



Date: December 22, 2020

PERSONAL INFORMATION

Name: Carmen De Miguel, PhD, MS, FAHA
Citizenship: Spanish (Green Card holder)
Foreign languages: Spanish

RANK/TITLE: Assistant Professor of Medicine
Department: Medicine/ Nephrology
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EDUCATION:

<i>Year</i>	<i>Degree</i>	<i>Institution</i>
2010	PhD	Medical College of Wisconsin, Milwaukee, WI
2010	MS	St. Cloud State University, St. Cloud, MN
2002	BS	Universidad Autónoma de Madrid, Madrid, Spain

POSTDOCTORAL TRAINING:

<i>Year</i>	<i>Degree</i>	<i>Institution</i>
2014-2017	Cardio-Renal Physiology and Medicine	University of Alabama at Birmingham
2010-2013	Experimental Medicine	Georgia Regents University

ACADEMIC APPOINTMENTS: (In reverse chronological order)

<i>Year</i>	<i>Rank/Title</i>	<i>Institution</i>
2019	Assistant Professor	University of Alabama at Birmingham
2017	Instructor of Medicine	University of Alabama at Birmingham
2017	Associate Scientist, NRTC	University of Alabama at Birmingham

MAJOR RESEARCH INTERESTS: The role of immune cells and inflammatory mediators in hypertensive and diabetic end-organ damage.

AWARDS/HONORS (selected from a total of 42):

1. Women in Research Grant, Cayman Biomedical Research Institute, Cayman Chemicals, May 2020.
2. Fellow of the American Heart Association (FAHA), Council on the Kidney in Cardiovascular Disease (KCVD), September 2019.
3. 2019 APS Dale J. Benos Early Career Professional Service Award, *American Physiological Society*, March 2019.
4. American Heart Association Best of Specialty Conferences (Council on Hypertension 2018), selected Top 10% abstracts, *AHA Scientific Sessions*, September 2018.
5. Kidney Council New Investigator Award, *American Heart Association Council on Kidney in Cardiovascular Disease*, September 2018.
6. Featured early career investigator in the AHA Council on the Kidney in Cardiovascular Disease newsletter, *AHA Connections Newsletter*, Summer 2018.
7. NIDDK Basic Science Exemplary Research Award for best research abstract and exemplary oral presentation at the Network of Minority Health Research Investigators (NMRI) 16th Annual Workshop, Bethesda, MD. April 2018.
8. Physiology Understanding Week 5 year Organizer Award, *American Physiological Society*, April 2017.
9. Best Oral Presentation by a Postdoctoral Scholar, *1st prize, 2017 UAB Postdoctoral Research Day, University of Alabama at Birmingham*, February 2017.

10. Career Enhancement Award for Postdoctoral Scholars, *UAB Office of Postdoctoral Education*, January 2017.
11. 2016 Dale Benos Scholar Award, *Nephrology Research Training Center, Department of Medicine/Nephrology, University of Alabama at Birmingham*, September 2016.
12. Joseph Reeves Award for Excellence in Research by a Postdoctoral Scholar, *Honorable Mention, 32nd UAB Department of Medicine Trainee Research Symposium*, March 2016.
13. 2016-2017 APS K-12 Minority Outreach Fellowship Award, *American Physiological Society*, February 2016.
14. American Heart Association Best of Specialty Conferences (Council on Hypertension Scientific Sessions 2015), selected Top 10% abstracts, *AHA Scientific Sessions*, September 2015.
15. 2015 Dale Benos Scholar Award, *Nephrology Research Training Center, Department of Medicine/Nephrology, University of Alabama at Birmingham*, August 2015.
16. Juan Carlos Romero Postdoctoral Research Recognition Award of the Water and Electrolyte Homeostasis Section, *American Physiological Society*, April 2014.
17. 2013 Caroline tum Suden/Francis A. Hellebrandt Professional Opportunity Award, *American Physiological Society - Women in Physiology Committee*, April 2013.
18. Award for Excellence in Research by a Postdoctoral Fellow, *29th Annual Graduate Research Day, Georgia Regents University*, finalist oral presentation, March 2013.
19. Trainee Poster Presentation Award, *Council for High Blood Pressure Research Trainee Advocacy Committee and Daiichi Sankyo Pharmaceuticals*, September 2012.
20. Award for Excellence in Research by a Postdoctoral Fellow: Best Poster Presentation, *28th Annual Graduate Research Day, Georgia Health Sciences University*, April 2012.
21. American Heart Association Best of Specialty Conferences (HBPR 2010), selected Top 10% abstracts, *AHA Scientific Sessions*, November 2010.
22. Kidney Council New Investigator Award - Trainee, *Council on Kidney in Cardiovascular Disease*, October 2010.
23. Cardiovascular Section Featured Topic Presenter Travel Award, *American Physiological Society*, April 2010.
24. Annual High Blood Pressure Research Conference New Investigator Award, *Council for High Blood Pressure Research*, September 2009.
25. Pre-doctoral Research Recognition Award of the Water and Electrolyte Homeostasis Section, *American Physiological Society*, April 2009.

PROFESSIONAL SOCIETY MEMBERSHIPS:

1. American Society of Nephrology. 2013-present.
2. American Heart Association. 2009-present.
3. The American Physiological Society. 2006-present.
4. The Endocrine Society. 2005-present.
5. Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). 2019-present.

COUNCILS AND COMMITTEES:

A. American Heart Association:

1. *Social Media Administrator, American Heart Association Council on the Kidney in Cardiovascular Disease*, July 2020-present.
2. *Membership and Communications Committee, Council on Hypertension*, July 2020-June 2022.
3. *Council on Hypertension Awards Committee*, July 2019-June 2021.
4. *Membership and Communications Committee, Council on the Kidney in Cardiovascular Disease*, September 2017 - present.
5. *Trainee Advocacy Committee member, Council on Hypertension*, December 2016 - present.

B. American Physiological Society:

1. *Water and Electrolyte Homeostasis Section Awards Committee, American Physiological Society*, August 2020-2023.
2. *International Committee member, American Physiological Society*, January 2020-April 2023.

3. *Membership Chair, Water and Electrolyte Homeostasis Section Steering Committee, American Physiological Society, April 2019-present.*
4. *American Physiological Society Life Science Teaching Resource Community (LifeSciTRC) Review Board, April 2016 – present.*
5. *Education Committee member, American Physiological Society, January 2015 - December 2017.*
6. *Trainee subcommittee member, American Physiological Society Water and Electrolyte Homeostasis Section, January 2014 - December 2016.*
7. *Trainee representative, Communications Committee, American Physiological Society, January 2011-December 2013.*

UNIVERSITY ACTIVITIES:

1. *Career Development Award (K) Internal Review Panel, Department of Medicine, October 2020-present.*
2. *Research Development Group, Department of Medicine, August 2020- August 2023.*
3. *Task Force for Addressing Systemic Racism, Division of Nephrology, Department of Medicine, August 2020-present.*
4. *Study section Meeting And Review Training (SMART) grant review program for trainees at UAB, leader, Section of Cardio-Renal Physiology and Medicine, Department of Medicine/Nephrology, September 2017 - present.*
5. *Birmingham Physiology Network Board member, training program coordinating committee member, November 2015- present.*
6. *Scientific Peer-mentoring and Advisory for Renal and Cardiovascular fellows (SPARC) Program at UAB, co-leader, February 2016- February 2018.*

EDITORIAL BOARD MEMBERSHIPS:

1. Editorial board member, American Journal of Physiology Renal Physiology, July 2020-present.
2. Editorial board member, Associate editor, Biomedicine and Pharmacotherapy, December 2019-present.
3. Junior editor, Hypertension Digital Editorial Team, September 2018 - present.

GRANT SUPPORT:

A. Current:

1. NHLBI Mentored Career Development Award K01 (K01HL145324-01), 02/01/2019 – 01/31/2024. *“Role of endothelin in hypertension-mediated inflammation and end-organ damage”*. PI: Carmen De Miguel, PhD.

