

Curriculum Vitae

Jason Hansen Karnes, PharmD, PhD, BCPS

PERSONAL INFORMATION

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EDUCATION AND TRAINING

2012 – 2015 Research Fellowship, Vanderbilt University School of Medicine, Division of Clinical Pharmacology, Nashville, TN (Advisor: Dr. Dan Roden)

2008 – 2012 Doctor of Philosophy, Clinical Pharmaceutical Sciences, University of Florida College of Pharmacy, Gainesville, FL
(Advisors: Dr. Rhonda M. Cooper-DeHoff and Dr. Julie A. Johnson)

2004 – 2008 Doctor of Pharmacy (*Cum Laude*), University of Florida College of Pharmacy, Gainesville, FL

2000 – 2004 Bachelor of Arts (Ancient Greek), College of William and Mary, Williamsburg, VA

PROFESSIONAL EXPERIENCE

2016 – Present Member, Division of Pharmacogenomics, Center for Applied Genetics and Genomic Medicine (TCAG²M), Tucson, AZ

2015 – Present Assistant Professor, University of Arizona College of Pharmacy Department of Pharmacy Practice and Science, Tucson, AZ

2015 – Present Member, Sarver Heart Center, University of Arizona College of Medicine, Tucson, AZ

2013 – 2015 Clinical Staff Pharmacist, Williamson Medical Center, Franklin, TN

2013 – 2014 Jason D. Morrow Chief Fellow, Vanderbilt University School of Medicine, Division of Clinical Pharmacology, Nashville, TN

2008 – 2012 Hospital Pharmacist, Shands Hospital at the University of Florida, Gainesville Florida

Completed Research:

UAHS- Clinical Research Pilot Program Award (PI: Karnes) 7/1/16 – 6/30/17
University of Arizona Health Sciences Clinical Research Pilot Program Award (UAHS-CRPA) aimed at generating pilot data to determine biomarkers for heparin-induced thrombocytopenia (HIT).

15POST22660017 (PI: Karnes) 1/1/15 – 8/31/15
Immunogenetics of Heparin-Induced Thrombocytopenia
This American Heart Association postdoctoral fellowship (Greater Southeast Affiliate) uses BioVU, Vanderbilt's biorepository coupled to electronic health records, to identify HLA alleles associated with HIT. A clinical study was also proposed to identify TCR clonotypes that predict HIT.

T32GM007569 (PI: Stein) 8/13/12 - 12/31/14
Clinical Pharmacology Fellowship Training Program, Vanderbilt University - funded by the National Institute of Child Health & Human Development and the National Institute of General Medical Sciences

University of Florida CTSI (PI: Cooper-DeHoff) 2009 – 2012
Long Term Antihypertensive Exposure and Adverse Metabolic Effects: PEAR Follow-Up Study
Clinical Research Unit Study #805 aimed at identifying clinical risk factors for long term adverse metabolic effects of thiazide diuretics.

TL1RR029888 (PI: Nelson) 08/16/09 – 08/15/11
University of Florida Clinical and Translational Sciences TL1 Training Program – funded by the National Center for Research Resources.

J. Craig Venter Institute (PI: Cooper-DeHoff) 2008 – 2012
Understanding the Relationship of Transcription Factor 7-like Gene (TCF7L2) Polymorphisms and Incidence of Diabetes in an Ethnically Diverse Hypertensive Heart Disease Population
National Institutes of Health NHLBI Resequencing and Genotyping Service Award

Alumni Association Fellowship 2008 - 2012
Predoctoral fellowship - funded by the University of Florida College of Pharmacy Alumni Association

5T35HL007489-25 (PI: Sumners) 5/22/06 – 8/5/06
University of Florida Predoctoral Fellowship – funded by the National Center for Research Resources

PUBLICATIONS

1. Bime C, Pouladi N, Sammani S, Batai K, Casanova N, Zhou T, Kempf CL, Sun X, Camp SM, Wang T, Kittles RA, Lussier YA, Jones TK, Reilly JP, Meyer NJ, Christie JD, **Karnes JH**, Gonzalez-Garay M, Christiani DC, Yates CR, Wurfel MM, Meduri GU, Garcia JGN. Genome Wide Association study in African Americans with Acute Respiratory Distress Syndrome identifies the Selectin P Ligand gene as a risk factor. *Am J Respir Crit Care Med.* 2018 (In Press)
2. Wells QS, Veatch OJ, Fessel JP, Joon AY, Levinson RT, Mosley JD, Held EP, Lindsay CS, Shaffer CM, Weeke PE, Glazer AM, Bersell KR, Van Driest SL, **Karnes JH**, Blair MA, Lagrone LW, Su YR, Bowton EA, Feng Z, Ky B, Lenihan DJ, Fisch MJ, Denny JC, Roden DM. Genome-wide association and pathway analysis of left ventricular function after anthracycline exposure in adults. *Pharmacogenet Genomics.* 2017; 27(7):247-254.
3. Kaye JB, Schultz LE, Steiner HE, Kittles RA, Cavallari LH, **Karnes JH**. Warfarin Pharmacogenomics in Diverse Populations. *Pharmacotherapy* 2017; 37(9):1164-1171.

