

Education

- 2007-2011 **Miami University**, Oxford, OH
Bachelor of Science in Zoology
Minor: Molecular Biology
Cumulative GPA: 3.76/4.0, *magna cum laude*
- 2011-2016 **University of Kentucky**, Lexington, KY
Doctor of Philosophy (Ph.D.) in Nutritional Sciences
University of Kentucky College of Medicine
Cumulative GPA: 3.581

Research Experience

- 2009-2010 **University of Cincinnati**, Cincinnati, OH
American Society for Pharmacology and Experimental Therapeutics Summer Undergraduate Research Fellow
Mentor: W. Keith Jones, Ph.D.
Project title: Investigation into the Transcriptional and Post-Transcriptional Regulation of Heat Shock Protein 70.3 (Hsp70.3) in Myocardial Late Ischemic Preconditioning
- 2011-2016 **University of Kentucky**, Lexington, KY
Ph.D., Nutritional Sciences
Mentor: Changcheng Zhou, Ph.D.
Project title: The Role of PXR and IKK β Signaling in Cardiometabolic Disease
- 2016-2017 **Cleveland Clinic Foundation**, Cleveland, OH
Postdoctoral Fellow; Department of Cellular and Molecular Medicine
Mentor: J. Mark Brown, Ph.D.
Project title: Targeting the Gut Microbiome for the Treatment of Alcoholic- and Nonalcoholic-Induced Liver Disease
- 2017-2018 **Medpace**, Cincinnati, OH
Clinical Trial Manager
Managed clinical trials in infectious diseases, cardiovascular disease, and chronic kidney disease.
- 2018-2019 **University of Cincinnati**, Cincinnati, OH
Clinical Trial Manager; Department of Internal Medicine
Mentors: Dylan Steen, MD and Sarah Couch, PhD, RD
Project title: Supermarket and Web-Based Intervention Targeting Nutrition for Cardiovascular Risk Reduction.
- 2019-2021 **University of Kentucky**, Lexington, KY
Postdoctoral Fellow; Division of Pediatrics, Department of Gastroenterology, Hepatology, and Nutrition
Mentors: Gregory Graf, PhD, and Samir Softic, MD
Project title: Elucidating Molecular Mechanisms Linking Fructose to Cholesterol Metabolism.
- 2022-present **University of Kentucky**, Lexington, KY
Assistant Professor; Department of Pharmacology & Nutritional Sciences
University of Kentucky College of Medicine

Professional Memberships

- 2009-present American Society for Pharmacology and Experimental Therapeutics (ASPET)
2013-present American Heart Association (AHA)

2015-present The American Association for the Advancement of Science (AAAS)
2021-present American Association for the Study of Liver Diseases (AASLD)