B. Completed:

1. UAB Diabetes Research Center Pilot & Feasibility Grant, 09/01/2018 – 06/01/2020. *“Endothelin-1, dendritic cells and diabetic kidney damage”*. PI: Carmen De Miguel, PhD.
2. NHLBI Investigator Developing Independent Research Career Supplement (IRS) (P01 HL136267-01S1), 03/01/2018 - 03/31/2022. *“Integrating novel mechanisms controlling sodium excretion and blood pressure”*. PI: David Pollock, PhD; Supplement's PI: Carmen De Miguel, PhD. Terminated after 9 months due to acceptance of K01 award.
3. National Institute of Health Training grant (NIH T32 DK007545), 09/01/2014 - 08/31/2017. *“Interdisciplinary Training in Kidney-Related Research”*. PI: Anupam Agarwal, MD.
4. American Heart Association (AHA) Greater Southeast Affiliate Post-Doctoral Fellowship, 07/01/2011 – 06/30/2013. *“Role of Renal Medullary Endoplasmic Reticulum Stress in Endothelin-Mediated Diabetic Inflammation”*. PI: Carmen De Miguel, PhD.

TEACHING EXPERIENCE:

1. Lecturer, "The immune system and the kidney", *Fundamentals of Renal Physiology Course* GBS 741, 1.5 h lecture. Department of Medicine/Nephrology. University of Alabama at Birmingham, AL. November 2020.
2. Lecturer, "Keeping a proper laboratory notebook", *Introduction to research* PSDO 200, 1h lecture (online). Offices of Undergraduate Research and Graduate School, University of Alabama at Birmingham, AL. August 2020.
3. Workshop Instructor, "Scientific Communications: Fundamentals of Manuscript Writing". 1h lecture (online). PRedOctoral PhD and MD research training in Teams (PROmoTE) Program. Section of Cardio-Renal Physiology and Medicine and Graduate Biomedical Sciences, University of Alabama at Birmingham, AL. June 19th, 2020.
4. Workshop Instructor, "Manuscript Writing Forum: Where to begin?" 1h lecture (online). Section of Cardio-Renal Physiology and Medicine and Graduate Biomedical Sciences, University of Alabama at Birmingham, AL. April 28th, 2020.
5. Workshop Instructor, "Lab safety 101". *UAB Undergraduate Workshop Series – Theme: "Building blocks"*. 1h lecture. Offices of Undergraduate Research and Postdoctoral Education, University of Alabama at Birmingham, AL. October 2nd, 2019
6. Lecturer, "*Diabetic Nephropathy*", *Advanced Study of Renal Physiology* GBS 732, 2h lecture. Department of Medicine/Nephrology. University of Alabama at Birmingham, AL. February 18th, 2019.
7. Workshop Instructor, "How to write an award-winning scientific abstract". 1h lecture. *Kidney Undergraduate Research Experience (KURE) Program*, University of Alabama at Birmingham, AL. June 2018; June 2019.
8. Preceptor, "*Body Fluids*" and "*Physiology behind clinical cases I and II*". 1st year Medical School Renal Module-small group sessions, PCL 1170. 3 sessions, 2h/each. University of Alabama at Birmingham, Department of Medicine/Nephrology. May 4th and 9th, 2018; May 8-15 2019; May 6-12 2020 (online).
9. Lecturer, "*Renal Inflammation*" and "*Diabetic Nephropathy*", *Advanced Study of Renal Physiology* GBS 732, 2h lecture/each. Department of Medicine/Nephrology. University of Alabama at Birmingham, AL. April 2nd and 9th, 2018.
10. Lecturer, "Acid-base regulation", *Fundamentals of Renal Physiology Course* GBS 748, 2.5h lecture and 3h small group discussion. Department of Medicine/Nephrology. University of Alabama at Birmingham, AL. October 9th, 2017; October 16th and 18th, 2018.
11. Workshop Instructor, "Lab Basics/Lab safety 101". *UAB Summer Undergraduate Workshop Series – Theme: "Building blocks"*. 1h lecture. Offices of Undergraduate Research and Postdoctoral Education, University of Alabama at Birmingham, AL. June 7th, 2017; June 6th, 2018; June 12th, 2019; March 4th, 2020.
12. Workshop Instructor, "Endothelial cell nitric oxide: implications in the clinic", *Translational Research Immersion Module Program (TRIM)*, Department of Medicine/Nephrology. University of Alabama at Birmingham, AL. January 2017, 2018.
13. Lecturer, "Renal consequences of diabetes", *Advanced Renal Physiology Course*, 2h lecture. Department of Medicine/Nephrology. University of Alabama at Birmingham, AL. November 14th, 2016.
14. Workshop instructor, *American Physiological Society (APS) Professional Skills Training Online Course: Abstract Writing for Scientific Meetings*. October 15-21, 2015; November 3-8, 2016; November 2017; May 2018.
15. Workshop instructor, "Lab basics 101". 1h lecture. *UAB Office of Undergraduate Research "Map for success" workshop series*. University of Alabama at Birmingham, AL. February and September 2016; February and September 2017; February and September 2018; March 2019.
16. Workshop instructor, American Physiological Society (APS) Professional Skills Training Online Course: Creating a Poster for a Scientific Meeting. February 18-24, 2016.
17. Workshop Instructor, "How to write a scientific abstract". 1h lecture. *Summer Cardio-Renal Physiology Undergraduate Research Experience (SeCURE) Program*, University of Alabama at Birmingham, AL. July 2015, May 2016.
18. Workshop Instructor, "How to get involved in science". 1h lecture. *Summer Cardio-Renal Physiology Undergraduate Research Experience (SeCURE) Program*, University of Alabama at Birmingham, AL. July 2014.
19. Lecturer of Cardiovascular Physiology - Prematriculation Medicine Program. 3h lecture. *Department of Physiology, Georgia Regents University, GA*. July 2012, 2013.

20. Laboratory Instructor (Teaching Assistant). Medical Physiology for medical students. "Assessment and analysis of cardiovascular function in the pig and the dog". *Department of Physiology, Medical College of Wisconsin*, WI. February 2008, 2009.
21. Laboratory Instructor (Teaching Assistant). Medical Physiology for medical students. "Contractility of visceral and vascular smooth muscle". *Department of Physiology, Medical College of Wisconsin*, WI. January 2008, 2010.
22. Laboratory Instructor (Teaching Assistant). Medical Physiology for medical students. "Electrical and mechanical properties of the skeletal muscle". *Department of Physiology, Medical College of Wisconsin*, WI. January 2007, 2010.
23. Laboratory Instructor (Teaching Assistant). General Biology. *Department of Biological Sciences, St Cloud State University*, MN. May-June 2005.
24. Laboratory Instructor (Teaching Assistant). Human Physiology. *Department of Biological Sciences, St Cloud State University*, MN. January-May 2005.
25. Laboratory Instructor (Teaching Assistant). Anatomy and Physiology for pre-nursing students. *Department of Biological Sciences, St Cloud State University*, MN. January 2004-May 2005.
26. Laboratory Instructor (Teaching Assistant). Women's Biology. *Department of Biological Sciences, St Cloud State University*, MN. June-July 2004.
27. Laboratory Instructor (Teaching Assistant). Organismal Diversity. *Department of Biological Sciences, St Cloud State University*, MN. September - December 2003.

OTHER:

Organized/Chaired conference sessions and symposia:

1. Mechanisms of Hypertension I: Top TAC Awards moderated session. AHA Hypertension Scientific Sessions, September 2020. Co-chaired with Dr. Sivarajan Kumarasami. *Conference held online due to COVID-19.
2. Watokines, Diabetes, and Inflammation, Experimental Biology Meeting, San Diego, CA. April 2020. Co-chaired with Dr. Edgar D. Torres Fernandez. *Conference cancelled due to COVID-19; APS Live: EB Featured Topics virtual session held on May 29, 2020.
3. Mechanisms of Chronic Kidney Disease and Fibrosis, AHA Council on Hypertension 2019 Scientific Sessions. Co-chaired with Dr. Daria Ilatovskaya.
4. CHAMP (Council on Hypertension Advisory and Mentoring Program) panel organizer and session moderator, AHA Council on Hypertension 2019 Scientific Sessions.
5. Obesity, Diabetes and Metabolic Syndrome, AHA Council on Hypertension 2018 Scientific Sessions. Co-chaired with Dr. Kamal Rahmouni.
6. Mechanisms of Hypertension Risk, APS Water and Electrolyte Homeostasis Section, Experimental Biology 2017. Co-chaired with Dr. Justine Abais-Battad.
7. Inflammation, Immunity and Cytokines II, AHA Hypertension 2015 Scientific Sessions. Co-chaired with Dr. Mohan Raizada.
8. Under stress: Endoplasmic Reticulum Stress and Apoptosis in cardiovascular and renal disease, APS Water and Electrolyte Homeostasis Section, Experimental Biology 2014. Co-chaired with Dr. Frank Spradley.
9. Pathogenesis of renal dysfunction in hypertension, FASEB Renal Hemodynamics Meeting 2013. Co-chaired with Dr. Ole Skott.
10. Obesity and Inflammation: Contributions to Vascular and Renal Disease, APS Water and Electrolyte Homeostasis Section, Experimental Biology 2013. Co-chaired with Dr. Frank Spradley.
11. Regulation of water and electrolyte balance in diabetic nephropathy, APS Water and Electrolyte Homeostasis Section, Experimental Biology 2012. Co-chaired with Dr. Richard Roman.