4. **Karnes JH**, Shaffer CM, Cronin R, Bastarache L, Gaudieri S, James I, Pavlos R, Steiner HE, Mosley JD, Mallal S, Denny JC, Phillips EJ, Roden DM. Influence of HLA alleles and KIR types on Heparin-Induced Thrombocytopenia. *Pharmacotherapy* 2017; 37(9):1150-1163.
5. **Karnes JH**,* Bastarache L,* Shaffer CM, Gaudieri S, Xu Y, Glazer A, Mosley JD, Zhao S, Raychaudhuri S, Mallal S, Ye Z, Mayer JG, Brilliant MH, Hebbbring SJ, Roden DM, Phillips EJ, Denny JC. Phenome-wide scanning identifies multiple diseases and disease severity phenotypes associated with HLA variants. *Science Translational Medicine* 2017; 9(389): eaai8708.
6. **Karnes JH**, Shaffer CM, Bastarache L, Gaudieri S, Glazer AM, Steiner H, Mosley JD, Mallal S, Denny JC, Phillips EJ, Roden DM. Comparison of Allelic Imputation Programs. *Plos One* 2017; 12(2):e0172444.
7. Aljabri A, Huckleberry Y, **Karnes JH**, Gharaibeh M, Kutbi S, Raz Y, Yun S, Abraham I, Erstad B. Cost-Effectiveness of Anticoagulants for the Management of Suspected Heparin- Induced Thrombocytopenia in the United States. *Blood*. 2016;128:3043-3051.
8. Mosley JD, Witte J, Larkin E, Bastarache L, Shaffer CM, **Karnes JH**, Stein CM, Phillips EJ, Hebbbring S, Brilliant M, Mayer J, Ye Z, Roden DM, Denny JC. Identifying Genetically-Driven Clinical Phenotypes Using Linear Mixed Models. *Nat Commun*. 2016;7:11433. PMID: PMC4848547
9. Mosley JD, Shaffer CM, Van Driest SL, Weeke PE, Wells QS, **Karnes JH**, Velez Edwards DR, Wei WQ, Teixeira PL, Bastarache L, Crawford DC, Li R, Manolio TA, Bottinger EP, McCarty CA, Linneman JG, Brilliant MH, Pacheco JA, Thompson W, Chisholm RL, Jarvik GP, Crosslin DR, Carrell DS, Baldwin E, Ralston J, Larson EB, Grafton J, Scrol A, Jouni H, Kullo IJ, Tromp G, Borthwick KM, Kuivaniemi H, Carey DJ, Ritchie MD, Bradford Y, Verma SS, Chute CG, Veluchamy A, Siddiqui MK, Palmer CNA, Morris AD, Doney A, MahmoudPour SH, Maitland-van der Zee AH, Denny JC, and Roden DM. A Genome-Wide Association Study Identifies Variants in *KCNIP4* Associated with ACE Inhibitor Induced Cough. *The Pharmacogenomics J*. 2016;16(3):231-7. PMID: PMC4713364
10. Sanders ML, **Karnes JH**, Denny JC, Roden DM, Ikizler TA, Birdwell KA. Clinical and Genetic Factors Associated with Cutaneous Squamous Cell Carcinoma in Kidney and Heart Transplant Recipients. *Transplantation Direct*. 2015. [In Press] PMID: PMC4486315
11. **Karnes JH**, Cronin RM, Rollin J, Teumer A, Pouplard C, Shaffer CM, Blanquicett C, Bowton EA, Cowan JD, Mosley JD, Van Driest SL, Weeke PE, Wells QS, Bakchoul T, Denny JC, Greinacher A, Gruel Y, Roden DM. A genome-wide association study of heparin-induced thrombocytopenia using an electronic medical record. *Thromb Haemost*. 2015;113(3):772-781. PMID: PMC4433536
12. **Karnes JH**, Gong Y, Arwood MJ, Gums JG, Hall K, Limacher MC, Johnson JA, and Cooper-DeHoff RM. Alteration in fasting glucose after prolonged treatment with a thiazide diuretic. *Diabetes Res Clin Pract*. 2014; 104(3):363-9. PMID: PMC4074403
13. Weeke P, Mosley JD, Hanna D, Delaney JT, Shaffer C, Wells QS, Van Driest S, **Karnes JH**, Ingram C; Guo Y, Shyr Y, Norris K, Kannankeril PJ, Ramirez AH, Smith JD, Mardis ER, Nickerson D, George AL, Roden DM. Exome Sequencing Implicates an Increased Burden of Rare Potassium Channel Variants in the Risk of Drug Induced Long QT Syndrome. *J Am Coll Cardiol* 2014; 63(14):1430-1437. PMID: PMC4018823
14. Bowton E, Field JR, Wang S, Schildcrout JS, Van Driest SL, Delaney JT, Cowan J, Weeke P, Mosley JD, Wells QS, **Karnes JH**, Shaffer C, Peterson JF, Denny JC, Roden DM, Pulley JM. Biobanks and electronic medical records: enabling cost-effective research. *Sci Transl Med*. 2014; 6(234):234cm3. PMID: PMC4226414
15. Gubbins PO, Micek ST, Badowski M, Cheng J, Gallagher J, Johnson SG, **Karnes JH**, Lyons K, Moore KG, Strnad K. Innovation in Clinical Pharmacy Practice and Opportunities for Academic-Practice Partnership. *Pharmacotherapy* 2014; 34(5):e45-54.
16. Gong Y, McDonough CW, Beitelshes AL, O'Connell JR, **Karnes JH**, Turner ST, Chapman AB, Gums JG, Bailey KR, Boerwinkle EA, Johnson JA, Cooper-DeHoff RM. *PROX1* gene variant is associated with fasting glucose change after antihypertensive treatment. *Pharmacotherapy*. 2014; 34(2):123-130. PMID: PMC3945213
17. **Karnes JH**, Van Driest S, Bowton EA, Weeke PE, Mosley JD, Peterson JF, Denny JC, and Roden DM. Using systems approaches to address challenges for clinical implementation of pharmacogenomics. *Wiley Interdiscip Rev Syst Biol Med*. 2014; 6(2):125-135. PMID: PMC3944797

