

CURRICULUM VITAE

Caitrin Wheeler McDonough

(Legal Name: Caitrin Wheeler McDonough Rowe)

September 2020

PERSONAL INFORMATION

Address:

Business: Department of Pharmacotherapy and Translational
Research
College of Pharmacy
University of Florida
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EDUCATION AND TRAINING

Bachelor of Science in Biochemistry, with Honors, Minor in Chemistry, The University of Iowa, Iowa City, Iowa, May 2005

Ph.D. in Molecular Medicine and Translational Science, Wake Forest University School of Medicine, Winston-Salem, North Carolina, May 2010

Advisor: Donald W. Bowden, Ph.D.

Dissertation Research: The Genetics of Type 2 Diabetic End-Stage Renal Disease in African Americans

Postdoctoral Fellowship in Cardiovascular Pharmacogenomics, The University of Florida, Gainesville, Florida, July 2010 to May 2013

Advisor: Julie A. Johnson, Pharm.D.

M.S. in Medical Sciences, concentration in Biomedical Informatics, The University of Florida, August 2019

Advisor: William Hogan, M.D., M.S.

Thesis Research: Characterization of Resistant Hypertension and Associated Outcomes in OneFlorida

PROFESSIONAL APPOINTMENTS

2013-present Research Assistant Professor, Department of Pharmacotherapy and Translational Research, College of Pharmacy, The University of Florida, Gainesville, Florida, May 2013 to present

PROFESSIONAL EXPERIENCE

Undergraduate Research Experience, Department of Biochemistry, The University of Iowa, Iowa City, Iowa, 2004-2005
Advisor: Lori L. Wallrath, Ph.D.

Laboratory Assistant, Department of Biochemistry, The University of Iowa, Iowa City, Iowa, 2003-2005
Advisor: Lori L. Wallrath, Ph.D.

PROFESSIONAL MEMBERSHIPS

American Society of Human Genetics, 2007-present

American Society for Clinical Pharmacology and Therapeutics, 2011-present

American Heart Association, 2015-present

GRANTS AND CONTRACTS

Active Research Support

Source: NIH, National Heart, Lung, and Blood Institute, K01 HL141690
Title: "Integrative Data Approaches for Resistant Hypertension Identification and Prediction"
Time period: June 2018 – May 2022
Role: Principal Investigator
Award: \$468,110 direct, \$502,987 total

Source: NIH, National Heart, Lung, and Blood Institute, R01 HL149752
Title: "Precision antiplatelet therapy after percutaneous coronary intervention"
Time period: July 2020 – June 2025
Role: Sub-Investigator (MPIs: Lari Cavallari (UF), Craig Lee (UNC))
Award: \$2.26M direct, \$3.55M total

Source: Medical Device Innovation Consortium
Title: "R2B17 Uncontrolled Hypertension"
Time period: April 2020 – March 2021
Role: Sub-Investigator (PI: Ellen Keeley)

Completed Research Support

Source: NIH, National Center for Advancement of Translational Science,
1 KL2 TR001429
Project Title: "Characterization of Resistant Hypertension and Associated Outcomes in OneFlorida"
Appointment time period: April 2016 to March 2018
Role: KL2 Scholar (PI: Thomas Pearson, Mentor: Rhonda Cooper-DeHoff, Co-Mentor: Bill Hogan)

Source: NIH, National Human Genome Research Institute, U01 HG007269
Title: "Genomic Medicine Implementation The Personalized Medicine Program"
Time period: May 2013 to April 2017
Role: Sub-Investigator (PI: Julie Johnson)

Source: NIH, National Heart, Lung, and Blood Institute, Loan Repayment Program,
L30 HL115706-02
Title: "The Identification of Antihypertensive Pharmacogenomic Predictors of Adverse Cardiovascular Outcomes and Resistant Hypertension"
Time period: July 2012 to June 2016
Role: Principal Investigator/Award Recipient

Source: NIH, National Human Genome Research Institute, U01 HG007269 -03S1
Title: "Genomic Medicine Implementation The Personalized Medicine Program"
Time period: May 2015 to April 2016
Role: Co-Investigator (PI: Julie Johnson)

Source: NIH, National Institute of General Medical Sciences, U01 GM74492
Title: "Pharmacogenomic Evaluation of Antihypertensive Responses"
Time period: August 2010 to July 2015
Role: Co-investigator (PIs: Julie Johnson and Rhonda Cooper-DeHoff)

Source: NIH, National Institute of Neurological Disease and Stroke; R01 NS073346
Title: "Secondary Prevention of Subcortical Stroke Prevention Genetic Substudy"
Time period: March 2011 to February 2014
Role: Co-Investigator (PIs: Julie Johnson, Oscar Benavente, and Alan Shuldiner)

Source: NIH, National Institute of Diabetes and Digestive and Kidney Diseases,
T32 DK007518
Title: "Pre & Post-Doctoral Training in Nephrology & Hypertension"
Time period: July 2010 to June 2012
Role: Post-Doctoral Fellow (PI: Mark Segal)

HONORS AND AWARDS

3rd Place, University of Iowa Biosciences Undergraduate Poster Competition, September 2004.

1st Place, University of Florida College of Pharmacy 25th Annual Research Showcase, Poster Competition, Post-doctoral Fellow Division, February 2012.

1st Place, University of Florida College of Pharmacy 26th Annual Research Showcase, Poster Competition, Post-doctoral Fellow Division, February 2013.

Travel Fellowship, 3rd NIGMS-funded Short Course on Statistical Genetics & Genomics at the University of Alabama at Birmingham, July 2013.

Selection and Travel Support to the PCORnet Cardiovascular Health Clinical Research Group Meeting in Washington D.C., June 2016, Awarding Group: PCORnet CVH CRG.

Travel Award, 3rd Annual North Coast Precision Medicine Conference at Case Western Reserve University, Cleveland, OH, September 2017.

Top Poster Ribbon, American Society for Clinical Pharmacology & Therapeutics Annual Meeting, Orlando, FL, March 2018.

PUBLICATIONS

Original Articles

1. Freedman BI, Hicks PJ, Sale MM, Pierson ED, Langefeld CD, Rich SS, Xu J, **McDonough C**, Janssen B, Yard BA, van der Woude FJ, Bowden DW. A leucine repeat in the carnosinase gene *CNDP1* is associated with diabetic end-stage renal disease in European Americans. *NDT*. 2007; 22(4):1131-5.
2. **McDonough CW**, Hicks PJ, Lu L, Langefeld CD, Freedman BI, Bowden DW. The influence of carnosinase gene polymorphisms on diabetic nephropathy risk in African-Americans. *Hum Genet*. 2009; 126(2):265-75. [PMC2885788]
3. Schulze SR, Curio-Penny B, Speese S, Dialynas G, Cryderman DE, **McDonough CW**, Nalbant D, Petersen M, Budnick V, Geyer PK, Wallrath LL. A comparative study of Drosophila and human A-type lamins. *PLoS One*. 2009; 4(10):e7564. [PMC2762312]
4. **McDonough CW**, Bostrom MA, Lu L, Hicks PJ, Langefeld CD, Divers J, Mychaleckyj JC, Freedman BI, Bowden DW. Genetic analysis of diabetic nephropathy on chromosome 18 in African Americans: linkage analysis and dense SNP mapping. *Hum Genet*. 2009; 126(6):805-817. [PMC2937163]
5. **McDonough CW**, Palmer ND, Hicks PJ, Roh BH, An SS, Cooke JN, Hester JM, Wing MR, Bostrom MA, Rudock ME, Lewis JP, Talbert ME, Blevins RA, Lu L, Ng MC, Sale MM, Divers