Ad hoc reviewer:

1. American Journal of Physiology Renal Physiology
2. American Journal of Physiology Regulatory, Integrative and Comparative Physiology
3. European Journal of Pharmacology
4. The American Journal of the Medical Sciences
5. Experimental Biology and Medicine
6. Journal of the American Heart Association
7. Laboratory Investigation

8. PLOS ONE
9. Pharmacogenomics Journal
10. Free Radical Biology and Medicine
11. Physiological Research
12. Experimental Physiology
13. Hypertension
14. Molecular Biology Reports
15. Pharmacological Research
16. Scientific Reports
17. Journal of Physiology and Pharmacology
18. Frontiers in Physiology
19. American Journal of Physiology Heart and Circulatory Physiology
20. Physiological Reports
21. Experimental and Molecular Pathology
22. Circulation Research
23. Life Sciences
24. Cytokine
25. Clinical Research
26. Oxidative Medicine and Cellular Longevity
27. Clinical Science
28. Toxicology in vitro
29. Cellular signaling
30. Bioscience Reports

MANUSCRIPTS:

Published:

1. Gohar E.Y., Almutlaq R. N., Daugherty E. M., Butt M.K., Jin C., Pollock J.S., Pollock D.M., **De Miguel C.** † Activation of G Protein-Coupled Estrogen Receptor 1 Ameliorates Proximal Tubular Injury and Proteinuria in Dahl Salt-Sensitive Female Rats. *AJP Renal. In press.* † **Senior author.**
2. Zimmerman M. A., Ogola, B. O., Wilkinson, M.M, **De Miguel, C.**, and Lindsey S.H. Medroxyprogesterone Opposes Estradiol-Induced Renal Damage in Midlife Ovariectomized Long Evans Rats. *Menopause.* 2020 27(12)
3. **De Miguel C.** †, Kraus A.C., Saludes M.A., Konkalmatt P., Ruiz Domínguez A., Asico L.D., Offen D., Jose P.A., and Cuevas S. †. ND-13, a DJ-1 Derived Peptide, Attenuates the Renal Expression of Fibrotic and Inflammatory Markers Associated with Unilateral Ureter Obstruction. *Int. J. Mol. Sci.* 2020 21(19) 7048. † **Corresponding authors.**
4. Gohar E.Y., Daugherty E.M., Aceves J.O., Sedaka R., Obi I.E., Allan J.M., Soliman R. H., Jin C., **De Miguel C.**, Lindsey S.H., Pollock J.S., Pollock D.M. Evidence for G Protein-coupled Estrogen Receptor as a Pro-natriuretic Factor. *Journal of the American Heart Association.* 2020 May 18; 9 (10): e015110.
5. Mitchell, T., **De Miguel C.**, and Gohar E.Y. Sex differences in redox homeostasis in renal disease. *Redox Biology* 2020 April 31:101489.
6. **De Miguel C.**, Hamrick W.C., Sedaka R.S., Jagarlamudi S., Asico L.D., Jose P.A., Cuevas S. Uncoupling Protein 2 increases blood pressure in DJ-1 knockout mice. *Journal of the American Heart Association.* 2019 May 7; 8 (9):e011856.
7. **De Miguel C.** †, Sedaka R., Kasztan M., Lever J.M., Sonnenberger M., Abad A., Jin C., Carmines P.K., Pollock D.M., Pollock J.S. Tauroursodeoxycholic acid (TUDCA) prevents development of high salt-induced proximal tubular injury in ET_B-deficient rats. *Acta Physiologica.* 2018;e13227. † **Corresponding author.**
8. Loria A.S., Spradley F.T., Obi I.E., Becker B., **De Miguel C.**, Speed J.S., Pollock D.M., and Pollock J.S. “Maternal Separation Enhances Anti-contractile Perivascular Adipose Tissue Function in High Fat-Fed Male Rats”. *Am J Physiol Reg Int Comp Physiol.* 315: R1085–R1095, 2018.
9. **De Miguel, C.***, Obi, I.E.* , Ho, D.H., Loria, A.S., and Pollock J.S. Early life stress induces renal pro-inflammatory mediators in adult male rats. *Am J Physiol Reg Int Comp Physiol.* 2018 Mar 1; 314(3):F343-F355. * indicates co-first authorship.

10. Kasztan, M., Fox, B.M., Speed, J.S., **De Miguel, C.**, Gohar, E.M., Townes, T.M., Kutlar, A., Pollock, J.S., and Pollock D.M. Long-term ET_A receptor antagonism provides robust renal protection in humanized sickle cell disease mice. *J Am Soc Nephrol*. 2017 Aug; 28(8):2443-2458.
11. **De Miguel C.**, Hamrick W.C., Hobbs J., Carmines P.K., David M. Pollock, and Pollock J.S. Endothelin receptor-specific control of endoplasmic reticulum stress and apoptosis in the kidney. *Scientific Reports* 2017 7: 43152.
12. Saleh M.A., **De Miguel C.**, Stevens D.I., Carmines P.K., Pollock D.M. and Pollock J.S. Free radical scavenging decreases endothelin-1 excretion and glomerular albumin permeability during type 1 diabetes. *Physiological Reports* 2016 Dec; 4(24): e13055.
13. **De Miguel C.**, Speed J.S., Kasztan M., Gohar E.Y. and Pollock D.M. Endothelin-1 and the kidney: new perspectives and recent findings. *Curr Opin Nephrol Hypert* 2016 25(1):35-41.
14. **De Miguel C.**, Pollock D.M. and Pollock, J.S. Endothelial-derived ET-1 and the development of renal injury. *Am J Physiol Reg Int Comp Physiol* 2015 309(9):R1071-3.
15. **De Miguel C.**, Rudemiller N.P., Abbais J.M. and Mattson D.L. Inflammation and hypertension: new understandings and potential therapeutic targets. *Curr Hypertens Rep* 2015 17(1):507.
16. Xu X., Su S., Wang X., Barnes V., **De Miguel C.**, Ownby D., Pollock J., Snieder H., Chen W. and Wang X. Obesity is Associated with More Activated Neutrophils in African American Male Youth. *Int J Obes* 2015 39, 26-32.
17. Osmond D.A., Zhang S., Pollock J.S., Yamamoto T., **De Miguel C.** and Inscho E.W. Clopidogrel preserves whole kidney autoregulatory behavior in ANG II-induced hypertension. *Am J Physiol Renal Physiol* 2014 306 (6):F619-28.
18. Spradley F.T.*, **De Miguel C.***, Hobbs J., Pollock D.M. and Pollock J.S. Mycophenolate mofetil prevents high fat diet-induced hypertension and renal glomerular injury in Dahl SS rats. *Physiological Reports* 2013 (1 (6): e00137). * indicates co-first authorship.
19. **De Miguel C.***, Foster J.M.*, Carmines P.K., and Pollock, J.S. Interaction between NO synthase and NADPH oxidase in control of sodium transport by the renal thick ascending limb during diabetes. *Acta Physiologica* 2013 209 (2):148-155. * indicates co-first authorship.
20. **De Miguel C.** and Pollock, J.S. Does endoplasmic reticulum stress mediate endothelin-1-induced renal inflammation? *Am J Physiol Reg Int Comp Physiol* 2013; 305 (2):R107-9.
21. Xu X., Su S., Barnes V., **De Miguel C.**, Pollock J., Ownby D., Shi H., Zhu H., Snieder H., and Wang X. A genome-wide methylation study on obesity: Differential variability and differential methylation. *Epigenetics* 2013; 8 (5): 522-533.
22. **De Miguel C.**, Lund H. and Mattson D.L. High dietary protein exacerbates hypertension and renal damage in Dahl salt-sensitive (SS) rats by increasing infiltrating immune cells. *Hypertension* 2011; 57 (2):269-274.
23. **De Miguel C.**, Guo C., Lund H., Feng D. and Mattson D.L. Infiltrating T lymphocytes in the kidney increase oxidative stress and participate in the development of salt-sensitive hypertension and renal injury. *Am J Physiol Renal Physiol* 2011; 300 (3):F734-742.
24. **De Miguel C.**, Das S., Lund H. and Mattson D.L. Renal infiltration of T-lymphocytes is associated with elevated intrarenal angiotensin II (AngII) and the development of hypertension and kidney damage in Dahl salt-sensitive (SS) rats. *Am J Physiol Reg Int Comp Physiol* 2010; 298 (4):R1136-1142.
25. Pechman K.R., **De Miguel C.**, Lund H., Basile D.P. and Mattson D.L. Recovery from renal ischemia-reperfusion injury is associated with altered renal hemodynamics, blunted pressure natriuresis, and sodium-sensitive hypertension. *Am J Physiol Reg Int Comp Physiol*. 2009; 297: R1358-1363.
26. Rajapakse N.W., **De Miguel C.**, Das S. and Mattson D.L. Exogenous L-Arginine ameliorates angiotensin II-induced hypertension and renal damage in rats. *Hypertension*. 2008; 52:1-2.