18. **Karnes JH**, Gong Y, Pacanowski MA, McDonough CW, Arwood MJ, Langaee TY, Pepine CJ, Johnson JA, and Cooper-DeHoff RM. Impact of *TCF7L2* single nucleotide polymorphisms on hydrochlorothiazide-induced diabetes. *Pharmacogenet Genomics* 2013; 23(12):697-705. PMID: PMC3893755
19. Mosley JD, Van Driest SL, Larkin EK, Weeke PE, Witte JS, Wells QS, **Karnes JH**, Guo Y, Bastarache L, Olson LM, McCarty CA, Pacheco JA, Jarvik GP, Larson EB, Crosslin DR, Kullo IJ, Tromp G, Kuivaniemi H, Carey DJ, Ritchie MD, Denny JC, Roden DM. Mechanistic Phenotypes: An Aggregative Phenotyping Strategy to Identify Disease Mechanisms Using GWAS Data. *Plos One*. 2013; 8(12):e81503. PMID: PMC3861317
20. **Karnes JH**, Langaee TY, McDonough CW, Chang S, Ramos M, Catlin JR, Casanova O, Gong Y, Pepine CJ, Johnson JA, and Cooper-DeHoff RM. Lack of association of the *HMGAI* IVS5-13insC variant with type 2 diabetes in an ethnically diverse hypertensive case control cohort. *J Transl Med*. 2013; 11(1):12. PMID: PMC3558451
21. **Karnes JH**, McDonough CW, Gong Y, Vo TT, Langaee TY, Chapman AB, Gums JG, Beitelshes AL, Bailey KR, Del-Aguila J, Boerwinkle EA, Pepine CJ, Turner ST, Johnson JA, Cooper-DeHoff RM. Association of *KCNJ1* variation with change in fasting glucose and new onset diabetes during HCTZ treatment. *Pharmacogenomics J*. 2013; 13(5):430-436. PMID: PMC3529742
22. **Karnes JH**, Cooper-Dehoff, RM. Antihypertensive medications: benefits of blood pressure lowering and hazards of metabolic effects. *Expert Rev Cardiovasc Ther*. 2009; 7(6):689-702. PMID: PMC2799117
23. Brunner M, Cooper-DeHoff RM, Gong Y, **Karnes JH**, Langaee TY, Pepine CJ, Johnson JA. Factors influencing blood pressure response to trandolapril add-on therapy in patients taking verapamil SR (from the International Verapamil SR/Trandolapril [INVEST] Study). *Am J Cardiol*. 2007; 99(11):1549-54. PMID: PMC2720593