- J, Langefeld CD, Freedman BI, Bowden DW. A genome wide association study for diabetic nephropathy genes in African Americans. *Kidney Int.* 2011; 79(5):563-72. [PMC3056271]
6. Murea M, Lu L, Ma L, Hicks PJ, Divers J, **McDonough CW**, Langefeld CD, Bowden DW, Freedman BI. Genome-wide association scan for survival on dialysis in African-Americans with type 2 diabetes. *Am J Nephrol.* 2011; 33(6):502-9. [PMC3202959]
 7. Freedman BI, Langefeld CD, Lu L, Divers J, Comeau ME, Kopp JB, Winkler CA, Nelson GW, Palmer ND, Hicks PJ, Bostrom MA, Cooke JN, **McDonough CW**, Bowden DW. Differential effects of MYH9 and APOL1 risk variants on FRMD3 Association with Diabetic ESRD in African Americans. *PLoS Genetics.* 2011; 7(6):e1002150. [PMC3116917]
 8. Palmer ND, **McDonough CW**, Hicks PJ, Roh BH, Wing MR, An SS, Hester JM, Cooke JN, Bostrom MA, Rudock ME, Talbert ME, Lewis JP, DIAGRAM Consortium, MAGIC Investigators, Ferrara A, Lu L, Ziegler JT, Sale MM, Divers J, Shriner D, Adeyemo A, Rotimi CN, Ng MCY, Langefeld CD, Freedman BI, Bowden DW. A Genome-Wide Association Search for Type 2 Diabetes Genes in African Americans. *PLoS ONE.* 2012; 7(1): e29202. [PMC3251563]
 9. Karnes JH, **McDonough CW**, Gong Y, Vo TT, Langae TY, Chapman AB, Gums JG, Beitelshes AL, Bailey KR, Del-Aguila JL, Boerwinkle EA, Pepine CJ, Turner ST, Johnson JA, and 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. [Epub ahead of print, August 21, 2012]. [PMC3529742]
 10. Asselbergs FW, Guo Y, van Iperen EP, Sivapalaratnam S, Tragante V, Lanktree MB, Lange LA, Almoguera B, Appelman YE, Barnard J, Baumert J, Beitelshes AL, Bhangale TR, Chen YD, Gaunt TR, Gong Y, Hopewell JC, Johnson T, Kleber ME, Langae TY, Li M, Li YR, Liu K, **McDonough CW**, Meijs MF, Middelberg RP, Musunuru K, Nelson CP, O'Connell JR, Padmanabhan S, Pankow JS, Pankratz N, Rafelt S, Rajagopalan R, Romaine SP, Schork NJ, Shaffer J, Shen H, Smith EN, Tischfield SE, van der Most PJ, van Vliet-Ostaptchouk JV, Verweij N, Volcik KA, Zhang L, Bailey KR, Bailey KM, Bauer F, Boer JM, Braund PS, Burt A, Burton PR, Buxbaum SG, Chen W, Cooper-Dehoff RM, Cupples LA, Dejong JS, Delles C, Duggan D, Fornage M, Furlong CE, Glazer N, Gums JG, Hastie C, Holmes MV, Illig T, Kirkland SA, Kivimaki M, Klein R, Klein BE, Kooperberg C, Kottke-Marchant K, Kumari M, Lacroix AZ, Mallela L, Murugesan G, Ordovas J, Ouwehand WH, Post WS, Saxena R, Scharnagl H, Schreiner PJ, Shah T, Shields DC, Shimbo D, Srinivasan SR, Stolk RP, Swerdlow DI, Taylor HA Jr, Topol EJ, Toskala E, van Pelt JL, van Setten J, Yusuf S, Whittaker JC, Zwinderman AH; LifeLines Cohort Study, Anand SS, Balmforth AJ, Berenson GS, Bezzina CR, Boehm BO, Boerwinkle E, Casas JP, Caulfield MJ, Clarke R, Connell JM, Cruickshanks KJ, Davidson KW, Day IN, de Bakker PI, Doevendans PA, Dominiczak AF, Hall AS, Hartman CA, Hengstenberg C, Hillege HL, Hofker MH, Humphries SE, Jarvik GP, Johnson JA, Kaess BM, Kathiresan S, Koenig W, Lawlor DA, März W, Melander O, Mitchell BD, Montgomery GW, Munroe PB, Murray SS, Newhouse SJ, Onland-Moret NC, Poulter N, Psaty B, Redline S, Rich SS, Rotter JI, Schunkert H, Sever P, Shuldiner AR, Silverstein RL, Stanton A, Thorand B, Trip MD, Tsai MY, van der Harst P, van der Schoot E, van der Schouw YT, Verschuren WM, Watkins H, Wilde AA, Wolffenbuttel BH, Whitfield JB, Hovingh GK, Ballantyne CM, Wijmenga C, Reilly MP, Martin NG, Wilson JG, Rader DJ, Samani NJ, Reiner AP, Hegele RA, Kastelein JJ, Hingorani AD, Talmud PJ, Hakonarson H, Elbers CC, Keating BJ, Drenos F. Large-Scale Gene-Centric Meta-analysis across 32 Studies Identifies Multiple Lipid Loci. *Am J Hum Genet.* 2012; 91(5):823-38. [PMC3487124].