Fellowships, Awards, and Honors

2009 ASPET Summer Undergraduate Research Fellowship (University of Cincinnati)
2009 1st place in ASPET SURF poster competition
2010 ASPET Summer Undergraduate Research Fellowship (University of Cincinnati)
2010 4th place in Summer Student Poster Competition (University of Cincinnati; 112 Participants)
2010 Undergraduate Presentation Award (Miami University) to EB in Anaheim, CA
2010 ASPET Undergraduate Travel Award to EB Meeting in Anaheim, CA
2011 Undergraduate Presentation Award (Miami University) to EB in Washington, D.C.
2011 ASPET Undergraduate Travel Award to EB Meeting in Washington, D.C.
2012 T32 Cardiovascular Training Fellowship (5T32HL072743-09)
2013 4th place in the ASPET Cardiovascular Pharmacology Division Best Graduate Student Abstract Competition at the Experimental Biology Conference in Boston, MA
2013 ASPET Graduate Student Travel Award to EB National Meeting in Boston, MA
2014 University of Kentucky Graduate School Travel Award to the Arteriosclerosis, Thrombosis and Vascular Biology (ATVB) Conference in Toronto, ON
2014 2nd place at the Ohio Valley Affiliates for Life Sciences Conference in Metabolic Diseases Poster Competition in Cincinnati, OH
2014 4th place in the poster competition at the Barnstable Brown Kentucky Diabetes and Obesity Research Day in Lexington, KY
2014 T32 Nutrition and Oxidative Stress Training Fellowship (5T32DK007778-14)
2014 Finalist in the Obesity Prevention Poster Competition at the SEC Symposium in Atlanta, GA
2015 PhRMA Foundation Predoctoral Fellowship
2015 1st place in the poster competition at the Barnstable Brown Kentucky Diabetes and Obesity Research Day in Lexington, KY
2015 University of Kentucky Graduate School Travel Award to the Metabolic Signaling and Disease: From Cell to Organism Conference at Cold Spring Harbor, NY
2015 1st place in the poster competition at the Saha Cardiovascular Research Day Lexington, KY
2016 ATVB Travel Award for Young Investigators
2016 Department of Pharmacology and Nutritional Sciences Graduate Student of the Year Award
2016 Miami University "18 of the last 9" Nominee
2016 Outstanding Postdoctoral Fellow Poster Presentation "The Stewart Whitman Award"
2017 American Heart Association Postdoctoral Fellowship
2017 Young Investigator Awards Platform Session – ASPET Division for Translational and Clinical Pharmacology
2019 1st place in the poster competition at the Saha Cardiovascular Research Day Lexington, KY
2019 Mentee, K. Conrad, awarded the best poster presentation at the SELRC in Cincinnati, OH
2019 Invited Speaker at Southeast Lipid Research Conference, Cincinnati, OH
2020 Invited Speaker at Miami University Alumni Career Panel
2021 Outstanding Postdoctoral Fellow Poster Presentation "The Stewart Whitman Award"
2021 Invited Speaker at Department of Pharmaceutical Sciences Seminar Series, Lexington, KY
2021 Invited Speaker at Don Fredrickson Lipid Research Conference in 2022, Durham, NC
2022 Impact Kentucky: University of Kentucky Vice President for Research "Researcher of the Month"
2022 Invited Speaker at the Annual CCTS Spring Conference, Lexington, KY

Professional/Academic Service

2011-present The Academy for Future Science Faculty, University of Northwestern
2013-2014 Vice President of the Nutritional Sciences Students Association
2013 Teaching Assistant for Integrated Biomedical Sciences 610
2015-2017 ASPET Cardiovascular Division Recruitment Committee
2016-2017 ASPET Cardiovascular Division Competition Committee
2017 ASPET Partnering for Success Peer Mentoring Program at EB 2017
2018-present Biological Sciences Advisory Committee for Miami University, OH
2019-present Clinical Trial Consultant (NCT03895580)
2019-present Ad-Hoc Reviewer for Arteriosclerosis, Thrombosis, and Vascular Biology (ATVB)
2020-present Ad-Hoc Reviewer for Adipocyte, Life Science Alliance, Journal of the American Heart Association (JAHA), Biomedicines, and Scientific Reports

2020-present ASPET Division for Translational and Clinical Pharmacology Awards Committee
2020-present International Journal of Molecular Sciences Board of Reviewers
2021-present Editorial Board for Frontiers in Cardiovascular Medicine
2021 Career Development Moderator at the Don Fredrickson Lipid Research Conference

Research Support

Active Research Support:

CCTS Early Career Pilot Study PI: **Helsley, RN** 12/01/2021-12/01/2022

University of Kentucky, Center for Clinical and Translational Science (CCTS)

CPT1a: A Novel Regulator of Cholesterol-Driven Liver Injury

Goal: This project focuses on understanding the role of hepatocyte-specific Cpt1a on cholesterol and lipoprotein metabolism.

Role: PI

K01DK128022-01A1 PI: **Helsley, RN** 01/01/2022-12/31/2026

National Institutes of Diabetes and Digestive and Kidney Diseases (NIDDK)

Elucidating Molecular Mechanisms Linking Fructose to Cholesterol Metabolism

Goal: This project focuses on understanding the mechanism(s) by which fructose promotes hyperlipidemia.

Role: PI

Completed Research Support:

No ID PI: **Couch, SC** 12/02/2019-12/31/2021

University of Cincinnati, Division of Cardiology

Supermarket and Web-Based Intervention Targeting Nutrition (SuperWIN) for Cardiovascular Risk Reduction

Goal: This project focuses on understanding the impact of a point-of-purchase dietary intervention delivered in the aisles of Kroger grocery stores on cardiovascular disease risk (NCT03895580).

Role: Consultant

17POST3285000 PI: **Helsley, RN** 01/01/2017-09/05/2017

American Heart Association

The Role of Hepatocyte ABHD6-Driven Lipid Turnover in Obesity-Associated Insulin Resistance

Goal: This project investigated the molecular mechanism by which hepatocyte-specific ABHD6 influences obesity and accompanying metabolic disorders.