*Authors contributed equally

ABSTRACTS

1. **Karnes JH**, Batai K, Arora A, Kaye JB, Steiner HE, Nair V, Garcia JGN, Yuan JXJ, Pauciulo MW, Nichols WC, Kittles R, Desai AA. Genome-Wide Association Study of Vasodilator Response in Pulmonary Arterial Hypertension. *Circulation*. 2017; 136: A24015. American Heart Association Scientific Sessions (Late Breaking Basic Science Poster), Anaheim, CA, November 2017.
2. Mosley JD, Feng Q, Wells QS, Van Driest SL, Shaffer CM, Edwards TL, Bastarache L, Wei WQ, Davis LK, McCarty CA, Thompson W, Chute CG, Gordon AS, Palmer MR, Crosslin DR, Larson EB, Carrell DS, Kullo IJ, Pacheco JA, Peissig PL, Linneman JG, Namjou B, Ritchie MD, Borthwick KM, Verma SS, **Karnes JH**, Wang TJ, Stein CM, Denny JC, Roden DM. Genetic predictors of biomarker levels derived from prospective epidemiologic cohorts applied to electronic health records to identify new biomarker-disease associations. American Society of Human Genetics Annual Meeting, Orlando, FL, October 2017.
3. Larriva MM, Campbell PJ, Nix DE, Quinn D, Klimecki W, **Karnes JH**. Efficacy of personal pharmacogenomic testing as an educational tool in the pharmacy curriculum. American College of Clinical Pharmacy Annual Meeting, Phoenix, AZ, October 2017.
4. Kaye JB, Schultz LE, Steiner HE, Kittles RA, Cavallari LH, **Karnes JH**. Performance of warfarin pharmacogenetic dosing algorithms in United States minority groups. American Indian Science and Engineering Society (AISES) National Conference, Minneapolis, MN, November 2016.
5. Aljabri A, Huckleberry YH, **Karnes JH**, Gharabeh M, Kutbi H, Raz Y, Yun S, Abraham I, Erstad B. Cost-Effectiveness of Anticoagulants for the Management of Suspected Heparin-Induced Thrombocytopenia in the US. American Heart Association Scientific Sessions, New Orleans, LA, November 2016.
6. **Karnes JH**, Phillips EJ, Shaffer CM, Denny JC, Mosley JD, Roden DM. HLA-KIR Interactions in Heparin-Induced Thrombocytopenia. American College of Clinical Pharmacy Annual Meeting, Fort Lauderdale, FL, October 2016