11. Gong Y, **McDonough CW**, Wang Z, Cooper-DeHoff RM, Langaee TY, Beitelshes AL, Chapman AB, Gums JG, Bailey KR, Boerwinkle E, Turner ST, Johnson JA. Hypertension susceptibility loci and blood pressure response to antihypertensives – results from the pharmacogenomic evaluation of antihypertensive responses (PEAR) study. *Circ Cardiovasc Genet.* 2012; 5(6):686-91. [PMC3529147].
12. Karnes JH, Langaee TY, **McDonough CW**, Chang SW, Ramos M, Catlin JR, Casanova O, Gong Y, Pepine CJ, Johnson JA, and Cooper-DeHoff RM. Lack of association of the *HMG11* IVS5-13insC variant with type 2 diabetes in an ethnically diverse hypertensive case control cohort. *J Transl Med.* 2013; 11(1):12. [PMC3558451].
13. Ganesh SK, Tragante V, Guo W, Guo Y, Lanktree MB, Smith EN, Johnson T, Castillo BA, Barnard J, Baumert J, Chang YP, Elbers CC, Farrall M, Fischer ME, Franceschini N, Gaunt TR, Gho JM, Gieger C, Gong Y, Isaacs A, Kleber ME, Leach IM, **McDonough CW**, Meijis MF, Mellander O, Molony CM, Nolte IM, Padmanabhan S, Price TS, Rajagopalan R, Shaffer J, Shah S, Shen H, Soranzo N, van der Most PJ, Van Iperen EP, van Setten J, Vonk JM, Zhang L, Beitelshes AL, Berenson GS, Bhatt DL, Boer JM, Boerwinkle E, Burkley B, Burt A, Chakravarti A, Chen W, Cooper-Dehoff RM, Curtis SP, Dreisbach A, Duggan D, Ehret GB, Fabsitz RR, Fornage M, Fox E, Furlong CE, Gansevoort RT, Hofker MH, Hovingh GK, Kirkland SA, Kottke-Marchant K, Kutlar A, Lacroix AZ, Langaee TY, Li YR, Lin H, Liu K, Maiwald S, Malik R; METASTROKE, Murugesan G, Newton-Cheh C, O'Connell JR, Onland-Moret NC, Ouwehand WH, Palmas W, Penninx BW, Pepine CJ, Pettinger M, Polak JF, Ramachandran VS, Ranchalis J, Redline S, Ridker PM, Rose LM, Scharnag H, Schork NJ, Shimbo D, Shuldiner AR, Srinivasan SR, Stolk RP, Taylor HA, Thorand B, Trip MD, van Duijn CM, Verschuren WM, Wijmenga C, Winkelmann BR, Wyatt S, Young JH, Boehm BO, Caulfield MJ, Chasman DI, Davidson KW, Doevendans PA, Fitzgerald GA, Gums JG, Hakonarson H, Hillege HL, Illig T, Jarvik GP, Johnson JA, Kastelein JJ, Koenig W; LifeLines Cohort Study, März W, Mitchell BD, Murray SS, Oldehinkel AJ, Rader DJ, Reilly MP, Reiner AP, Schadt EE, Silverstein RL, Snieder H, Stanton AV, Uitterlinden AG, van der Harst P, van der Schouw YT, Samani NJ, Johnson AD, Munroe PB, de Bakker PI, Zhu X, Levy D, Keating BJ, Asselbergs FW. Loci influencing blood pressure identified using a cardiovascular gene-centric array. *Hum Mol Genet.* 2013; 22(8):1663-78. PMID: 23303523. [PMC3657476].
14. **McDonough CW**, Burbage SE, Duarte JD, Gong Y, Langaee TY, Turner ST, Gums JG, Chapman AB, Bailey KR, Beitelshes AL, Boerwinkle E, Pepine CJ, Cooper-DeHoff RM, Johnson JA. Association of variants in *NEDD4L* with blood pressure response and adverse cardiovascular outcomes in hypertensive patients treated with thiazide diuretics. *Journal of Hypertension*, 2013; 31(4):698-704. PMID: 23353631. [PMC3756535].
15. **McDonough CW**, Gong Y, Padmanabhan S, Burkley B, Langaee TY, Melander O, Pepine CJ, Dominiczak AF, Cooper-DeHoff RM, Johnson JA. Pharmacogenomic association of non-synonymous SNPs in *SIGLEC12*, *A1BG*, and the Selectin Region and Cardiovascular Outcomes. *Hypertension*, 2013; 62(1):48-54. PMID: 23690342. [PMC3686553].
16. Turner ST, Boerwinkle E, O'Connell JR, Bailey KR, Gong Y, Chapman AB, **McDonough CW**, Beitelshes AL, Schwartz GL, Gums JG, Padmanabhan S, Hiltunen TP, Citterio L, Donner KM, Hedner T, Lanzani C, Melander O, Saarela J, Ripatti S, Wahlstrand B, Manunta P, Kontula K, Anna F, Dominiczak AF, Cooper-DeHoff RM, Johnson JA. Genomic Association Analysis of Common Variants Influencing Antihypertensive Response to Hydrochlorothiazide. *Hypertension*, 2013; 62(2):391-7. PMID: 23753411. [PMC3780966]

17. Gong Y, **McDonough CW**, Beitelshes AL, O'Connell JR, Karnes JH, Turner ST, Chapman AB, Gums JG, Bailey KR, Boerwinkle E, Johnson JA, Cooper-DeHoff RM. PROX1 Gene Variant is Associated with Glucose Change after Antihypertensive Treatment. *Pharmacotherapy*, 2014, 34(2):123-30. PMID: 24122840. [PMC3945213].
18. **McDonough CW**, Gillis NK, Alsultan A, Chang SW, Kawaguchi-Suzuki M, Lang JE, Shahin MHA, Buford TW, El Roubi NM, Sá ACC, Langaee TY, Gums JG, Chapman AB, Cooper-DeHoff RM, Turner ST, Gong Y, Johnson JA. Atenolol Induced HDL-C Change in the Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR) Study. *PLoS One*. 2013; 8(10):e76984. PMID: 24116192. [PMC3792156].
19. Karnes JH, Gong Y, Pacanowski MA, **McDonough CW**, Arwood M, 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: 24128935. [PMC3893755].
20. Yoneyama S, Guo Y, Lanktree MB, Barnes MR, Elbers CC, Karczewski KJ, Padmanabhan S, Bauer F, Baumert J, Beitelshes A, Berenson GS, Boer JM, Burke G, Cade B, Chen W, Cooper-Dehoff RM, Gaunt TR, Gieger C, Gong Y, Gorski M, Heard-Costa N, Johnson T, Lamonte MJ, **McDonough C**, Monda KL, Onland-Moret NC, Nelson CP, O'Connell JR, Ordovas J, Peter I, Peters A, Shaffer J, Shen H, Smith E, Speilotes L, Thomas F, Thorand B, Verschuren WM, Anand SS, Dominiczak A, Davidson KW, Hegele RA, Heid I, Hofker MH, Huggins GS, Illig T, Johnson JA, Kirkland S; the Look AHEAD Research Group, König W, Langaee TY, McCaffery J, Melander O, Mitchell BD, Munroe P, Murray SS, Papanicolaou G, Redline S, Reilly M, Samani NJ, Schork NJ, van der Schouw YT, Shimbo D, Shuldiner AR, Tobin MD, Wijmenga C, Yusuf S; the GIANT Consortium; the CARE IBC Consortium, Hakonarson H, Lange LA, Demerath EW, Fox CS, North KE, Reiner AP, Keating B, Taylor KC. Gene-centric meta-analyses for central adiposity traits in up to 57,412 individuals of European descent confirm known loci and reveal several novel associations. *Hum Mol Genet.*, 2014; 23(9):2498-510. PMID: 24345515. [PMC3988452].
21. Vandell AG, **McDonough CW**, Gong Y, Langaee TY, Lucas AM, Chapman AB, Gums JG, Beitelshes AL, Bailey KR, Johnson RJ, Boerwinkle E, Turner ST, Cooper-DeHoff RM, Johnson JA. Hydrochlorothiazide-Induced Hyperuricemia in the Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR) Study. *J Intern Med*. 2014 Feb 12. [Epub ahead of print]. PMID: 24612202.
22. Tragante V, Barnes MR, Ganesh SK, Lanktree MB, Guo W, Franceschini N, Smith E N, Johnson T, Holmes M V, Karczewski KJ, Almqvera B, Barnard J, Baumert J, Chang YC, Elbers CC, Farrall M, Fischer ME, Gaunt TR, Gho JM, Gieger C, Goel A, Gong Y, Isaacs A, Kleber ME, Leach IM, **McDonough CW**, Meijs MF, Mellander O, Nelson CP, Nolte IM, Padmanabhan S, Pankratz N, Price TS, Shaffer J, Shah S, Tomaszewski M, van der Most PJ, Van Iperen EP, Vonk JM, Witkowska K, Wong C, Zhang L, Berenson GS, Bhatt DL, Brown M, Burt A, Cooper-DeHoff RM, Cruickshanks KJ, Curtis SP, Gansevoort RT, Guo X, Haiqing S, Hastie CE, Hofker MH, Hovingh GK, Kim D, Kirkland SA, Klein B E, Klein R, Li YR, Newton-Cheh C, Onland-Moret NC, Palmas W, Parsa A, Penninx BW, Pettinger M, Vasan RS, Ridker PM, Shimbo D, Steele L, Stolk RP, Thorand B, Trip MD, van Duijn CM, Verschuren CM, Wijmenga62, Wyatt S, Young JH, Zwinderman AH, Bezzina CR, Boerwinkle E, Casas JP, Caulfield MJ, Chakravarti A, Chasman DI, Davidson KW, Doevendans PA, FitzGerald GA, Fornage M, Hakonarson H, Halder I, Hillege HL, Illig T, Jarvik GP, Johnson JA, Kastelein JJ, Koenig W, März W, Murray SS, O'Connell JR,