Role: PI

No ID PI: **Helsley, RN** 07/01/2015-07/01/2016

Pharmaceutical Research and Manufacturers of America (PhRMA) Foundation

A Novel Mechanism for ARV-Drug Associated Dyslipidemia

Goal: This project investigates the role of PXR in mediating antiretroviral (ARV) drug-elicited dyslipidemia and atherosclerosis.

Role: PI

5T32DK007778-14 PI: **Cassis, LA** 05/01/2014-06/01/2015

National Institutes of Health - NRSA

Investigation of IKK β in Adipogenesis and Diet-Induced Obesity

Goal: This project investigates the role of IKK β signaling in diet-induced obesity and metabolic disorders.

Role: Trainee

5T32HL072743-09 PI: **Randall, DC** 07/01/2012-04/01/2014

National Institutes of Health - NRSA

The Role of the Pregnane X Receptor in Xenobiotic-Induced Hyperlipidemia

Goal: This project investigates the molecular mechanism through which PXR regulates lipid homeostasis.

Role: Trainee

Publications and Presentations

A. Original Peer-Reviewed Manuscripts (*Co-first authors):

1. Tranter, M., **Helsley, R.N.**, Paulding, W., McGuinness, M., Brokamp, C., Haar, L., Ren, X., and Jones, W.K. (2011) Coordinated post-transcriptional regulation of the Hsp70.3 gene by micro-RNA and