7. **Karnes JH**, Bastarache L, Shaffer CM, Gaudieri S, Xu Y, Glazer AM, Mosley JD, Raychaudhuri S, Mallal S, Ye Z, Mayer JG, Brilliant MH, Hebring SJ, Roden DM, Phillips EJ, Denny JC. A Clinical Catalogue of Phenotypes Associated with Variation in the MHC Locus. American Society of Human Genetics Annual Meeting, Vancouver, BC, CA, October 2016. (Selected as Reviewer's Choice Abstract and featured in ASHG Poster Walk)
8. Bastarache L, **Karnes JH**, Shaffer CM, Gaudieri S, Glazer AM, Steiner H, Mosley JD, Mallal S, Phillips EJ, Denny JC, Roden DM. Comparison of HLA Allelic Imputation Programs. American Society of Human Genetics Annual Meeting, Vancouver, BC, CA, October 2016.
9. Kaye JB and **Karnes JH**. Literature review of performance of genotype-guided warfarin dosing algorithms in diverse ethnic groups. Association of American Indian Physicians (AAIP) 45th Annual Meeting, Oakland, CA, August 2016.
10. Hemler JA, Marston ES, **Karnes JH**, Glazer AM, Shaffer CM, Denny JC, Phillips EJ, Mallal SA, Kendall PL. A Study of Immunogenetic Associations with Peanut Allergy utilizing a Novel DNA Repository. American Academy of Allergy, Asthma & Immunology (AAAAI), Los Angeles, CA, March 2016.
11. **Karnes JH**, Denny JC, Cronin RM, Shaffer CM, Mosley JD, Mallal S, Phillips E, Roden DM. Association of *HLA-DRB3*01:01* with Heparin-Induced Thrombocytopenia. American Heart Association Scientific Sessions, Orlando, FL, November 2015.
12. **Karnes JH**, Denny JC, Bowton EA, Shaffer CM, Mosley JD, Van Driest SL, Weeke PE, Wells QS, Roden DM. Genome-wide association study of platelet factor 4/heparin antibody formation. *October Clin Pharmacol Ther* 2015;97(S1):S27-S28. American Society for Clinical Pharmacology and Therapeutics Annual Meeting, New Orleans, LA, March 2015
13. **Karnes JH**, Denny JC, Cronin RM, Shaffer CM, Bowton EA, Cowan JD, Mosley JD, Van Driest SL, Weeke PE, Wells QS, Roden DM. Influence of Exonic Variation on Heparin-Induced Thrombocytopenia. *Circulation*. 2014;130: A11449. American Heart Association Scientific Sessions, Chicago, IL, November 2014
14. Mosley JD, Shaffer CM, Van Driest SL, Weeke PE, Wells QS, **Karnes JH**, Velez Edwards DR, Wei W, Teixeira PL, Bastarache L, Crawford DC, Manolio TA, Bottinger EP, McCarty CA, Jim Linneman, Pacheco JA, Thompson W, Chisholm RL, Jarvik GP, Crosslin DR, Carrell DS, Larson EB, Jouni H, Kullo IJ, Tromp G, Borthwick KM, Kuivaniemi H, Ritchie MD, Denny JC, Roden DM. A genome-wide association study identified variants in *KCNIP4* associated with ACE inhibitor induced cough. American Society of Human Genetics Annual Meeting, Boston, MA, October 2013.
15. **Karnes JH**, Mosley JD, Shaffer CM, Bowton EA, Delaney JT, Van Driest SL, Weeke PE, Wells QS, Denny JC, Roden DM. Genome-wide association study of fluoroquinolone-induced tendonitis. American College of Clinical Pharmacy Annual Meeting, Austin, TX, October 2014 (Selected as first runner-up among best fellow posters)
16. Sanders ML, **Karnes JH**, Denny JC, Roden DM, Ikizler TA, Birdwell KA. The Use of a DNA Biobank Linked to Electronic Medical Records to Determine Clinical and Genetic Predictors of Cutaneous Squamous Cell Carcinoma in Kidney Transplant Recipients. World Transplant Congress, San Francisco, CA, July 2014. (Selected as a top poster in the "proteomics/genomics" category)
17. Weeke PE, Mosley JD, Hanna D, Shaffer CM, Delaney JT, Wells QS, Van Driest SL, **Karnes JH**, Ingram CR, Guo Y, Shyr Y, Norris K, Kannankeril PJ, Ramirez AH, Smith JD, Mardis E, Nickerson DA, George A, Roden DM. Exome Sequencing Implicates the Burden of Rare Potassium Channel Variants in the Risk of Drug Induced Long QT Syndrome. American Heart Association Scientific Sessions, Dallas, TX, November 2013.
18. Wells QS, Mosley JD, Van Driest SL, Weeke P, **Karnes JH**, Shaffer CM, Bowton E, Denny JC and Roden DM. Genomwide-Association Identifies a Novel Locus for Anthracycline Cardiotoxicity. *Circulation* 2013; 128 (S22). American Heart Association Scientific Sessions, Dallas, TX, November 2013.
19. Sanders ML, **Karnes JH**, Denny JC, Roden DM, Ikizler TA, Birdwell KA. Clinical and genetic predictors of cutaneous squamous cell carcinoma in kidney transplant recipients. American Society of Nephrology Kidney Week 2013 Annual Meeting, Atlanta, GA, November 2013.