Submitted but not yet accepted:

1. Gohar E.Y., **De Miguel C.**, Obi I.E., Daugherty E.M., Hyndman K.A., Becker B.K., Jin C., Sedaka R., Johnston J.G., Liu P., Speed J.S., Mitchell T., Kriegel A.J., Pollock J.S., Pollock D.M. Acclimation to a high salt diet is sex-dependent. *Hypertension*. *In revision*.
2. Spradley F.T., Ho D.H., **De Miguel C.** and Pollock J.S. High-fat diet in Dahl SS rats switches the mechanistic pathway of perivascular adipose tissue-mediated buffering of vasoconstriction from NO-dependent to NO-independent. *Am J Physiol Reg Int Comp Physiol*. *In revision*.

Manuscripts in preparation:

1. **De Miguel C.**, Edell C., Xu X., Wang X. and Pollock J.S. Teen obesity leads to changes in the circulatory T lymphocyte profile.
2. **De Miguel C.**, Yeo N.C., Tsaih S-W, McDermott-Roe C., Prokop J. W., Palmer N.D., Ng M.C.Y., Rudemiller N. P., Chen M-H, Bowden D.W., Freedman B.I., Lazar J., and Jacob H.J. Inhibition of *Helz2* contributes to renal tubular injury by increased apoptosis
3. **De Miguel C.**, Johnston J., Montes I., Hyndman K.A. and Pollock J.S. Specific NOS1 knockout in the thick ascending limb results in exaggerated kidney damage during diabetes.

Other publications:

1. **De Miguel, C.** UAB: Hypertension and Kidney Research in the Heart of Alabama. *AHA Connections Magazine*. Summer 2019.
2. **De Miguel C.** Teaching Kidney Physiology in Inner City Elementary Schools is PhUn!! American Physiological Society PhUn Week blog. February 2019.
<https://blog.lifescitrc.org/phunweek/2019/02/06/teaching-kidney-physiology-in-inner-city-elementary-schools-is-phun/>
3. **De Miguel C.** and Stanhewicz A. APS Awards Outstanding High School Students at the Annual Intel International Science and Engineering Fair. *Physiologist* 2016 Jul; 59(4):200.

ABSTRACTS:

Published abstracts:

1. **Carmen De Miguel**, Aleena George, Sara N. Biswal, Abigayle C. Kraus, Katelyn Dunigan-Rusell and Trent E. Tipple. Sex Differential Effects of Hyperoxia and Thioredoxin Reductase-1 Inhibition on the Kidney Endothelin-1 System. AHA Hypertension Scientific Sessions. September 2020. *Conference held online due to COVID19.
2. **Carmen De Miguel**, Vianna G. Martinez. Rawan Almutlaq, David M. Pollock, and Jennifer S. Pollock. Sex differences in the activation of renal cell death pathways in diabetic vascular endothelial cell ET-1 knockout mice". Experimental Biology Meeting, San Diego, CA. April 2020. **Selected for oral presentation.***Conference cancelled due to COVID-19 – Talk given in the APS Live: EB Featured Topics virtual session held on May 29, 2020
3. **Carmen De Miguel**, Vianna Martinez, David M. Pollock, and Jennifer S. Pollock. Differential activation of renal cell death pathways in male and female vascular endothelial cell ET-1 knockout mice. 16th International Conference on Endothelin: Physiology, Pathophysiology and Therapeutics. Kobe, Japan. September 2019. **Selected for oral presentation.**
1. Patrick A. Molina, **Carmen De Miguel**, Craig Maynard, and Jennifer S. Pollock. Distinct roles for ET_A and ET_B receptors in TH17 differentiation. 16th International Conference on Endothelin: Physiology, Pathophysiology and Therapeutics. Kobe, Japan. September 2019. **Selected for oral presentation.**
2. Eman Y. Gohar, Rawan Almutlaq, **Carmen De Miguel**, Elizabeth Daugherty, Chunhua Jin, Jennifer S. Pollock, David M. Pollock. Activation of G Protein-coupled Estrogen Receptor Ameliorates Proteinuria in Dahl Salt-sensitive Female Rats. ASN Kidney Week 2019. Washington, D.C. **Selected for oral presentation.**
3. **De Miguel, C.**, Kasztan, M., Lever, J.M., Carmines, P.K., Pollock, D.M., and Pollock, J.S. Tauroursodeoxycholic Acid (TUDCA) Prevents High Salt-Induced Renal Injury by Reducing Glomerular Permeability to Albumin and Attenuating CD4⁺ Cell Inflammation in the Renal Cortex. *Experimental Biology* 2019, Orlando, FL, April 2019.
4. Eman Y. Gohar, **Carmen De Miguel**, Ijeoma Obi, Kelly A. Hyndman, Elizabeth M. Daugherty, Bryan K. Becker, Chunhua Jin, Jermaine G. Johnston, Pengyuan Liu, Joshua S. Speed, Tanecia Mitchell, Alison Kriegel, Jennifer S. Pollock, David M. Pollock. Sex-Differences in Renal Na⁺ Regulatory Mechanisms During Acclimation to a High Salt Diet. *Experimental Biology* 2019, Orlando, FL, April 2019.
5. Patrick A. Molina, Brandon M. Fox, **Carmen De Miguel**, Fengyuan Huang, Malgorzata Kasztan, David M. Pollock, Jennifer S. Pollock. Renal TH17 cells are elevated in humanized sickle cell mice. *Experimental Biology* 2019, Orlando, FL, April 2019.
6. **De Miguel C.**, Pollock D.M. and Pollock J.S. Loss of ET_B Receptor Function Activates Inflammasome Signaling Pathways and Dendritic Cells in the Renal Outer Medulla During Type 1 Diabetes. AHA Council on Hypertension 2018 Scientific Sessions, Chicago, IL. September 2018. **Selected for oral presentation.**