- Oldehinkel AJ, Rader DJ, Redline S, Reilly MP, Schadt EE, Silverstein RL, Snieder H, Snyder M, Stanton AV, Tobin MD, Uitterlinden AG, van der Harst P, van der Schouw YT, Samani NJ, Johnson AD, Reiner AP, Zhu X, de Bakker PI, Levy D, Asselbergs FW, Munroe PB, Keating BJ. Gene-centric meta-analysis in 87,736 individuals of European ancestry identifies multiple blood pressure related loci. *Am J Hum Genet.*, 2014; 94(3):349-60. PMID: 24560520. [PMC3951943].
23. Shroads AL, Coats BS, **McDonough CW**, Langae T, Stacpoole PW. Haplotype variations in glutathione transferase zeta 1 influence the kinetics and dynamics of chronic dichloroacetate in children. *J Clin Pharmacol.*, 2014 Jul 30. [Epub ahead of print]. PMID: 25079374.
 24. Fontana V*, **McDonough CW***, Gong Y, El Rouby NM, Sá ACC, Taylor KD, Chen Y-D I, Gums JG, Chapman AB, Turner ST, Pepine CJ, Johnson JA, Cooper-DeHoff RM. Large-Scale Gene-centric Analysis Identifies Polymorphisms for Resistant Hypertension. *J Am Heart Assoc.* 2014; 3(6): pii:e001398. PMID: 25385345. *These authors contributed equally to this work.
 25. Langae TY, Zhong G, Li W, Hamadeh I, Solayman MH, **McDonough CW**, Stacpoole PW, James MO. The influence of human GSTZ1 gene haplotype variations on GSTZ1 expression. *Pharmacogenet Genomics.* 2015; 25(5):239-45. PMID: 25738370
 26. **McDonough CW**, McClure LA, Mitchell BD, Gong Y, Horenstein RB, Lewis JP, Field TS, Talbert RL, Benavente OR, Johnson JA, Shuldiner AR. *CYP2C19* Metabolizer Status and Clopidogrel Efficacy in the Secondary Prevention of Small Subcortical Strokes (SPS3) Study. *J Am Heart Assoc.* 2015; 4(6): pii:e001652. PMID: 26019129.
 27. Gong Y, **McDonough CW**, Beitelshees AL, El Rouby N, Hiltunen TP, O'Connell JR, Padmanabhan S, Langae TY, Hall K, Schmidt SO, Curry RW Jr, Gums JG, Donner KM, Kontula KK, Bailey KR, Boerwinkle E, Takahashi A, Tanaka T, Kubo M, Chapman AB, Turner ST, Pepine CJ, Cooper-DeHoff RM, Johnson JA. PTPRD gene associated with blood pressure response to atenolol and resistant hypertension. *J Hypertens.* 2015 Nov;33(11):2278-85. doi: 10.1097/HJH.0000000000000714.
 28. Hoh BL, Gong Y, Waters ML, Royster AJ, Sheehan TO, Burkley B, Langae TY, **McDonough CW**, Mocco J, Zuckerman SL, Mummareddy N, Stephens ML, Ingram C, Shaffer CM, Denny JC, Brilliant MH, Kitchner TE, Linneman JG, Roden DM, Johnson JA. *CYP2C19* and *CES1* Polymorphisms and Efficacy of Clopidogrel and Aspirin Dual Antiplatelet Therapy in Patients with Symptomatic Intracranial Atherosclerotic Disease. *J Neurosurg.* 2015 Nov 20:1-6. [Epub ahead of print].
 29. NINDS Stroke Genetics Network (SiGN) and International Stroke Genetics Consortium (ISGC). (**McDonough CW** part of SiGN). A genome-wide association study of ischemic stroke and its subtypes identifies a novel locus near *TSPAN2* for stroke related to atherosclerosis. *Lancet Neurol.* 2015 Dec 18. pii: S1474-4422(15)00338-5. doi: 10.1016/S1474-4422(15)00338-5. [Epub ahead of print]
 30. Gong Y, Beitelshees AL, Wang Z, **McDonough CW**, Langae TY, Hall K, Schmidt SO, Curry RW, Gums JG, Bailey KR, Boerwinkle E, Chapman AB, Turner ST, Cooper-DeHoff RM, Johnson JA. Pharmacogenomic Genome-Wide Meta-Analysis of Blood Pressure

Response to Beta-Blockers in Hypertensive African Americans. *Hypertension*. 2016 Mar;67(3):556-63. PMID: 26729753.