20. Mosley JD, Van Driest SL, Larkin EK, Weeke PE, Witte JS, Wells QS, **Karnes JH**, Guo Y, Bastarache L, Olson LM, McCarty CA, Pacheco JA, Jarvik GP, Larson EB, Crosslin DR, Kullo IJ, Tromp G, Kuivaniemi H, Carey DJ, Ritchie MD, Denny JC, Roden DM. Mechanistic Phenotypes: An Aggregative Phenotyping Strategy to Identify Disease Mechanisms Using GWAS Data. American Society of Human Genetics Annual Meeting, Boston, MA, October 2013.
21. Gong Y, Moore MJ, **Karnes JH**, McDonough CW, Wang Z, Langae TY, Beitelshes AL, Turner ST, Chapman AB, Gums JG, Bailey KR, Boerwinkle E, Johnson JA, Cooper-DeHoff RM. Fasting glucose loci associated with glucose response to antihypertensives- results from the pharmacogenomic evaluation of antihypertensive responses (PEAR) study. Clin Pharmacol Ther 2013;93(S1):S28. American Society for Clinical Pharmacology and Therapeutics Annual Meeting, Indianapolis, IN, March 2013.
22. **Karnes JH**, McDonough CW, Gong Y, Langae TY, Pepine CJ, Johnson JA, Cooper-DeHoff RM. Alpha adducin-1 (*ADD1*) single nucleotide polymorphism associated with new onset diabetes risk with hydrochlorothiazide therapy in the International Verapamil SR Trandolapril GENETic Substudy (INVEST-GENES). Clin Pharmacol Ther 2012;91(S1):S21. American Society for Clinical Pharmacology and Therapeutics Annual Meeting, National Harbor, MD, March 2012.
23. **Karnes JH**, Vo TT, Gong Y, Langae TY, Beitelshes AL, Turner ST, Chapman AB, Gums JG, Bailey K, Boerwinkle E, Pepine CJ, Johnson JA, Cooper-DeHoff RM. *KCNJ1* SNPs are associated with increased fasting glucose and risk of new onset diabetes during HCTZ therapy. Clin Pharmacol Ther 2011;89(S1):S46. American Society for Clinical Pharmacology and Therapeutics Annual Meeting, Dallas, TX, March 2011.
24. **Karnes JH**, George AM, Gong Y, Langae TY, Stauffer LA, Burkley BM, Pepine CJ, Johnson JA, Cooper-DeHoff RM. New-Onset Diabetes Risk Associated with Antihypertensive Therapy in Hypertensive Coronary Artery Disease Patients is Modified by a Single Nucleotide Polymorphism (SNP) in the L-Type Calcium Channel (LTCC) Alpha 1C Subunit Gene (CACNA1C). Clin Pharmacol Ther 2010;87(S1):S45. American Society for Clinical Pharmacology and Therapeutics Annual Meeting, Atlanta, GA, March 2010.
25. **Karnes JH**, Brunner M, Gong Y, Langae TY, Cooper-DeHoff RM, Pepine CJ, Johnson JA. Lack of Association of the Angiotensin II Type I Receptor (AGTR1) 1166A>C Polymorphism with cardiovascular and cerebrovascular Outcomes in a Subgroup of Patients of the International Verapamil SR/Trandolapril Study (INVEST). Clin Pharmacol Ther 2006;79(2):P43. American Society for Clinical Pharmacology and Therapeutics Annual Meeting, Baltimore, MD, March 2006.
26. Brunner M, **Karnes JH**, Gong Y, Langae TY, Cooper-DeHoff RM, Pepine CJ, Johnson JA. Association of angiotensin II type I receptor (AGTR1) 1166A>C polymorphism with blood pressure response to ace inhibitor in a subgroup of patients of the International Verapamil CR/trandolapril Study (INVEST). Clin Pharmacol Ther 2006;79(2):P14. American Society for Clinical Pharmacology and Therapeutics Annual Meeting, Baltimore, MD, March 2006.

OTHER CONTRIBUTIONS

Pavlos R, **Karnes JH**, Trubiano J, Peter J, Phillips E. Pharmacogenomics of Drug Allergy. In Khan D, Banerji A (eds). Drug Allergy Testing, 1st Edition. Elsevier, St Louis, Missouri. 2018, pp. 39-51.

Karnes JH, Erstad B, Aljabri A, Huckleberry Y, Gharaibeh M, Kutbi HI, Raz Y, Yun S and Abraham I. Medical Management of Heparin-Induced Thrombocytopenia: Pharmacoeconomic Considerations. Blood e-letter (19 June, 2017)

PRESENTATIONS

Invited:

April 2017

“Cardiovascular Pharmacogenomics: Meeting the Unmet Clinical Needs.” Precision Medicine Symposium, University of Arizona.