7. **De Miguel C.**, Saludes M., Asico L.D., Latham P.S., Offen D., Jose P.A. and Cuevas S. ND-13, a DJ-1-Derived Peptide, Protects Against the Renal Fibrosis and Inflammation Associated With Unilateral Ureter Obstruction. AHA Council on Hypertension 2018 Scientific Sessions, Chicago, IL. September 2018. **Selected for oral presentation.**
8. **De Miguel C.**, Pollock D.M., and Pollock J.S. Lack of endothelium-derived ET-1 accelerates diabetes-mediated renal damage in female, but not male, mice. Experimental Biology 2018, San Diego, CA. April 2018.
9. **De Miguel C.**, Hamrick W.C., Jagarlamudi S., Ma X., Asico L., Jose P.A., and Cuevas S. DJ-1 protects against renal mitochondrial oxidative stress and T cell infiltration. Experimental Biology 2018, San Diego, CA. April 2018.
10. **De Miguel C.**, Pollock D.M., and Pollock J.S. Loss of ET_B receptor function activates NOD-like receptor and inflammasome signaling pathways in renal outer medulla during type 1 diabetes through an ER stress-independent mechanism. NIDDK Network of Minority Health Research Investigators (NMRI) 16th Annual Workshop, Bethesda, MD. April 2018. **Selected for oral presentation.**
11. **De Miguel C.**, Hamrick W.C., Jagarlamudi S., Asico L., Jose P.A. and Cuevas S. Role of UCP2 on mitochondrial dysfunction and blood pressure regulation in the renal oxidative stress-mediated hypertension associated with DJ-1 depletion. AHA Council on Hypertension 2017 Scientific Sessions, San Francisco, CA. September 2017.
12. Gohar E.Y., Obi I.E., **De Miguel C.**, Pollock J.S., and Pollock D.M. New evidence for G protein-coupled estrogen receptor as a natriuretic factor. AHA Council on Hypertension 2017 Scientific Sessions, San Francisco, CA. September 2017.
13. **De Miguel C.**, Hamrick W.C., Jagarlamudi S., Asico L., Jose P.A. and Cuevas S. Role of UCP2 on mitochondrial dysfunction in the renal oxidative stress-mediated hypertension associated with DJ-1 depletion. Experimental Biology meeting, Chicago, IL. April 2017.
14. Becker BK, Feagans AC, Chen D, Jin C, Speed JS, **De Miguel C.**, Pollock JS, and Pollock DM. Potential Role for Renal Nerves in Mediating Hypertension in Male ET_B-deficient Rats. Experimental Biology meeting, Chicago, IL. April 2017.
15. **De Miguel C.**, Liu X, Pollock DM and Pollock JS. ET_B Receptor Dysfunction Leads to Exaggerated Apoptosis and Inflammasome Priming in Renal Outer Medulla during Type 1 Diabetes. Experimental Biology meeting, Chicago, IL. April 2017.
16. **De Miguel C.**, Hobbs J.L., Carmines P.K., Pollock D.M. and Pollock J.S. Protective role of the endothelin B receptor against the development of tunicamycin-induced renal apoptosis. American Society of Nephrology Kidney Week 2016, Chicago, IL. November 2016.
17. **De Miguel C.**, Sedaka R., Abad A., Hobbs J.L., Pollock DM and Pollock JS. Tauroursodeoxycholic acid (TUDCA) prevents high salt-induced renal damage in ET_B deficient rats in a blood pressure-independent manner. AHA Council on Hypertension 2016 Scientific Sessions, Orlando, FL. September 2016. **Selected for oral presentation.**
18. **De Miguel C.**, Hamrick W.C., Asico L., Jose P.A. and Cuevas S. Role of UCP2 in the oxidative/nitrosative stress-mediated hypertension associated with DJ-1 depletion. AHA Council on Hypertension 2016 Scientific Sessions, Orlando, FL. September 2016.
19. **De Miguel C.**, Hamrick W.C., Pollock D.M. and Pollock J.S. Loss of ET_B function activates NOD-like receptor and inflammasome signaling pathways in renal outer medulla during type 1 diabetes through an ER stress-independent mechanism. 2016 APS Conference: Inflammation, Immunity, and Cardiovascular Disease, Westminster, CO. August 2016.
20. **De Miguel C.**, Battles K.D., Hamrick W.C., Liu X., Pollock D.M. and Pollock J.S. Endothelial-derived Endothelin-1 distinctly mediates the development of renal apoptosis in male and female mice. Experimental Biology meeting, San Diego, CA. April 2016.
21. **De Miguel C.**, Ho D.H., Loria A.S., Obi I. and Pollock J.S. Early life stress induces renal pro-inflammatory immune responses. AHA Council on Hypertension 2015 Scientific Sessions, Washington, D.C. September 2015. **Selected for oral presentation.**
22. **De Miguel C.**, Xu X., Pan Y., Ownby D., Wang X., and Pollock J.S. Teen obesity leads to changes in the circulatory T lymphocyte profile. AHA Council on Hypertension 2015 Scientific Sessions, Washington, D.C. September 2015.
23. **De Miguel C.**, Hamrick W.C., Hobbs J.L., Yanagisawa M., Pollock D.M. and Pollock J.S. "The Endothelin System Mediates Renal Endoplasmic Reticulum Stress and Apoptosis". 14th International

- Conference on Endothelin: Physiology, Pathophysiology and Therapeutics, Savannah, GA. September 2015. **Selected for oral presentation.**
24. **De Miguel C**, Rodriguez M.A., Pollock D.M. and Pollock J.S. Evidence that Vascular Endothelial Derived Endothelin-1 Promotes Development of Tunicamycin-Induced Endoplasmic Reticulum Stress in Renal Vessels. Experimental Biology meeting, Boston, MS. March 2015.
 25. Sedaka R., **De Miguel C**, Pollock D.M. and Pollock J.S. TUDCA Attenuates High Salt-Induced Renal Injury in ET_B Deficient Rats. Experimental Biology meeting, Boston, MS. March 2015.
 26. **De Miguel C**, Hobbs J.L., Pollock D.M. and Pollock J.S. Renal Endoplasmic Reticulum (ER) stress is induced *via* Endothelin A (ET_A) receptor. International Society of Hypertension New Investigator Symposium, San Francisco, CA. September 2014.
 27. **De Miguel C**, Hobbs J.L., Pollock D.M. and Pollock J.S. Renal Endoplasmic Reticulum (ER) stress is induced *via* Endothelin A (ET_A) receptor. Experimental Biology meeting, San Diego, CA. April 2014. **Selected for oral presentation.**
 28. Obi I., **De Miguel C**, Ho D.H., Loria A.S., and Pollock J.S. Early life stress enhances renal expression of T-cell and B-cell activation factors. Experimental Biology meeting, San Diego, CA. April 2014.
 29. Duval Rulova, S., **De Miguel C**, Ortiz R.M., and Pollock J.S. Combination Therapy of Olmesartan/Exenatide Decreases Renal ER Stress in a Rat Model of Metabolic Syndrome. Experimental Biology meeting, San Diego, CA. April 2014.
 30. **De Miguel C**, Pollock D.M. and Pollock J.S. Endothelin-1 is involved in the induction of renal vascular apoptosis *via* CHOP activation. International Society of Nephrology (ISN) Frontiers Symposium: Intrinsic Regulation of Kidney Function, Charleston, NC. March 2014.
 31. **De Miguel C**, Xu X., Ownby D., Wang X., and Pollock J.S. Obesity leads to activation of circulating T lymphocytes in female, not male, African American teenagers. 67th High Blood Pressure Research Conference, New Orleans, LA. September 2013.
 32. **De Miguel C**, Edenfield L.A., Hyndman K., Musall B.C., Harrison D.G., Pollock D.M., Carmines P.K., and Pollock J.S. Thick Ascending Limb-Specific NOS1 Knockout Reduces Urinary Osmolality in Type 1 Diabetes, FASEB Renal Hemodynamics Meeting, Saxtons River, VT. July 2013.
 33. Edenfield L.A., **De Miguel C**, Hyndman K., Musall B.C., Harrison D.G., Pollock D.M., Carmines P.K., and Pollock J.S. Thick Ascending Limb-Specific NOS1 Knockout Reduces Urinary Osmolality in Type 1 Diabetes, Experimental Biology meeting, Boston, MS. April 2013.
 34. **De Miguel C**, Hobbs J.L., Pollock D.M. and Pollock J.S. Endothelin B receptor protects against endoplasmic reticulum stress-induced renal damage, Experimental Biology meeting, Boston, MS. April 2013. **Selected for oral presentation.**
 35. **De Miguel C**, Ownby D., Wang X., and Pollock J.S. Obesity alters the circulating T cell profile in female African American teenagers. 66th High Blood Pressure Research Conference, Washington, D.C., September 2012.
 36. **De Miguel C**, Ownby D., Wang X., and Pollock J.S. Obesity alters the circulatory T cell profile in female African American teenagers. 2012 Southern Translational Education and Research Conference (STaR), Augusta, GA. September 2012.
 37. Spradley F.T., **De Miguel C.**, Pollock J.S. T lymphocytes infiltrating the kidneys of Dahl SS rats are activated and differentiated. Experimental Biology Meeting, San Diego, CA. April 2012.
 38. **De Miguel C**, Pollock D.M. and Pollock J.S. Specific Endothelin A Receptor Blockade Results in Reduced Expression of Endoplasmic Reticulum Stress Proteins in Renal Medulla of Type-1 Diabetic Rats. Experimental Biology Meeting, San Diego, CA. April 2012.
 39. **De Miguel C**, Pollock D.M. and Pollock J.S. Specific Endothelin A Receptor Blockade Results in Reduced Expression of Endoplasmic Reticulum Stress Proteins in Renal Medulla of Type-1 Diabetic Rats. Georgia Life Sciences Summit, Atlanta, GA. September 2011.
 40. Spradley F.T., **De Miguel C.**, Pollock J.S. Mycophenolate Mofetil Prevents Renal Injury in Dahl S Rats on High Fat Diet. 65th High Blood Pressure Research Conference, Orlando, FL. September 2011. **Selected for oral presentation.**
 41. **De Miguel C**, Ho D.H., Loria A.S., and Pollock J.S. Early Life Stress Enhances Circulating T-cell Activation and Renal Inflammatory Markers. Experimental Biology Meeting, Washington, D.C. April 2011.
 42. Spradley F.T., **De Miguel C.**, Pollock J.S. Mycophenolate Mofetil Reduces Renal T-cell Numbers and Prevents High Fat-Induced Hypertension in Dahl Rats. Experimental Biology Meeting, Washington, D.C. April 2011.