31. Chang SW, Gong Y, **McDonough CW**, Langaee TY, Nasiri Kenari N, Beitelshes AL, Gums JG, Chapman AB, Turner ST, Johnson JA, Cooper-DeHoff RM. Melatonin Pathway and Atenolol-Related Glucose Dysregulation: Is There a Correlation? *Clin Transl Sci*. 2016 Apr; 9(2):114-22. PMID: 26946962.
32. Dotson VM, Hsu FC, Langaee TY, **McDonough CW**, King AC, Choen RA, Newman AB, Kritchevsky SB, Myers V, Manini TM, Pahor M, for the LIFE Study Group. Genetic Moderators of the Impact of Physical Activity on Depressive Symptoms. *J Frailty Aging*. 2016; 5(1):6-14. PMID: 26980363.
33. Shahin MH, Gong Y, **McDonough CW**, Rotroff DM, Beitelshes AL, Garrett TJ, Gums JG, Motsinger-Reif A, Chapman AB, Turner ST, Boerwinkle E, Frye RF, Fiehn O, Cooper-DeHoff RM, Kaddurah-Daouk R, Johnson JA. A Genetic Response Score for Hydrochlorothiazide Use: Insights From Genomics and Metabolomics Integration. *Hypertension*. 2016 Sep;68(3):621-9. PMID: 27381900. PMCID: PMC4982802.
34. Chang SW, **McDonough CW**, Gong Y, Johnson TA, Tsunoda T, Gamazon ER, Perera MA, Takahashi A, Tanaka T, Kubo M, Pepine CJ, Johnson JA, Cooper-DeHoff RM. Genome-wide association study identifies pharmacogenomic loci linked with specific antihypertensive drug treatment and new-onset diabetes. *Pharmacogenomics J*. 2016 Sep 27. PMID: 27670767.
35. Weitzel KW, **McDonough CW**, Elsey AR, Burkley B, Cavallari LH, Johnson JA. Use of personal genotype data in health professional education: Effects on student learning and attitudes in a pharmacogenomics course. *American Journal of Pharmacy Education*. 2016 Sep 25;80(7): 122. PMID: 27756930.
36. Salvi E, Wang Z, Rizzi F, Gong Y, **McDonough CW**, Padmanabhan S, Hiltunen TP, Lanzani C, Zaninello R, Chittani M, Bailey KR, Sarin AP, Barcella M, Melander O, Chapman AB, Manunta P, Kontula KK, Glorioso N, Cusi D, Dominiczak AF, Johnson JA, Barlassina C, Boerwinkle E, Cooper-DeHoff RM, Turner ST. Genome-Wide and Gene-Based Meta-Analyses Identify Novel Loci Influencing Blood Pressure Response to Hydrochlorothiazide. *Hypertension*. 2017 Jan;69(1):51-59. PMID: 27802415.
37. Shahin MH, Sa AC, Webb A, Gong Y, Langaee T, **McDonough CW**, Riva A, Beitelshes AL, Chapman AB, Gums JG, Turner ST, Boerwinkle E, Scherer SE, Sadee W, Cooper-DeHoff RM, Johnson JA. Genome-Wide Prioritization and Genomics-Transcriptomics Integration Reveal Novel Signatures Associated with Thiazide Diuretics Blood Pressure Response. *Circulation Genetics* 2016, in press.
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26. El Rouby N, **McDonough CW**, Gong Y, McClure LA, Mitchell BD, Horenstein RB, Talbert RL, Takahashi A, Tanaka T, Kubo M, Pepine CJ, Cooper-DeHoff RM, Benavente OR, Shuldiner AR, Johnson JA. Novel genetic loci for resistant hypertension discovered through a genome-wide association approach (GWAS) in the INternational VErapamil SR-Trandolapril STudy (INVEST) and the Secondary Prevention of Subcortical Strokes (SPS3) Study. Program/Abstract # 665. Presented at the 65th Annual Meeting of The American Society of Human Genetics, October 8th, 2015 in Baltimore, MD.
27. Shahin MH, Sa AC, Webb A, Gong Y, Langaee T, **McDonough CW**, Beitelshes AL, Chapman AB, Gums JG, Turner ST, Frye RF, Scherer SE, Sadee W, Cooper-DeHoff RM, Johnson JA. Identifying a Novel Hypertension Genetic Signature Influencing the Blood Pressure Response to Hydrochlorothiazide Treated Patients. Program/Abstract #674. Presented at the 65th Annual Meeting of The American Society of Human Genetics, October 7th, 2015 in Baltimore, MD.
28. Sa AC, Webb A, Gong Y, **McDonough CW**, Langaee TY, Turner ST, Beitelshes AL, Chapman AB, Boerwinkle E, Gums JG, Scherer S, Cooper-DeHoff RM, Sadee W, Johnson JA. Molecular Markers of Blood Pressure Response to Thiazide Diuretics Identified Through Whole Transcriptome RNA-Seq Analysis, Program/Abstract #656. Presented at the 65th Annual Meeting of The American Society of Human Genetics, October 7th, 2015 in Baltimore, MD.
29. Shahin MH, Rotroff DM, Webb A, Gong Y, Langaee T, **McDonough CW**, Beitelshes AL, Garrett T, Gums JG, Motsinger-Reif A, Chapman AB, Turner ST, Boerwinkle E, Frye RF, Scherer SE, Sadee W, Fiehn O, Cooper-DeHoff RM, Kaddurah-Daouk R, and Johnson JA. Integrating Metabolomics and Genomics Uncovers Novel Pathways and Genetic Signatures Influencing Hydrochlorothiazide Blood Pressure Response: A Genetic Response Score for Hydrochlorothiazide Use. *Circulation* 2015;132:A13621. Poster presentation at the American Heart Association 2015 Scientific Sessions. November 8, 2015. Orlando, FL.

30. de Oliveira FA, Shahin MH, Gong Y, **McDonough CW**, Beitelshes AL, Gums JG, Chapman AB, Boerwinkle E, Turner ST, Frye RF, Fiehn O, Kaddurah-Daouk R, Johnson JA, Cooper-DeHoff RM. Genomics-metabolomics Integrative Approach Reveals Novel Biomarkers In DPYS Associated With Higher Glucose Change After Treatment With Atenolol. *Circulation* 2015;132:A18338. Poster presentation at the American Heart Association 2015 Scientific Sessions. November 10, 2015. Orlando, FL.
31. El Rouby N, **McDonough CW**, Gong Y, McClure LA, Mitchell BD, Horenstein RB, Talbert RL, Takahashi A, Tanaka T, Kubo M, Pepine C, Cooper-DeHoff RM, Benavente O, Shuldiner AR, and Johnson JA. Precision Medicine Approach to Resistant Hypertension. *Circulation*. 2015;132:A15465. Poster presentation at the American Heart Association 2015 Scientific Sessions. November 8, 2015. Orlando, FL.
32. Sa AC, Webb A, Gong Y, **McDonough CW**, Shahin, MH, Langae TY, Turner ST, Beitelshes AL, Chapman AB, Boerwinkle E, Gums JG, Scherer S, Cooper-DeHoff RM, Sadee W, Johnson JA. Hypertension (HTN)/Blood Pressure (BP) Signature Genes and BP Response to Thiazide Diuretics (TD): Results from PEAR and PEAR-2 Studies. Presented as an Oral Presentation and Selected for a Presidential Trainee Award. *Clin. Pharmacol. Ther.* 2016, 99:S19 (PT23).
33. Shahin, MH, Sa AC, Webb A, Gong Y, Langae TY, **McDonough CW**, Riva A, Beitelshes AL, Chapman AB, Gums JG, Turner ST, Frye RF, Scherer SE , Sadee W, Cooper-DeHoff RM, Johnson JA. Finding a Needle in the Haystack for Thiazide Diuretic Response Using Genomics/Transcriptomics in the Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR) Study. Presented as a Poster and Selected for a Presidential Trainee Award. *Clin. Pharmacol. Ther.* 2016, 99:S19.
34. Magvanjav O, **McDonough CW**, Gong Y, McClure LA, Talbert RL, Horenstein RB, Mitchell BD, Shuldiner AR, Benavente OR, Johnson JA. Pharmacogenetic association of β 1-adrenergic receptor Ser49Gly polymorphism with outcomes in the Secondary Prevention of Small Subcortical Strokes (SPS3) trial. Presented as an Oral Presentation and Selected for a Presidential Trainee Award. *Clinical Pharmacology & Therapeutics* 2016, 99: S19 (PT-17).
35. **McDonough CW**, McClure LA, Mitchell BD, Gong Y, Horenstein RB, Lewis JP, Field TS, Talbert RL, Benavente OR, Johnson JA, Shuldiner AR. *CYP2C19* Metabolizer Status and Clopidogrel Efficacy in the Secondary Prevention of Small Subcortical Strokes (SPS3) Study. Presented as an Encore Abstract. *Clin. Pharmacol. Ther.* 2016, 99:S19.
36. Lovato B, Weitzel W, Eley A, **McDonough C**, Gong Y, Fillingim R, Schmidt S, Johnson J, Cavallari L. Factors influencing beliefs about pharmacogenetics testing in patients with chronic pain. *Pharmacotherapy* 2016;36(10):e144 (#455). Poster presentation at the ACCP Annual Meeting. October 23-26, 2016. Hollywood, FL.
37. Mehanna M, Gong Y, **McDonough CW**, Beitelshes A, Gums J, Chapman AB, Johnson J, Turner S, Cooper-DeHoff R. 2016. The role of plasma renin activity for improving precision of antihypertensive drug therapy in European Americans and African Americans. *Pharmacotherapy*. 36/12:e214 (#40). Poster presentation at the ACCP Annual Meeting. October 23-26, 2016. Hollywood, FL.
38. Cavallari LH, Denny JC, Lee CR, Beitelshes AL, Duarte JD, Kimmel SE, Voora D, **McDonough CW**, Gong Y, Wei WQ, Pratt VM, Chumnumwat S, Coons JC, Cooper-DeHoff