- January 2017 “Genetic Determinants of Heparin-Induced Thrombocytopenia.” PGRN-Riken Strategic Meeting, Yokohama, Japan.
- June 2016 “Unravelling Immunogenetic Phenotypes using Electronic Health Records Resources: Heparin-Induced Thrombocytopenia and Beyond.” Department of Transfusion Medicine, Ernst-Moritz-Arndt-Universität, Greifswald, Germany.
- November 2015 “Pharmacogenomics of Heparin-Induced Thrombocytopenia: Meeting the Unmet Clinical Needs.” Department of Pharmacotherapy and Translational Research Seminar, University of Florida, Gainesville, FL
- January 2014 “Pharmacogenomics of Heparin-Induced Thrombocytopenia.” Seminar, University of Southern California, Los Angeles, CA
- September 2013 “Clinical Pharmacogenomics.” Seminar Series at 8th Clinical Pharmacy Week (CPW 2013) Austrian Society of Clinical Pharmacy, Vienna, Austria

Non-invited:

- November 2015 “Pharmacogenomics of Heparin-Induced Thrombocytopenia: Meeting the Unmet Clinical Needs.” Department of Epidemiology and Biostatistics Clinical and Translational Research Seminar, University of Arizona, Tucson, AZ
- April 2015 “Association of *HLA-DRB3*01:01* with Heparin-Induced Thrombocytopenia.” Hot Topics Presentation, Pharmacogenomics Research Network Spring Meeting, State College, PA
- October 2014 “Genome-wide association study of fluoroquinolone-induced tendonitis.” Pharmacokinetics/Pharmacodynamics/ Pharmacogenomics Practice Research Network Business Meeting and Networking Forum. American College of Clinical Pharmacy Annual Meeting, Austin, TX
- January 2014 “Pharmacogenomics of Heparin-Induced Thrombocytopenia.” Grand Rounds, Vanderbilt University Division of Clinical Pharmacology.
- February 2012 “Long term antihypertensive exposure and adverse metabolic effects: PEAR Follow-up Study.” University of Florida College of Pharmacy Department of Pharmacotherapy and Translational Research Seminar (1 hour CE)
- February 2011 “Pharmacogenetic risk factors for thiazide-associated dysglycemia.” University of Florida College of Pharmacy Department of Pharmacotherapy and Translational Research Seminar (1 hour CE)
- May 2010 “New-Onset Diabetes Risk Associated with Antihypertensive Therapy Is Modified by a Single Nucleotide Polymorphism (SNP) in the L-Type Calcium Channel (LTCC) Alpha 1C Subunit Gene (CACNA1C).” 2010 National Predoctoral Clinical Research Training Program Meeting, Washington University, St. Louis, MO
- October 2009 “What is the Evidence Associating Antihypertensive-induced Diabetes with Adverse Outcomes?” University of Florida College of Pharmacy Department of Pharmacotherapy and Translational Research Seminar (1 hour CE)

AWARDS

2017	Outstanding Young Alumnus, University of Florida
2014	M. Kelli Jordan Travel Award, American College of Clinical Pharmacy
2014	Vanderbilt Clinical Pharmacology Fellows Teaching Award
2013	Membership Recruiting Honorable Mention, American Society for Clinical Pharmacology and Therapeutics
2012	Member of the Month (September), American Society for Clinical Pharmacology and Therapeutics
2012	Membership Recruiting Honorable Mention, American Society for Clinical Pharmacology and Therapeutics
2012	Graduate Student Travel Award, University of Florida Office of Research
2010	Pharmaceutical Industry SAS® User's Group (PharmaSUG) Annual Meeting Scholarship
2010	Teaching Assistant of the Year, University of Florida College of Pharmacy
2009, 2010	Alumni Brother of the Year, Kappa Psi Pharmaceutical Fraternity Gamma Sigma Chapter
2007	Brother of the Year, Kappa Psi Pharmaceutical Fraternity Gamma Sigma Chapter
2006	Peter Field Academic Scholarship, Kappa Psi Pharmaceutical Fraternity Gamma Sigma Chapter
2000 – 2004	Hogan Prize for Excellence in Classical Studies, College of William and Mary in Virginia

TEACHING EXPERIENCEUniversity of Arizona

Spring 2017	Applied Pharmacogenetics and Precision Medicine. (PHPR 887), Course Coordinator
2015 - 2017	"Drug Discovery and Development: Pharmacogenomics." Medicines-Bench to Bedside (PCOL 195a)
Spring 2016	"Pharmacogenomics in Practice: Meeting the Unmet Clinical Needs." Problems in Complex Disease Biology (595H)
Fall 2015	"Logistic Regression" and "Survival Analysis." Drug Literature Evaluation - Statistical Methods (PhPr 861a)