- alternative polyadenylation. *Journal of Biological Chemistry*. 286(34): 29828-37. PMID: 21757701
2. Park, S-H., Sui, Y., Gizard, F., Xu, J., Pillier-Rios, J., **Helsley, R.N.**, Han, S-S., and Zhou, C. (2012) Myeloid-specific IKK β deficiency decreases atherosclerosis in LDL receptor-deficient mice. *Arteriosclerosis, Thrombosis, and Vascular Biology*. 32(12): 2869-76. PMID: 23023371
 3. **Helsley, R.N.***, Sui, Y.*, Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. (2013) Pregnane x receptor mediates dyslipidemia induced by the HIV protease inhibitor amprenavir in mice. *Molecular Pharmacology*. 83(6):1190-9. PMID: 23519392
 4. Sui, Y., Park, S-H., **Helsley, R.N.**, Sunkara, M., Gonzalez, F.J., Morris, A.J., and Zhou, C. (2014) Bisphenol A increases atherosclerosis in pregnane x receptor-humanized ApoE deficient mice. *Journal of the American Heart Association*. 3(2): e000492. PMID: 24755147
 5. Sui, Y., Park, S.H., Xu, J., Monette, S., **Helsley, R.N.**, Han, S-S., and Zhou, C. (2014) IKK β links vascular inflammation to obesity and atherosclerosis. *Journal of Experimental Medicine*. 211(5): 869-886. PMID: 24799533
- Highlighted in Rockefeller University Press Releases on 05/06/2014. Highlighted in Science Daily, The Medical News, MedicalXpress, Newswise, Scicasts, and Diagnostic and Interventional Cardiology.**
6. Sui, Y.*, **Helsley, R.N.***, Park, S.H., Song, X., Liu, Z., and Zhou, C. (2015) Intestinal PXR links xenobiotic exposure and hypercholesterolemia. *Molecular Endocrinology*. 29(5): 765-776. PMID: 25811240
 7. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., Lee, R.G., Zhu, B., Kern, P.A., and Zhou, C. (2016) Targeting IKK β in adipocyte lineage cells for treatment of obesity and metabolic dysfunctions. *Stem Cells*. 34(7): 1883-95. PMID: 26991836
 8. Park, S-H., Liu, Z., Sui, Y., **Helsley, R.N.**, Zhu, B., Powell, D.K., Kern, P.A., and Zhou, C. (2016) IKK β is essential for adipocyte survival and adaptive adipose remodeling in obesity. *Diabetes*. 65(6): 1616-29. PMID: 26993069
 9. **Helsley, R.N.** and Zhou, C. (2017) Epigenetic impact of endocrine disrupting chemicals on lipid homeostasis and atherosclerosis: a pregnane X receptor-centric view. *Environ Epigenet*. 3(4): 1-15 PMID: 29119010
 10. Ferguson, D., Zhang, J., Davis, M.A., **Helsley, R.N.**, et al. (2017) The lipid droplet-associated protein perilipin 3 facilitates hepatitis C virus-driven hepatic steatosis. *J Lipid Res*. 58(2): 420-432. PMID: 27941027
 11. Schugar, R.C., Shih, D.M., Warriar, M., **Helsley, R.N.**, et al. (2017) The TMAO-Producing Enzyme Flavin-Containing Monooxygenase 3 Regulates Obesity and the Beiging of White Adipose Tissue. *Cell Rep*. 19(12): 2451-2461. PMID: 28683320
 12. Gromovsky, A.D., Schugar, R.C., Brown, A.L., **Helsley, R.N.**, et al (2018) Δ -5 Fatty Acid Desaturase *FADS1* Impacts Metabolic Disease by Balancing Proinflammatory and Proresolving Lipid Mediators. *Arterioscler Thromb Vasc Biol*. 38(1): 218-231. PMID: 29074585
 13. Gwag, T., Meng, Z., Sui, Y., **Helsley, R.N.**, Park, S.H., Wang, S., Greenberg, R.N., and Zhou, C. (2019) Non-nucleoside reverse transcriptase inhibitor efavirenz activates PXR to induce hypercholesterolemia and hepatic steatosis. *J Hepatol*. 70(5): 930-940. PMID: 30677459
 14. **Helsley, R.N.**, Venkateshwari, V., Brown, A.L., et al (2019) Obesity-Linked Suppression of Membrane-Bound O-Acyltransferase 7 (MBOAT7) Drives Non-Alcoholic Fatty Liver Disease. *eLife*. 17;8e49882. PMID: 31621579
 15. Anthony, S.R., Guarnieri, A.R., Gozdoff, A., **Helsley, R.N.**, Owens, A.P., and Tranter, M. (2019) Mechanisms Linking Adipose Tissue Inflammation to Cardiac Hypertrophy and Fibrosis. *Clin Sci*. 133(22):2329-2344. PMID: 31777927
 16. Brown, A.L., Conrad, K., Allende, D.S., Gromovsky, A.D., Neumann, C., Owens, P.A., Tranter, M., and **Helsley, R.N.** (2019) Choline Supplementation Attenuates High Fat Diet-Induced Hepatocellular Carcinoma (HCC) in Mice. *J Nutr*. 150(4):775-783. PMID: 31851339
 17. **Helsley, R.N.** and Softic, S. (2020) Fructose metabolism by the guts cuts liver fat. *J Mol Med*. 98(5):733-734. PMID: 32318746
 18. Pathak, P., **Helsley, R.N.**, Brown, A.L., Buffa, J.A., et al. (2020) Small Molecule Inhibition of Gut Microbial Choline Trimethylamine Lyase Activity Alters Host Cholesterol and Bile Acid Metabolism. *Am J Physiol Heart Circ Physiol*. 318(6):H1474-1486 PMID: 32330092
 19. Anthony, S.R., Guarnieri, A., Lanzillotta, L., Gozdoff, A., Green, L.C., O'Grady, K., **Helsley, R.N.**, Owens, P.A., and Tranter, M. (2020) HuR Expression in Adipose Tissue Mediates Energy Expenditure and Acute Thermogenesis Independent of UCP1 Expression. *Adipocyte*. 9(1): 335-345 PMID: 32713230
 20. **Helsley, R.N.***, Moreau, F.*, Gupta, M.K., Radulescu, A, DeBosch, B., and Softic, S. (2020) Tissue-Specific Fructose Metabolism in Obesity and Diabetes. *Curr Diab Rep*. 20(11):64 PMID: 33057854