- RM, Dave CV, Dillon C, Hamadeh IS, Hines L, Howell LA, Jeng LJ, Lee YM, Skaar TC, Sriramoju VB, Stevenson JM, Vesely MR, Wake D, Kreutz RP, Stouffer GA, Wilke RA, Empey PE, Limdi NA, Roden DM, Shuldiner AR, Johnson JA, Peterson JF. Prospective Clinical Implementation of CYP2C19-Genotype Guided Antiplatelet Therapy After PCI: a Multi-Site Investigation of MACE Outcomes in a Real-World Setting. *Circulation* 2016;134:e711-712 (abstract #21050). Presented as a Late-Breaking Clinical Science Special Report: Precision Medicine on the Front Lines at the American Heart Association's Scientific Sessions 2016. New Orleans, LA. November 15, 2016.
39. Costa Sa A, Webb A, Gong Y, **McDonough CW**, Shahin MH, Datta S, Langae TY, Turner ST, Beitelshes AL, Chapman AB, Boerwinkle E, Gums JG, Scherer SE, Cooper-DeHoff RM, Sadee W, Johnson JA. 2017. Rna-Seq Analyses Identify Molecular Markers of Blood Pressure (BP) Response to Thiazide Diuretics (TD). *Clinical Pharmacology & Therapeutics*. 101/S96: PWIV-001.
 40. El Rouby N, **McDonough CW**, Gong Y, McClure LA, Mitchell BD, Horenstein RB, Talbert RL, Bradford Y, Crawford DC, Ritchie MD, Gitzendanner MA, Takahashi A, Tanaka T, Kubo M, Pepine CJ, Benavente OR, DeHoff RM, Johnson JA. 2017. A GWAS of Resistant Hypertension in the INternational VErapamil SR-trandolapril Study (INVEST) and Secondary Prevention of Small Subcortical Strokes (SPS3). *Clinical Pharmacology & Therapeutics*. 101/S27: PI 029.
 41. Singh S, Alghamdi W, Arwood MJ, Bargal SA, de Oliveira F, Dumeny L, Wen-Yi L, Mehanna M, Stockard B, Yang G, Fredette N, Shahin M, Bailey KR, Beitelshes AL, Boerwinkle E, Chapman AB, Gums JG, Turner ST, Gong Y, McDonough CW, Cooper-DeHoff RM, Johnson JA. 2017. A Genome Wide Association Study to Identify Pharmacogenomic Variants Associated with Chlorthalidone Induced Glucose Change in African Americans. *Clinical Pharmacology & Therapeutics*. 101/S9: PT-019.
 42. **McDonough CW**, Hogan WR, Shenkman EA, Cooper-DeHoff RM. Characterization of Resistant Hypertension in a Statewide Electronic Health Record-Based Database (OneFlorida). Presented as a Poster at the Association for Clinical and Translational Science (ACTS) – Translational Science Meeting 2017. Washington D.C., April 20, 2017.
 43. Arwood MJ, **McDonough CW**, Cavallari LH, Elsey AR, Frye RF, Gong Y, Langae T, Johnson JA, Weitzel KW. Equipping health professional students to apply pharmacogenomic data to clinical decision making in real-world scenarios: Comparison of an active engagement versus didactic teaching approach. Presented as a Poster at the Association for Clinical and Translational Science (ACTS) – Translational Science Meeting 2017. Washington D.C., April 20, 2017.
 44. Singh S, Gong Y, **McDonough CW**, Bailey KR, Beitelshes AL, Boerwinkle E, Chapman AB, Gums JG, Turner ST, Cooper-DeHoff RM, Johnson JA. Genome-wide association study reveals novel genetic markers associated with chlorthalidone blood pressure response. PgmNr 2685/F. Accepted for a poster presentation at the 67th Annual Meeting of The American Society of Human Genetics, October 20, 2017. Orlando, FL. Selected as the Reviewers Choice Abstract. <http://www.ashg.org/2017meeting/pages/online-planner.shtml>
 45. Shahin MH, Akoluk A, Singh S, **McDonough CW**, Gong Y, Chapman AB, Turner ST, Gums JG, Beitelshes AL, Boerwinkle E, Cooper-DeHoff RM, Johnson JA. A genome-wide association study identifies novel genetic signatures associated with thiazide diuretics

adverse metabolic events. PgmNr 2678/T. Accepted for a poster presentation at the 67th Annual Meeting of The American Society of Human Genetics, October 19, 2017. Orlando, FL. Selected as the Pharmacogenomics Research Network (PGRN) Best Trainee Abstract Award at the 2017 ASHG Annual Meeting. <http://www.ashg.org/2017meeting/pages/online-planner.shtml>

46. Singh S, Gong Y, **McDonough CW**, Bailey KR, Beitelshes AL, Boerwinkle E, Chapman AB, Gums JG, Turner ST, Cooper-DeHoff RM, Johnson JA. Genome wide association study identifies novel pharmaogenetic variants associated with chlorthalidone blood pressure response in African Americans. (2018), American Society for Clinical Pharmacology and Therapeutics. Clin. Pharmacol. Ther., 103: S50. doi:10.1002/cpt.993 (PI-139).
47. Singh S, Wang Z, Shahin MH, Langaee TY, Gong Y, **McDonough CW**, Bailey KR, Turner ST, Chapman A, Gums JG, Beitelshes AL, Cooper-DeHoff RM, Scherer S, Boerwinkle E, Johnson JA. Targeted sequencing identifies missense variant in the BEST3 gene associated with antihypertensive response to thiazide diuretics (2018), American Society for Clinical Pharmacology and Therapeutics. Clin. Pharmacol. Ther., 103: S5–S97. doi:10.1002/cpt.993 (PT-001). Selected for a Presidential Trainee Award and the David J. Goldstein (top trainee abstract) Award.
48. **McDonough CW**, Chase PB, Loiacono A, Waugh S, Modave F. *SLCO1B1* rs4149056 Phenome-wide association study (PheWAS) with Survey data from the Harvard Personal Genome Project. (2018), American Society for Clinical Pharmacology and Therapeutics. Clin. Pharmacol. Ther., 103: S55 and S79. (PWIII-003 and PII-092). Selected for a Poster Walk presentation and Top Ribbon Abstract at the Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics, March 2018, Orlando, FL.
49. Simpkins AN, **McDonough CW**, McClure LA, Mitchel BD, Shuldiner AR, Benavente OR, Johnson JA. Secondary Stroke Prevention with Aspirin and Clopidogrel in *CYP2C19*17* carriers increases risk of major bleeding. Stroke, 50 (S1): A37. Presented as an Oral Abstract at the International Stroke Conference, February 2019.
50. **McDonough CW**, Warren HR, Jack JR, Motsinger-Reif AA, El Roubay NM, Gong Y, Mychaleckyj JC, Benavente OR, Caulfield MJ, Doria A, Pepine CJ, Johnson JA, Munroe PB, Wagner MJ, Cooper-DeHoff RM. Drug-SNP Interactions and Cardiovascular Outcomes: A Genome-Wide Meta-Analysis in the International Consortium for Antihypertensive Pharmacogenomics Studies. Clinical Pharmacology & Therapeutics 2019, 105 (S1):S105: PIII-084. Abstract presented at the American Society for Clinical Pharmacology and Therapeutics 2019 Annual Meeting; March 15, 2019; Washington DC.
51. Yang G, Singh S, **McDonough CW**, Hamadeh IS, Langaee TY, Katz J, Lakatos P, Balla B, Kosa JP, Vaszilko M, Pelliccioni GA, Price D, Milshtein KG, Figg WD, Moreb JS, Gong Y. An international genome-wide meta-analysis of bisphosphonate related osteonecrosis of the jaw. Clinical Pharmacology & Therapeutics 2019, 105 (S1):S28: PT-016. Abstract presented at the American Society for Clinical Pharmacology and Therapeutics 2019 Annual Meeting (Presidential Trainee Winner); March 13, 2019; Washington DC.
52. Singh S, El Roubay N, **McDonough CW**, Gong Y, Bailey KR, Beitelshes AL, Boerwinkle E, Chapman AB, Gums JG, Turner ST, Cooper-DeHoff RM, Johnson JA. Identification of Genetic Variants Associated with Blood Pressure Response to Beta-Blockers in PEAR/PEAR-2 European Americans. Clinical Pharmacology & Therapeutics 2019, 105 (S1):S111: PIII-106.