Belmont University College of Pharmacy

Fall 2014	"Cardiovascular Pharmacogenomics." Pharmacodynamics I (PHM 6110)
Spring 2014	"Personalized Cardiovascular Pharmacotherapy." Cardiology (PHM 6991)
Spring 2014	"Personalized Medicine in Cardiovascular Pharmacotherapy." Pharmacogenomics and Personalized Medicine (PHM 6991)
Fall 2013	"Cardiovascular Pharmacogenomics." Pharmacodynamics I (PHM 6110)
Fall 2013	"Pharmacogenomics of Adverse Drug Reactions." Toxicology (PHM 6991)

University of Florida College of Pharmacy

Spring 2012	Teaching Assistant, Geriatric Pharmacotherapy (PHA 5618)
Fall 2011	"Treatment of Cardiac Arrhythmias." 4 lecture and case discussion hours, Pharmacotherapy II (PHA 5782)
2009 - 2012	Teaching Assistant, Advanced Pharmaceutical Compounding (PHA 5109L, PHA 5177C)
2011	Teaching Assistant, Biostatistics (PHA 5719)

2011	Hospital Pharmacy Peer Review Training Program
2010 – 2012	University of Florida College of Pharmacy Cardiovascular Pharmacogenomics Clerkship (PHA 5600)
2008 - 2012	“Bioinformatic Tools for Pharmacogenomics Research.” Monthly discussion session for Cardiovascular Pharmacogenomics Clerkship (PHA 5600)
2010	Categorical Variable Analysis Discussion Session. Biostatistics (PHA 5719)
2010	Osteoporosis Community Screening Session. Practicum (PHA 5941)
2010	“Pharmacogenomics of HLA and Diabetes.” Drug Therapy Monitoring and Pharmacogenomics (PHA 5113)
2009	“The Pharmacogenomics of Diabetes.” Drug Therapy Monitoring and Pharmacogenomics (PHA 5113)
2009 - 2010	“Database Tools for Pharmacogenomics.” Drug Therapy Monitoring and Pharmacogenomics (PHA 5113)
2009 - 2011	Graduate student mentor, Summer Research Internships for the Center for Pharmacogenomics
2008	Teaching Assistant, Advanced Pharmaceutical Compounding (PHA 5108L)

MANUSCRIPT REVIEWS

Advances in Chronic Kidney Disease
Annals of Hematology
Clinical and Translational Science
Clinical Therapeutics
Drug Safety
European Journal of Clinical Pharmacology
Journal of General Internal Medicine
Journal of Molecular Medicine
Frontiers in Pharmacology (Review Editor)
Pharmacogenetics and Genomic
Pharmacotherapy
Pharmaceutical Research
Plos One

GRANT REVIEWS

American Heart Association: GTOE CL (Genomics and Translational Biology – Clinical, Observational / Epidemiology – Clinical)

PROFESSIONAL AFFILIATIONS

American Association of Colleges of Pharmacy (AACP)
American College of Clinical Pharmacy (ACCP)
American Heart Association (AHA)
American Society of Clinical Pharmacology and Therapeutics (ASCPT)
American Society of Hematology (ASH)
American Society of Human Genetics (ASHG)
Clinical Pharmacogenetics Implementation Consortium (CPIC)
International Society of Thrombosis and Haemostasis (ISTH)
Kappa Psi Pharmaceutical Fraternity Incorporated
Pharmacogenomics Research Network (PGRN)

PROFESSIONAL SERVICE

American College of Clinical Pharmacy

2017 – Present	Chair-elect (Pharmacokinetics, Pharmacodynamics, Pharmacogenomics [PK/PD/PG] Practice & Research Network)
2016 – 2017	Secretary/Treasurer (PK/PD/PG Practice & Research Network)
2012 – 2013	Task Force on Practice Innovation

American Heart Association

2016 – Present	Early Career Committee, Council on Functional Genomics & Translational Biology (FGTB)
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American Society for Clinical Pharmacology and Therapeutics

2017 - Present	Chair, Pharmacogenomics Community
2015 - 2017	Chair, Literature Dissemination Committee (Pharmacogenomics Community Working Group)
2015 - 2017	Chair, Social Media Task Force
2015 - 2017	Education Committee
2014 - 2015	Social Media Task Force
2011 – 2013	Membership Action Team

Kappa Psi Pharmaceutical Fraternity Incorporated

2015 – Present	Grand Council Deputy (Faculty Advisor), Gamma Upsilon Chapter
2008 – 2009	Satrap (President), Southeast Region (Province 4)
2007 – 2008	Vice Satrap (Vice President), Southeast Region (Province 4)
2006 – 2007	Regent (President), Gamma Sigma Chapter