43. **De Miguel C**, Lund H., and Mattson D.L. Adoptive Transfer of Renal Infiltrating T-lymphocytes Increases Blood Pressure and Renal Damage in Dahl Salt-Sensitive (SS) Rats. American Heart Association Scientific Sessions 2010, Best of Specialty Conferences (HBPR 2010), Chicago, IL. November 2010.
44. **De Miguel C**, Lund H., and Mattson D.L. Adoptive Transfer of Renal Infiltrating T-lymphocytes Increases Blood Pressure and Renal Damage in Dahl Salt-Sensitive (SS) Rats. 64th High Blood Pressure Research Conference, Washington, D.C. October 2010. **Selected for oral presentation.**
45. **De Miguel C**, Lund H., and Mattson D.L. High Dietary Protein Exacerbates Hypertension and Renal Damage in Dahl Salt-Sensitive (SS) Rats by Increasing Infiltrating Immune Cells. Experimental Biology Meeting, Anaheim, CA. April 2010. **Selected for oral presentation.**
46. Saleh M., **De Miguel C**, Lund H., and Mattson D.L. TNF- α inhibition reduces the development of sodium-sensitive renal disease in rats recovered from ischemia-reperfusion (I/R) injury. Central Society for Clinical Research / Midwestern Section American Federation for Medical Research 2010 Combined Annual Meeting, Chicago, IL. April 2010.
47. **De Miguel C**, Guo C., Lund H., and Mattson D.L. Renal infiltrating T-lymphocytes are associated with increased renal oxidative stress in Dahl Salt Sensitive (SS) hypertension. 63rd High Blood Pressure Research Conference, Chicago, IL. September 2009. **Selected for oral presentation.**
48. **De Miguel C**, Das S., Lund H., and Mattson D.L. Renal infiltration of T-lymphocytes is associated with elevated intrarenal angiotensin II (Ang II) and the development of hypertension and kidney damage in Dahl salt-sensitive (SS) rats. Experimental Biology Meeting, New Orleans, LA. April 2009. **Selected for oral presentation.**
49. Das S., **De Miguel C**, Lund H., and Mattson D.L. Exogenous L-Arginine blunts Angiotensin II-mediated renal vasoconstriction and improves pressure-diuresis. Experimental Biology Meeting, New Orleans, LA. April 2009.
50. **De Miguel C**, and Gazal O. Motilin stimulates *in vitro* gonadotropin-releasing hormone secretion in female and male rats. 87th Annual Meeting of the Endocrine Society, San Diego, CA. June 2005.
51. Fumaki O, **De Miguel C**, and Gazal O. Ghrelin effects on growth hormone releasing hormone (GHRH) and somatostatin (SST) secretion in hypothalamic explants. Student Research Colloquium, St Cloud State University, St Cloud, MN. February 2005.
52. **De Miguel C**, and Gazal O. Motilin and gonadotropin-releasing hormone (GnRH) secretion. Student Research Colloquium, St Cloud State University, St Cloud, MN. February 2005.

Poster exhibits (most recent, selected from a total of 79):

1. George A., Biswal S.N., Kraus A.C., Dunigan- Russel K., Tipple T.E. and **De Miguel C**. Sex differential effects of hyperoxia and thioredoxin reductase-1 inhibition on the kidney endothelin-1 system. Academic Conference for Emerging Scholars (BioAcCES) conference, Rockefeller University, October 2020.
2. Martinez, V.G., Pollock D.M., Pollock J.S., and **De Miguel C**. Sex Differences in Kidney Cell Death Pathway Activation in Diabetic Mice Lacking Endothelium-Derived Endothelin-1. Academic Conference for Emerging Scholars (BioAcCES) conference, Rockefeller University, October 2020.
3. **De Miguel C**, George A., Biswal S.N., Kraus A.C., Dunigan- Russel K. and Tipple T.E. Sex differential effects of hyperoxia and thioredoxin reductase-1 inhibition on the kidney endothelin-1 system. AHA Hypertension Scientific Sessions. September 2020. *Conference held online due to COVID19.
4. George A.*, Biswal S.N., Kraus A.C., Dunigan- Russel K., Tipple T.E. and **De Miguel C**. Sex differential effects of hyperoxia and thioredoxin reductase-1 inhibition on the kidney endothelin-1 system. 2020 Spring UAB EXPO, Birmingham, AL. *Tied for 1st place in the Biological and Life Sciences category.
5. **De Miguel, C.**, Kasztan, M., Lever, J.M., Carmines, P.K., Pollock, D.M., and Pollock, J.S. Tauroursodeoxycholic Acid (TUDCA) Prevents High Salt-Induced Renal Injury by Reducing Glomerular Permeability to Albumin and Attenuating CD4⁺ Cell Inflammation in the Renal Cortex. Experimental Biology 2019, Orlando, FL, April 2019.
6. **De Miguel C.**, Pollock D.M., and Pollock J.S. "Lack of endothelium-derived ET-1 accelerates diabetes-mediated renal damage in female, but not male, mice". Experimental Biology 2018, San Diego, CA. April 2018.

