessee State University, 2012, 2013, 2014, 2015, 2016, 2017, 2018

Preventing Discrimination and Sexual Violence: Title IX, VAWA and Clery Act for Faculty and Staff - Online Training, East Tennessee State University, 2017, 2018

Title VI for Tennessee Faculty and Staff - Online Training, East Tennessee State University, 2017, 2018

Conflict of Interest Course, Collaborative Institutional Training Initiative, 2018

Creating Validated OSCEs in Pharmacy Education - East Tennessee State University, 2017

NIH Regional Seminar & Pre-Seminar Workshop (eRA System: Grant Application) - New Orleans, Louisiana, 2017

The online Animal Research Training Program Refresher, Collaborative Institutional Training Initiative, 2010, 2016

Title VI - Online Training, East Tennessee State University, 2015, 2016

Equity & Diversity - Respect in the Workplace - Online Training, East Tennessee State University, 2015, 2016

Phoenix WinNonlin Workflows: Estimate Preclinical PK/PD Parameters for Anti-Cancer Agents, Webinar, Phoenix PK/PD Modeling Webinar Series, 2015

Advanced Methods in NONMEM® 7.3, American Conference on Pharmacometrics Pre-Meeting Workshop; Las Vegas, Nevada, 2014

Preventing Sexual Harassment Refresher, East Tennessee State University, 2014

Financial Conflict of Interest Course, Collaborative Institutional Training Initiative, 2014

Intellectual Property Fundamentals Workshop, East Tennessee State University, 2012

Introduction to Population PKPD Analysis Using NONMEM 7: Special Emphasis on New EM Algorithms, American College of Clinical Pharmacology Pre-Meeting Workshop, 2010

Research Grant Development Course, East Tennessee State University, 2008-2009

American Association of Pharmaceutical Scientists Workshop on Pharmacogenetics in Individualized Medicine: Methods, Regulatory and Clinical application, American Association of Pharmaceutical Scientists, 2008

Peer Review Workshop, East Tennessee State University, 2008

Effective Management of Student Conduct, East Tennessee State University, 2008

Preventing Employment Discrimination, East Tennessee State University, 2008

Preventing Sexual Harassment, East Tennessee State University, 2008

Deire2Learn Overview-Advanced, East Tennessee State University, 2007

Deire2Learn Workshop-Respondus, East Tennessee State University, 2007

The Care and Use of Animals in research, Teaching and Testing, University of Alberta, 2002

Teaching and Learning Effectiveness Sessions, University of Alberta, 2002

The Care and Use of the Laboratory Rat, University of Alberta, 2001

Radiation Safety Course, University of Alberta, 2001

HONORS, AWARDS, AND SCHOLARSIPS

Gatton College of Pharmacy 2014-2015 Outstanding Teacher Award Presented by Class of 2017, 2015

Faculty Excellence in Research Award, Gatton College of Pharmacy, 2014

Faculty Excellence in Research Award, Gatton College of Pharmacy, 2012

Rho Chi Academic Honor Society in Pharmacy

J Gordon Kaplan Graduate Student Award, University of Alberta, 2002