21. Damen, M.S.M.A, Stankiewicz, T., Park, S-H., **Helsley, R.N.**, et al. (2021) Non-hematopoietic IL-4Ra expression contributes to fructose-driven obesity and metabolic sequelae. *Int J Obes (Lond)*. Doi: 10.1038/s41366-021-00902-6. PMID: 34302121
22. Park, S.H., **Helsley, R.N.**, et al. (2021) A Luminescence-Based Protocol for Assessing Fructose Metabolism via Quantification of Kethexokinase Enzymatic Activity in Mouse or Human Hepatocytes. *STAR Protoc*. Doi: 10.1016/j.xpro.2021.100731. PMID: PMC8361265
23. Schugar, R.C., Gliniak, C.M., Osborn, L.J., Massey, W., Sangwan, N., Horak, A., Banerjee, R., Orabi, D., **Helsley, R.N.**, et al. (2022) Gut microbe-targeted choline trimethylamine lyase inhibition improves obesity via rewiring of host circadian rhythms. *eLife*. Doi: 10.7554/eLife.63998 PMID: 35072627
24. **Helsley, R.N.***, Miyata, T.*, Kadam, A.*, et al (2022) Gut microbial trimethylamine is elevated in alcohol-associated hepatitis and contributes to ethanol-induced liver injury in mice. *eLife*. Doi: 10.7554/eLife.76554 PMID: 35084335
25. Couch, S.C., **Helsley, R.N.**, Siegel, F.U., Saelens, B.E., Magazine, M., Eckman, M.H., Summer, S., Fenchel, M., King, E.C., Bhatt, D.L., and Steen, D.L. (2022) Design and rationale for the supermarket and web-based intervention targeting nutrition (SuperWIN) for cardiovascular risk reduction trial. *Am Heart J*. 248:21-34. PMID: 35218725

B. Abstracts:

1. **Helsley, R.N.**, Tranter, M., Paulding, W., and Jones, W.K. Micro-RNA regulation of Hsp70 protein expression in late ischemic preconditioning. Experimental Biology Conference, 2010. Anaheim, CA
Recipient of ASPET Undergraduate Student Travel Award
2. **Helsley, R.N.**, Tranter, M., Paulding, W., and Jones, W.K. NF- κ B and HSF-1 coordinated transcriptional regulation of the Hsp70.3 promoter. Experimental Biology Conference, 2011. Washington, DC.
Recipient of ASPET Undergraduate Student Travel Award
3. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. HIV protease inhibitors activate PXR and induce dyslipidemia in mice. Saha Cardiovascular Research Day, 2012. Lexington, KY
4. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. Pregnane x receptor mediates dyslipidemia induced by the HIV protease inhibitor amprenavir in mice. Experimental Biology Conference, 2013. Boston, MA
Recipient of ASPET Graduate Student Travel Award
5. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. Pregnane x receptor mediates dyslipidemia induced by the HIV protease inhibitor amprenavir in mice. Barnstable Brown Kentucky Diabetes and Obesity Research Day, 2013. Lexington, KY
6. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. Pregnane x receptor mediates dyslipidemia induced by the HIV protease inhibitor amprenavir in mice. Saha Cardiovascular Research Day, 2013. Lexington, KY.
7. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. Pregnane x receptor mediates dyslipidemia induced by the HIV protease inhibitor amprenavir in mice. South East Lipid Research Conference, 2013. Pine Mountain, GA
8. Sui, Y., Park, S-H., **Helsley, R.N.**, Sunkara, M., Gonzalez, F.J., Morris, A.J., and Zhou, C. Bisphenol A increases atherosclerosis in pregnane x receptor-humanized ApoE deficient mice. ATVB Conference, 2014. Toronto, ON
Recipient of the University of Kentucky Graduate School Travel Award
9. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. Pregnane x receptor mediates dyslipidemia induced by the HIV protease inhibitor amprenavir in mice. 11th Annual Ohio Valley Affiliates for Life Sciences Conference in Metabolic Diseases, 2014. Cincinnati, OH
Awarded 2nd place in the poster competition
10. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. Phthalate substitute plasticizers activate PXR and induce dyslipidemia in mice. Barnstable Brown Kentucky Diabetes and Obesity Research Day, 2014. Lexington, KY
Awarded 4th place in the poster competition
11. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. Phthalate substitute plasticizers activate PXR and induce dyslipidemia in mice. COBRE Annual Review and Competing Renewal Retreat, 2014. Lexington, KY
12. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. Activation of intestinal PXR by phthalate substitute plasticizers stimulates NPC1L1 expression and induces hyperlipidemia in mice. Saha Cardiovascular Research Day, 2014. Lexington, KY
13. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. Activation of intestinal PXR by phthalate substitute

plasticizers stimulates NPC1L1 expression and induces hyperlipidemia in mice. South East Lipid Research Conference, 2014. Pine Mountain, GA

14. **Helsley, R.N.**, Sui, Y., Liu, Z., Park, S-H., and Zhou, C. Targeted deletion of IKK β protects mice from obesity and metabolic disorders. SEC symposium on obesity prevention, 2014. Atlanta, GA