Abstract presented at the American Society for Clinical Pharmacology and Therapeutics 2019 Annual Meeting; March 15, 2019; Washington DC

53. Babcock K, Chucri K, **McDonough CW**. Interrater reliability and issues identified during a manual chart review for resistant hypertension. ASHP Midyear Student Posters 2019: 18:2-125. Abstract presented at the American Society of Hospital Pharmacists 2019 Annual Midyear Meeting; December 9, 2019; Las Vegas, NV.
54. Yang G, Singh S, Collins J, Langae TY, **McDonough CW**, Holliday L, Wang D, Lamba J, Gong Y. SIRT1 Functional Single Nucleotide Polymorphisms (SNPs) Associated with Bisphosphonates-Related Osteonecrosis of the Jaw. *Clinical Pharmacology & Therapeutics* 2020, 107 (S1):S89: PIII-038. Abstract accepted for presentation at the American Society for Clinical Pharmacology and Therapeutics 2020 Annual Meeting. *Meeting was cancelled due to the COVID-19 pandemic.
55. Lteif C, Dalton R, **McDonough CW**, Duarte JD. Three Prime UTR Variants in *ADRB3* Associated with Pulmonary Hypertension in Heart Failure. *Clinical Pharmacology & Therapeutics* 2020, 107 (S1):S89: PIII-039. Abstract accepted for presentation at the American Society for Clinical Pharmacology and Therapeutics 2020 Annual Meeting. *Meeting was cancelled due to the COVID-19 pandemic.

PRESENTATIONS

Seminars and Invited Presentations

“The effects of weight loss and exercise in humans on poly unsaturated fatty acid levels in serum.” Contemporary Issues in Molecular Medicine, Molecular Medicine Departmental Seminar, Winston-Salem, NC. November 2005.

“Carnosinase 2 (*CNDP2*) and Diabetic end-stage renal disease.” Contemporary Issues in Molecular Medicine, Molecular Medicine Departmental Seminar, Winston-Salem, NC. March 2006.

“The search for diabetic end-stage renal disease genes on chromosome 18: *CNDP1*, *CNDP2*, and *BCL2*.” Contemporary Issues in Molecular Medicine, Molecular Medicine Departmental Seminar, Winston-Salem, NC. February 2007.

“The search for diabetic end-stage renal disease genes on chromosome 18: a dense SNP map.” Contemporary Issues in Molecular Medicine, Molecular Medicine Departmental Seminar, Winston-Salem, NC. February 2008.

“The search for diabetic end-stage renal disease genes on chromosome 18: candidate gene analysis and Dense SNP mapping.” Contemporary Issues in Molecular Medicine and Translational Science, Molecular Medicine and Translational Sciences Departmental Seminar, Winston-Salem, NC. October 2008.

“The search for type 2 diabetic end-stage renal disease genes: candidate gene analysis, dense SNP mapping, and a genome wide association study.” Translational Science Seminar Series,

Molecular Medicine and Translational Sciences Departmental Seminar, Winston-Salem, NC. September 2009.

“The Genetics of Type 2 Diabetic End-Stage Renal Disease in African Americans.” Ph.D. Defense Seminar. Wake Forest University Graduate School of Arts and Sciences. Winston-Salem, NC. April 2010.

“The Genetics of Type 2 Diabetic End-Stage Renal Disease in African Americans.” University of Iowa Gene Lata Biochemistry Undergraduate Honors Symposium. Invited Speaker. Iowa City, IA. April 2011.

“The Application of Genetic Risk Scores in Antihypertensive Pharmacogenomics: Essential for Future Clinical Translation.” The Pharmacogenetics Research Network (PGRN) – Research In Progress Series, National Webinar. Presented with Yan Gong, PhD. October 2012.

“Pharmacogenomics Research: What Happens Before a Test Makes It To the Bedside?” University of Florida, CTSI Mini-Medical School. October 2013, and December 2013.

“Pharmacogenomics Research: What Happens Before a Test Makes It To the Bedside?” University of Toledo Student Group Webinar. March 2014.

“Population Substructure and Genetic Race in Association Analyses” Invited Presentation, Moffitt Cancer Center, Division of Population Sciences. October 2015.

“Pharmacogenomics and Precision Medicine: Applications in Research, Teaching, and Clinical Implementation”. Invited Seminar, Wake Forest University School of Medicine, Center for Genomics and Personalized Medicine Research. March 2016.

“Characterization of Resistant Hypertension and Associated Outcomes in OneFlorida.” University of Florida, CTSI Research Day. Gainesville, FL. June 2016.

“Case Examples: A Methodology Comparison of Mapping Antihypertensive Prescriptions in Electronic Health Record-based Data.” Part of “Big Drug Data: A Guide to Utilizing Electronic Health Records for Clinical Pharmacology Research” a Science at Sunrise Session at the American Society of Clinical Pharmacology and Therapeutics 2020 Annual Meeting, Houston, TX, March 2020. *This meeting was cancelled due to the COVID-19 pandemic.

Continuing Education Presentations

“Pharmacogenetic Predictors of Adverse Cardiovascular Outcomes in Hypertension and Coronary Artery Disease.” Pharmacotherapy and Translational Research Department Seminar with CE. University of Florida, College of Pharmacy. Gainesville, FL. February 2011.

“Pharmacogenetic Predictors of Blood Pressure Response and Adverse Cardiovascular Outcomes in Hypertension.” Pharmacotherapy and Translational Research Department Seminar with CE. University of Florida College of Pharmacy. Gainesville, FL. February 2012.

“Pharmacogenomic Predictors of HDL Response to Atenolol: A Group Research Project as a Teaching Tool.” Pharmacotherapy and Translational Research Department Seminar with CE. University of Florida College of Pharmacy. Gainesville, FL. December 2012.

“Introduction to Genetics and Genetic Terminology.” University of Florida Institutional Review Board (IRB) Retreat. Lake Wauberg, Micanopy, FL. August 2013.

“Principles of Genetic Medicine.” Precision Medicine Conference, hosted by The University of Florida College of Pharmacy. Lake Nona, Orlando, FL. March 2016.

“Teaching Strategies for Clinical Pharmacogenomics.” Precision Medicine Conference, hosted by The University of Florida College of Pharmacy. Lake Nona, Orlando, FL. March 2016.

“Principles of Genetic Medicine.” Precision Medicine Conference, hosted by The University of Florida College of Pharmacy. Pre-recorded Home Study Materials. Orlando, FL. March 2017.