7. **De Miguel C.**, Hamrick W.C., Jagarlamudi S., Ma X., Asico L., Jose P.A., and Cuevas S. "DJ-1 protects against renal mitochondrial oxidative stress and T cell infiltration". Experimental Biology 2018, San Diego, CA. April 2018.
8. **De Miguel C.**, Hamrick W.C., Jagarlamudi S., Asico L., Jose P.A. and Cuevas S. "Role of UCP2 on mitochondrial dysfunction and blood pressure regulation in the renal oxidative stress-mediated hypertension associated with DJ-1 depletion". AHA Council on Hypertension 2017 Scientific Sessions, San Francisco, CA. September 2017.
9. **De Miguel, C.**, Liu X., Pollock DM, and Pollock JS. "ET_B Receptor Dysfunction Leads to Exaggerated Apoptosis and Inflammasome Priming in Renal Outer Medulla during Type 1 Diabetes". 28th Annual Vascular Biology and Hypertension Symposium – Annual Trainee Poster Session, University of Alabama at Birmingham, Birmingham, AL. May 2017.
10. **De Miguel C.**, Hamrick WC, Jagarlamudi S, Ma X, Asico L, Jose PA, and Cuevas S. Role of UCP2 on mitochondrial dysfunction and blood pressure regulation in the renal oxidative stress-mediated hypertension associated with DJ-1 depletion. AHA Council on Hypertension 2017 Scientific Sessions, San Francisco, CA. September 2017.
11. **De Miguel C.**, Liu X, Pollock DM and Pollock JS. "ET_B Receptor Dysfunction Leads to Exaggerated Apoptosis and Inflammasome Priming in Renal Outer Medulla during Type 1 Diabetes". 28th Annual Vascular Biology and Hypertension Symposium – Annual Trainee Poster Session, University of Alabama at Birmingham, Birmingham, AL. May 2017.
12. **De Miguel C.**, Hamrick W.C., Jagarlamudi S., Asico L., Jose P.A. and Cuevas S. "Role of UCP2 on mitochondrial dysfunction in the renal oxidative stress-mediated hypertension associated with DJ-1 depletion". Experimental Biology meeting, Chicago, IL. April 2017.
13. **De Miguel C.**, Liu X, Pollock DM and Pollock JS. "ET_B Receptor Dysfunction Leads to Exaggerated Apoptosis and Inflammasome Priming in Renal Outer Medulla during Type 1 Diabetes". Experimental Biology meeting, Chicago, IL. April 2017.
14. **De Miguel C.**, Sedaka R., Abad A., Hobbs J.L., Pollock DM and Pollock JS. "Tauroursodeoxycholic acid (TUDCA) prevents high salt-induced renal damage in ET_B deficient rats in a blood pressure-independent manner". 33rd UAB Department of Medicine Trainee Research Symposium, Birmingham, AL. March 2017.
15. **De Miguel C.**, Hobbs J.L., Carmines P.K., Pollock D.M. and Pollock J.S. "Protective role of the endothelin B receptor against the development of tunicamycin-induced renal apoptosis". American Society of Nephrology Kidney Week 2016, Chicago, IL. November 2016.
16. **De Miguel C.**, Hamrick W.C., Pollock D.M. and Pollock J.S. "Loss of ET_B function activates NOD-like receptor and inflammasome signaling pathways in renal outer medulla during type 1 diabetes through an ER stress-independent mechanism". 27th Annual Vascular Biology and Hypertension Symposium – Annual Trainee Poster Session, University of Alabama at Birmingham, Birmingham, AL. October 2016.
17. **De Miguel C.**, Sedaka R., Abad A., Hobbs J.L., Pollock DM and Pollock JS. "Tauroursodeoxycholic acid (TUDCA) prevents high salt-induced renal damage in ET_B deficient rats in a blood pressure-independent manner". AHA Council on Hypertension 2016 Scientific Sessions, Orlando, FL. September 2016.
18. **De Miguel C.**, Hamrick W.C., Asico L., Jose P.A. and Cuevas S. "Role of UCP2 in the oxidative/nitrosative stress-mediated hypertension associated with DJ-1 depletion". AHA Council on Hypertension 2016 Scientific Sessions, Orlando, FL. September 2016.
19. **De Miguel C.**, Hamrick W.C., Pollock D.M. and Pollock J.S. "Loss of ET_B function activates NOD-like receptor and inflammasome signaling pathways in renal outer medulla during type 1 diabetes through an ER stress-independent mechanism". 2016 APS Conference: Inflammation, Immunity, and Cardiovascular Disease, Westminster, CO. August 2016.
20. **De Miguel C.**, Hamrick W.C., Pollock D.M. and Pollock J.S. "Loss of ET_B function activates NOD-like receptor and inflammasome signaling pathways in renal outer medulla during type 1 diabetes through an ER stress-independent mechanism. 7th Annual UAB Diabetes Research Day, Birmingham, AL. May 2016.
21. **De Miguel C.**, Battles K.D., Hamrick W.C., Liu X., Pollock D.M. and Pollock J.S. "Endothelial-derived Endothelin-1 distinctly mediates the development of renal apoptosis in male and female mice". Experimental Biology meeting, San Diego, CA. April 2016.

22. **De Miguel C**, Battles K.D., Hamrick W.C., Liu X., Pollock D.M. and Pollock J.S. "Endothelial-derived Endothelin-1 distinctly mediates the development of renal apoptosis in male and female mice". 32nd UAB Department of Medicine Trainee Research Symposium, Birmingham, AL. March 2016.

ORAL PRESENTATIONS:

National and International meetings

1. "Next Generation Scientist: Science Outreach and Community Engagement". American Physiological Society, Trainee Advisory Committee Next Generation Scientist Webinar Series. December 2020.
2. "Sex differences in the activation of renal cell death pathways in diabetic vascular endothelial cell ET-1 knockout mice". Experimental Biology Meeting, San Diego, CA. April 2020. *Conference cancelled due to COVID-19 – Talk given in the APS Live: EB Featured Topics virtual session held on May 29, 2020. **Featured speaker.**
3. "Loss of ET_B Receptor Function Activates Inflammasome Signaling Pathways and Dendritic Cells in the Renal Outer Medulla during Type 1 Diabetes". AHA Council on Hypertension 2018 Scientific Sessions, Chicago, IL. September 2018.
4. "ND-13, a DJ-1-derived peptide, protects against the renal fibrosis and inflammation associated with unilateral ureter obstruction". AHA Council on Hypertension 2018 Scientific Sessions, Chicago, IL. September 2018.
5. "Loss of ET_B receptor primes the renal inflammasome during type 1 diabetes". NIDDK Network of Minority Health Research Investigators (NMRI) 16th Annual Workshop, Bethesda, MD. April 2018.
6. "Tauroursodeoxycholic acid (TUDCA) prevents high salt-induced renal damage in ET_B deficient rats in a blood pressure-independent manner". 2017 UAB Postdoctoral Research Day, University of Alabama at Birmingham, Birmingham, AL. February 2017.
7. "Tauroursodeoxycholic acid (TUDCA) prevents high salt-induced renal damage in ET_B deficient rats in a blood pressure-independent manner". AHA Council on Hypertension 2016 Scientific Sessions, Orlando, FL. September 2016.
8. "Early life stress induces renal pro-inflammatory immune responses". AHA Council on Hypertension 2015 Scientific Sessions, Washington, D.C. September 2015.
9. "The Endothelin System Mediates Renal Endoplasmic Reticulum Stress and Apoptosis". 14th International Conference on Endothelin: Physiology, Pathophysiology and Therapeutics, Savannah, GA. September 2015.
10. "Evidence that Vascular Endothelial Derived Endothelin-1 Promotes Development of Tunicamycin-Induced Endoplasmic Reticulum Stress in Renal Vessels". Data Diuresis, APS Water and Electrolyte Homeostasis Section, Experimental Biology meeting, Boston, MS. March 2015.
11. "The Endothelin System and the Development of Renal Endoplasmic Reticulum Stress". Southern Salt, Water and Kidney Club, Sarasota, FL. December 2014.
12. "Renal Endoplasmic Reticulum (ER) stress is induced *via* Endothelin A (ET_A) receptor". Experimental Biology meeting, San Diego, CA. April 2014.
13. "Renal Endoplasmic Reticulum (ER) stress is induced *via* Endothelin A (ET_A) receptor". Juan Carlos Romero Postdoctoral Research Recognition Award Symposium, APS Water and Electrolyte Homeostasis Section, Experimental Biology meeting, San Diego, CA. April 2014.
14. "Endothelin B receptor protects against endoplasmic reticulum stress-induced renal damage". Data Diuresis, APS Water and Electrolyte Homeostasis Section, Experimental Biology meeting, Boston, MS. April 2013.
15. "Adoptive Transfer of Renal Infiltrating T-lymphocytes Increases Blood Pressure and Renal Damage in Dahl Salt-Sensitive (SS) Rats". 64th High Blood Pressure Research Conference, Washington, D.C. October 2010.
16. "High Dietary Protein Exacerbates Hypertension and Renal Damage in Dahl Salt-Sensitive (SS) Rats by Increasing Infiltrating Immune Cells". Experimental Biology Meeting, Anaheim, CA. April 2010.
17. "Renal infiltrating T-lymphocytes are associated with increased renal oxidative stress in Dahl Salt Sensitive (SS) hypertension". 63rd High Blood Pressure Research Conference, Chicago, IL. September 2009.
18. "Renal infiltration of T-lymphocytes is associated with elevated intrarenal angiotensin II (Ang II) and the development of hypertension and kidney damage in Dahl salt-sensitive (SS) rats". Experimental Biology Meeting, New Orleans, LA. April 2009.

19. "Renal infiltration of immune cells and salt-sensitive hypertension". DSI-Water and Electrolyte Homeostasis Student and Fellow Awards Symposium. New Orleans, LA. April 2009.

Local and regional meetings

1. "Activation of the renal inflammasome and dendritic cells with ET_B receptor dysfunction during type 1 diabetes". UAB-Vanderbilt Nephrology Retreat, Chattanooga, TN. June 2019.
2. "Salt-dependent kidney damage is prevented by TUDCA treatment". UAB-Vanderbilt Nephrology Retreat, Chattanooga, TN. July 2017.
3. "Tauroursodeoxycholic acid (TUDCA) prevents high salt-induced renal damage in ET_B deficient rats in a blood pressure-independent manner". 2017 UAB Postdoctoral Research Day, University of Alabama at Birmingham, Birmingham, AL. February 2017.
4. "Early life stress induces renal pro-inflammatory immune responses". 2016 UAB Postdoctoral Research Day, University of Alabama at Birmingham, Birmingham, AL. February 2016.
5. "Endothelin-1 promotes renal endoplasmic reticulum stress and apoptosis". UAB-Vanderbilt Nephrology Retreat, Chattanooga, TN. August 2015.
6. "The Endothelin System Mediates Renal Endoplasmic Reticulum Stress Development". 2015 UAB Postdoctoral Research Day, University of Alabama at Birmingham, Birmingham, AL. February 2015.
7. "Endothelin B receptor protects against renal endoplasmic reticulum stress". 29th Annual Graduate Research Day, College of Graduate Studies, Georgia Regents University, Augusta, GA. March 2013.