Poster competition finalist

15. **Helsley, R.N.**, Sui, Y., Liu, Z., Park, S-H., and Zhou, C. I κ B Kinase β signaling in adipose progenitor cells promotes obesity and metabolic disorders. ATVB Conference, 2015. San Francisco, CA
16. **Helsley, R.N.**, Sui, Y., Liu, Z., Park, S-H., Zhu, B., Kern, P.A., and Zhou, C. IKK β signaling in adipose progenitor cells promotes obesity and metabolic disorders. Barnstable Brown Obesity and Diabetes Research Day, 2015. Lexington, KY

Awarded 1st place in the poster competition

17. **Helsley, R.N.**, Sui, Y., Liu, Z., Park, S-H., Zhu, B., Kern, P.A., Lee, R.G., and Zhou, C. IKK β signaling in adipose progenitor cells promotes obesity and metabolic disorders. Metabolic Signaling and Disease: From Cell to Organism, 2015. Cold Spring Harbor, NY
18. **Helsley, R.N.**, Sui, Y., Liu, Z., Park, S-H., Zhu, B., Kern, P.A., Lee, R.G., and Zhou, C. IKK β signaling in adipose progenitor cells promotes obesity and metabolic disorders. COBRE Retreat, 2015. Lexington, KY
19. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., Lee, R.G., Zhu, B., Kern, P.A., and Zhou, C. Targeting IKK β in adipose progenitor cells for treatment of obesity and metabolic disorders. Saha Cardiovascular Research Day, 2015. Lexington, KY

Awarded 1st place in the poster competition

20. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., Lee, R.G., Zhu, B., Kern, P.A., and Zhou, C. Targeting I κ B Kinase β in adipocyte lineage cells for treatment of obesity and metabolic dysfunctions. ATVB Conference, 2016. Nashville, TN

ATVB Travel Award for Young Investigators

21. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., Lee, R.G., Zhu, B., Kern, P.A., and Zhou, C. Targeting I κ B Kinase β in adipocyte lineage cells for treatment of obesity and metabolic dysfunctions. Vanderbilt Cardiovascular Symposium, 2016. Nashville, TN
22. **Helsley, R.N.**, Marshall, M.M., Schugar, R.C., Ferguson, D., Gromovsky, A.D., Neumann, C., Lee, R.G., Hazen, S.L., Nagy, L.E., and Brown, J.M. The gut microbe-derived, trimethylamine (TMA), contributes to the etiology of ethanol-induced liver disease. Cleveland Clinic Research Day, 2016. Cleveland, OH.
23. **Helsley, R.N.**, Marshall, M.M., Schugar, R.C., Ferguson, D., Gromovsky, A.D., Neumann, C., Lee, R.G., Hazen, S.L., Nagy, L.E., and Brown, J.M. The gut microbe-derived, trimethylamine (TMA), contributes to the etiology of ethanol-induced liver disease. Saha Cardiovascular Research Day, 2016. Lexington, KY

Outstanding Postdoctoral Fellow Poster Presentation "The Stewart Whitman Award"

24. Brown, A.L., Conrad, K., Allende, D.S., Gromovsky, A.D., Neumann, C., Owens, P.A., Tranter, M., and **Helsley, R.N.** Choline Supplementation Attenuates High Fat Diet-Induced Hepatocellular Carcinoma (HCC) in Mice. Case Western Reserve Cancer Symposium, 2019. Cleveland, OH
25. Brown, A.L., Conrad, K., Allende, D.S., Gromovsky, A.D., Neumann, C., Owens, P.A., Tranter, M., and **Helsley, R.N.** Choline Supplementation Attenuates High Fat Diet-Induced Hepatocellular Carcinoma (HCC) in Mice. South East Lipid Research Conference, 2019. Cincinnati, OH

Trainee wins best presentation award

26. **Helsley, R.N.**, Venkateshwari, V., Brown, A.L., et al (2019) Obesity-Linked Suppression of Membrane-Bound O-Acyltransferase 7 (MBOAT7) Drives Non-Alcoholic Fatty Liver Disease. Saha Cardiovascular Research Day, 2019. Lexington, KY.