PROFESSIONAL SERVICE

American Society for Clinical Pharmacology and Therapeutics

Translational Informatics Community

Vice Chair – 2019-2020

Chair – 2020-2021

Abstract Reviewer, 2018-present

Session Proposal Reviewer, 2019-present

American Heart Association

Abstract Reviewer – Scientific Sessions, 2016-present

Abstract Reviewer – International Stroke Conference, 2016, 2017

International Consortium for Antihypertensive Pharmacogenomics Studies (ICAPS)

Leader, 2019 – present

Member, 2012 - present

Manuscript Reviewer (examples):

Hypertension

Diabetes

Diabetes Care

Circulation: Cardiovascular Genetics

Clinical Pharmacology & Therapeutics

Pharmacogenetics and Genomics

Journal of Human Hypertension

Journal of Medical Internet Research

Pharmacotherapy

Current Pharmaceutical Design

PLoS One

UNIVERSITY SERVICE

University of Florida

Coordinator, Pharmacotherapy and Translational Research Journal Club, 2011-2012

Committee Member, Instructional Design Team for Principles of Drug Therapy Individualization, 2015-2016

Committee Member, Select Faculty Search Committees

Committee Member, Curriculum Committee, 2018-present

TEACHING

University of Florida

PHA 6449 – Pharmacogenomics (offered every other year, even years)

2014 - present: Co-coordinator, course lecturer and discussion leader on linkage disequilibrium, controlling for population structure in genetic association analyses, genome-wide association studies, and computer hands-on training for PLINK.

2012: Course lecturer on web tools and databases, and controlling for population structure in genetic association analysis. Assisted in coordinating student projects, answering student questions on data analysis for projects, and oral presentation grading.

Graduate class, size: 7 students.

Graduate class, size: ~12 students

PHA 6613 – Clinical Applications of Precision Medicine: Precision Health

2019 - present: Course coordinator, course lecturer on precision and accuracy; screening, phenotyping, diagnostics, and laboratory testing; genetic inheritance patterns, and cardiovascular genomics. Graduate class, online, size: 7-12 students

PHA 5012 – Clinical Applications of Personalized Medicine

2017- present: Course lecturer. PharmD class, size ~71 students.

PHA 6427 – Pharmacogenetics of Drug Metabolism and Transport

2012 - present: Course lecturer on principles of genetic medicine and genetic/pharmacogenetic databases. Graduate class, size: ~14 students.

PHA5878C: Patient Care 3: Cardiovascular and Pulmonary

2016-present: Course Faculty, Course lecture on the pharmacogenomics of asthma. PharmD class, size ~240 students.

Research Elective Clerkship in Cardiovascular Pharmacogenomics– course number varies by month

2019-present: Discussion leader: Direct to Consumer Genotyping.

2010-2019: Discussion leader – Genome wide association studies and applications to pharmacogenomics.

2011-2012: Assist clerkship students with their journal club presentations.

PHA 5132 - Principles of Drug Therapy Individualization

2016-2019: Course Faculty, Course lecturer on principles of genetic medicine and genetic/pharmacogenetic databases. PharmD class, size ~240 students.

PHA 5993 – Clinical Applications of Personalized Medicine

2015: Co-coordinator, course lecturer and discussion leader. PharmD class, size ~25 students.

2016: Course lecturer. PharmD class, size ~20 students.

PHA 5993 – Clinical Applications of Pharmacogenomics

2014: Co-coordinator, course lecturer and discussion leader. PharmD class, size ~45 students.

PHA 5993 – Clinical Applications of Genomic Medicine

2014: Co-coordinator, course lecturer and discussion leader. PharmD class, size ~25 students.

PHA 5113 – Personalized Medicine

2011-2016: Course lecturer on principles of genetic medicine and database tools for genetic medicine.

2010: Course lecturer on principles of genetic medicine.

PharmD class, size: ~270-300 students.

BMS 6828 & 6829 – Interdisciplinary Family Health I and II

2012-2013: Small group facilitator. Class size: ~12 students.

Graduate Committee

Member – PhD:

Nihal El Rouby, PharmD, 2012 to May 2017. Dissertation title: ‘Identification of genetic determinants associated with resistant hypertension using genome-wide association analysis coupled with induced pluripotent stem cells (iPSC).’

Oyunbileg (Obiko) Magvanjav, MS, (MD/PhD student), 2013 to May 2018. Dissertation title: “Genetic and Non-genetic determinants of uncontrolled blood pressure on combination antihypertensive therapy”

Guang Yang, 2017 to August 2020. Dissertation project: “Pharmacogenomics of Osteonecrosis of the Jaw”

Leanne Dumney, (MD/PhD student), 2017 to present. Dissertation project: "Identifying Patient-Specific Factors of Spironolactone Response in HFpEF"

Lakshmi Manasa Chekka, 2018 to present. Dissertation project: "Pharmacoeugenetics and precision medicine in the treatment of hypertension"

Christelle Lteif, 2019 to present. "The Role of ID Proteins on Pulmonary Hypertension Development in Left Heart Failure."

Richard Marrero, 2020 to present. "Genome-wide Association Study in Children Diagnosed with Acute Myeloid Leukemia"

Member – Masters:

Salma Bargal, 2015 to December 2017. Thesis title: "Genome-wide association study for identification of Genetic Variants Predictive of Cytarabine In Vitro Sensitivity in Pediatric AML."

Mentorship of Students

- 2011 Roger Hart, Undergraduate. Howard Hughes Science for Life Summer Research Program. Project Title: Association of Variants in *MCM6*, Lactose Intolerance, and Blood Pressure Response to Atenolol and HCTZ.
- 2011 Sarah Burbage, PharmD student. Pharmacotherapy and Translational Research Summer Research Training Program and subsequent Research Elective. Project Title: *NEDD4L* variation associates with hydrochlorothiazide response in hypertensive patients.
- 2012 Anne Lucas, PharmD student. Pharmacotherapy and Translational Research Summer Research Training Program and subsequent Research Elective. Project Title: Expression Analysis of Novel Genes Associated with HCTZ-induced Hyperuricemia.
- 2013 Nihal El Rouby, Graduate student. Lab Rotation. Project Title: Expression Analysis of *FTO* in the Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR) Study.
- 2013 Carol Sá, Graduate student. Lab Rotation. Project Title: Expression Analysis of *GALNT2* in the Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR) Study.
- 2013 Oyunbileg 'Obiko' Magvanjav, MD/PhD Student. Summer Research Project. Project Title: Assessment of Blood Pressure Response Genetic Risk Scores from PEAR for the prediction of Cardiovascular Events in INVEST.
- 2013 Will Walker, MD Student. Medical Student Research Program (MSRP). Project Title: Genetic Association Analysis of Functional Variants on the Illumina HumanCVD Chip with White Coat Effect in PEAR.

- 2014 Robin Derby, PharmD student. Pharmacotherapy and Translational Research Summer Research Training Program. Project Title: Expression Analysis of *RhoB* in the Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR) Study.
- 2016 Linjun Bao, PharmD student. Pharmacotherapy and Translational Research Summer Research Training Program. Project Title: Expression Analysis of *FOS*, *DUSP1*, and *PPP1R15A* in the Pharmacogenomic Evaluation of Antihypertensive Responses (PEAR) Study.
- 2018-2019 Kyle Babcock, PharmD student. Pharmacy Research Assistant. Project Title: Conducting manual chart reviews to validate a resistant hypertension computable phenotype.
- 2018-present Kristen Chucru, PharmD student. Pharmacy Research Assistant, 2018-2019. Project Title: Conducting manual chart reviews to validate a resistant hypertension computable phenotype
PharmD Research Student, Spring 2020. Project Title: Why computable phenotypes fail: Characterizing Difficult to classify hypertensive patients.
- 2019-present Sam Simon, PharmD student. Pharmacy Research Assistant, Fall 2019. Project Title: Applications of biomedical informatics in pharmacogenomics and Big Data.
PharmD Research Student, Spring 2020. Project Title: *SLC15A2* rs1143672 Phenome-wide association study (PheWAS) with survey data from the Personal Genome Project.