Awarded 1st place in the poster competition

27. **Helsley, R.N.**, Park, S.H., Meyer, J.G., Schilling, B., Newgard, C.B., Kahn, R., and Softic, S. Dietary Fructose Influences Fatty Acid Metabolism through Transcriptional and Post-Translational Modifications of Mitochondrial Proteins. COBRE Annual Retreat, 2020. Lexington, KY.
28. **Helsley, R.N.**, Park, S.H., Meyer, J.G., Schilling, B., Newgard, C.B., Kahn, R., and Softic, S. Dietary Fructose Influences Fatty Acid Metabolism through Transcriptional and Post-Translational Modifications of Mitochondrial Proteins. Digestive Health Center Annual Scientific Retreat, 2020. Cincinnati, OH.
29. **Helsley, R.N.**, Park, S.H., Hemendra, V.J., Sullivan, P.G., Meyer, J.G., Schilling, B., Newgard, C.B., Kahn, R., and Softic, S. Dietary Fructose Decreases Fatty Acid Oxidation via Post-Translational Regulation of CPT1a. University of Kentucky College of Medicine Trainee Showcase, 2021. Lexington, KY.
30. **Helsley, R.N.**, Park, S.H., Hemendra, V.J., Sullivan, P.G., Meyer, J.G., Schilling, B., Newgard, C.B., Kahn, R., and Softic, S. Dietary Fructose Decreases Fatty Acid Oxidation via Post-Translational Regulation of CPT1a. Saha Cardiovascular Research Day, 2021. Lexington, KY.

Outstanding Postdoctoral Fellow Poster Presentation "The Stewart Whitman Award"

31. Steen, D.L., **Helsley, R.N.**, Bhatt, D.L., King, E., Summer, S.S., Fenchel, M., Saelens, B.E., Eckman,

M.H., Lenchitz, B., and Couch, S.C. A Multisite, Randomized Trial of Supermarket and Web-Based Intervention Targeting Nutrition for Cardiovascular Risk Reduction. American College of Cardiology Meeting, 2022. Washington, D.C.

32. **Helsley, R.N.**, Zelows, M.M., Kaur, R., Williams, K., Softic, S., and Graf, G. CPT1a Modulates Lipoprotein and Hepatic Lipid Metabolism in a Sex-Specific Manner. CCTS Research Day, 2022. Lexington, KY.

C. Podium Presentations:

1. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. HIV protease inhibitors activate PXR and induce dyslipidemia in mice. Saha Cardiovascular Research Day, 2012. Lexington, KY
2. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. The role of the pregnane x receptor in xenobiotic-induced dyslipidemia. Graduate Center for Nutritional Sciences Seminar Series, University of Kentucky College of Medicine, 2013. Lexington, KY
3. **Helsley, R.N.**, Sui, Y., Ai, N., Park, S-H., Welsh, W.J., and Zhou, C. Pregnane x receptor mediates dyslipidemia induced by the HIV protease inhibitor amprenavir in mice. Experimental Biology Conference, 2013. Boston, MA

Awarded 4th place in the ASPET Cardiovascular Pharmacology Best Abstract Competition

4. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. PXR links xenobiotic exposure to dyslipidemia and atherosclerosis. Saha Cardiovascular Research Day, 2013. Lexington, KY
5. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. The role of the pregnane x receptor in xenobiotic-induced dyslipidemia. Department of Pharmacology and Nutritional Sciences Seminar Series, University of Kentucky College of Medicine, 2014. Lexington, KY
6. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., and Zhou, C. IKK β signaling in adipose progenitor cells promotes obesity and metabolic disorders. Department of Pharmacology and Nutritional Sciences Seminar Series, University of Kentucky College of Medicine, 2015. Lexington, KY
7. **Helsley, R.N.**, Sui, Y., Liu, Z., Park, S-H., Zhu, B., Kern, P.A., and Zhou, C. IKK β signaling in adipose progenitor cells promotes obesity and metabolic disorders. Barnstable Brown Obesity and Diabetes Research Day, 2015. Lexington, KY
8. **Helsley, R.N.**, Sui, Y., Park, S-H., Liu, Z., Zhu, B., Kern, P.A., Lee, R.G., and Zhou, C. Targeting IKK β in adipose progenitor cells for treatment of obesity and metabolic disorders. Saha Cardiovascular Research Day, 2015. Lexington, KY
9. **Helsley, R.N.**, Marshall, M.M., Schugar, R.C., Ferguson, D., Gromovsky, A.D., Neumann, C., Lee, R.G., Hazen, S.L., Nagy, L.E., and Brown, J.M. The gut microbe-derived, trimethylamine (TMA) contributes to the etiology of ethanol-induced liver disease. P50 Seminar Series, 2016. Cleveland, OH.
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