Invited lectures at local and regional courses and meetings

1. "Social media and the modern scientist", Department of Kinesiology and Health Sciences, Virginia Commonwealth University, Richmond, VA. November 2020.
2. "Cell death and inflammatory pathways in diabetic kidney disease: the role of endothelin-1", Nephrology Research & Training Center (NRTC) Seminar Series, Division of Nephrology, University of Alabama at Birmingham, Birmingham, AL. October 2020.
3. "Social media and the modern scientist", University of Toledo Training Leaders course, Toledo, OH. August 2020.
4. "The role of the endothelin system in renal damage and inflammation". Renal Grand Rounds, Division of Renal Diseases and Hypertension, University of Minnesota, Minneapolis, MN. June 2019.
5. "The endothelin system in renal damage and inflammation". Department of Cellular & Integrative Physiology, University of Nebraska Medical Center, Omaha, NE. March 2019.
6. "Endothelin-1, inflammation and chronic kidney disease". Nephrology Research & Training Center (NRTC) Seminar Series, Division of Nephrology, University of Alabama at Birmingham, Birmingham, AL. March 2018.
7. "Salt-dependent kidney damage is prevented by TUDCA treatment". UAB-Vanderbilt Nephrology Retreat, Chattanooga, TN. July 2017.
8. "The Role of Endothelin-1 in the Development of Renal Endoplasmic Reticulum Stress". Nephrology Research & Training Center (NRTC) Seminar Series, Division of Nephrology, University of Alabama at Birmingham, Birmingham, AL. April 2015.
9. "Mechanisms of Endothelin-dependent Inflammation during Diabetic Nephropathy". Research Forum Series, Section of Experimental Medicine, Department of Medicine, Georgia Health Sciences University, Augusta, GA. December 2011.
10. "Motilin and secretion of gonadotropin-releasing hormone (GnHR) in hypothalamic explants from male and female Sprague-Dawley rats". Master's thesis defense. Department of Biological Sciences, St. Cloud State University, St. Cloud, MN. June 2010.
11. "Renal infiltration of immune cells and salt-sensitive hypertension". Doctoral dissertation defense, Department of Physiology, Medical College of Wisconsin, Milwaukee, WI. May 2010.
12. "The role of renal immune cell infiltration in salt-sensitive hypertension". Vascular Biology Center, Medical College of Georgia, Augusta, GA. October 2009.
13. "The role of renal immune cell infiltration in salt-sensitive hypertension". Department of Physiology Seminar Series, Medical College of Wisconsin, Milwaukee, WI. July 2009.
14. "Renal infiltration of immune cells and hypertension". Department of Physiology Seminar Series, Medical College of Wisconsin, Milwaukee, WI. September 2008.
15. "Effects of L-Arginine infusion on Angiotensin II-induced hypertension". Department of Physiology Seminar Series, Medical College of Wisconsin, Milwaukee, WI. October 2007.

16. "L-Arginine transport and nitric oxide production". Department of Physiology Seminar Series, Medical College of Wisconsin, Milwaukee, WI. August 2006.
17. "Molecular basis of obesity". Department of Biological Sciences Seminar Series, St Cloud State University, St Cloud, MN. May 2005.

REVIEW GROUPS

Grant reviewer:

1. *United Kingdom Research and Innovation (UKRI), Medical Research Council Grant Proposal Review Committee*, November 2020.
2. *Center for Heart and Vascular Research Pilot Project Application Review Committee*, University of Nebraska Medical Center, December 2019.
3. *Vascular Endothelial Biology Basic Science Fellowship Peer Review Committee*, American Heart Association, October 2019.

Abstract reviewer:

1. ENDO 2021, Endocrine Society Annual Conference Abstracts, November 2020
2. BioRender, Graphical Abstract Competition, 2020.
3. American Physiological Society, Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awards 2020.
4. American Society of Nephrology, Kidney Week 2019.
5. Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) – National Diversity in STEM Conference 2018-2020.
6. UAB Medical Student Research Day 2018.
7. UAB Kidney Undergraduate Research Experience (KURE) poster and symposium 2017- 2018.
8. Annual Biomedical Research Conference for Minority Students (ABRCMS) 2016-2019.
9. American Heart Association Scientific Sessions 2016.
10. American Physiological Society David Bruce/Horowitz/Horowitz Excellence in Undergraduate Research Awards 2015-2020.
11. American Physiological Society Early Career Innovator Award 2015-2017.

Travel scholarship reviewer:

1. National Diversity in STEM Conference, Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) 2018-2020.

TRAINEE MENTORING COMMITTEES

A. Postdoctoral fellows:

1. Anne Ramsey, PhD

B. Dissertation committee:

1. Jazmine J. Benjamin

STUDENTS MENTORED/SUPERVISED

A. Medical students

1. Abigayle Kraus, September 2020-present, University of Alabama at Birmingham.
2. Leia Edenfield, Medical student (summer 2012), Georgia Regents University.
3. Tyler Cunningham, Medical student (summer 2011), Georgia Regents University.

B. Graduate students

1. Maryam Khawar, Non-thesis Master's student, October 2019-January 2020, University of Alabama at Birmingham.
2. Patrick Molina, MD/PhD student, 2017-present, University of Alabama at Birmingham.
3. Luke Dunaway, Graduate student, 2017-present, University of Alabama at Birmingham.
4. Randee Sedaka, Graduate Student (2014-2020), University of Alabama at Birmingham.
5. Ijeoma Obi, Graduate student (2013-2019), University of Alabama at Birmingham.
6. Jermaine Johnston, Graduate student (2012-2018), University of Alabama at Birmingham.

C. Undergraduate students

1. Mingmar Sherpa, December 2020-present, University of Alabama at Birmingham.
2. William Johnston, September 2020-present, University of Alabama at Birmingham.
3. Heather Thorn, July 2020-present, University of Alabama at Birmingham.
4. Lilla Stjernstrom, July 2020-present, University of Alabama at Birmingham.
5. Quincy Lacy Jr., January 2020-present, University of Alabama at Birmingham.
6. Hannah Northcutt, January 2020-present, University of Alabama at Birmingham.
7. Sharrell Greene, October 2019- present, University of Alabama at Birmingham.
8. Zoey Sexton, October-December 2019, University of Alabama at Birmingham
9. Aleena George, October 2019-June 2020, University of Alabama at Birmingham
10. Jillian A. Tinglin, 2018-2019, University of Alabama at Birmingham.
11. Priscilla Patel, 2005, St. Cloud State University.
12. Lalita Shrestha, 2005, St. Cloud State University.
13. Olayemi Durosaro, 2004-2005, St. Cloud State University.
14. Vivian Wang, 2004-2005, St. Cloud State University.
15. Christopher Walker, 2004, St. Cloud State University.
16. Anna Meszka, 2004, St. Cloud State University.
17. Lucas Hart, 2003-2004, St. Cloud State University.

D. Summer undergraduate students

1. Vianna G. Martinez, KURE summer 2019, University of Alabama at Birmingham.
2. Michelle Sonnenberger, KURE summer 2016, University of Alabama at Birmingham.
3. Iris Montes, KURE summer 2015, University of Alabama at Birmingham.
4. Marco Antonio Rodriguez, KURE summer 2014, University of Alabama at Birmingham.
5. Steven Duval Ruilova, UpSTaRT summer 2013, Georgia Regents University.
6. Brett Glomski, SPUR summer 2010, Medical College of Wisconsin.
7. Jennifer Yeek, SPUR Undergraduate student, summer 2009, Medical College of Wisconsin.
8. Danielle Abraham, SPUR Undergraduate student, summer 2008, Medical College of Wisconsin.
9. Kayla Flores, SPUR Undergraduate student, summer 2007, Medical College of Wisconsin.

E. Gap year interns

1. Sara N. Biswal, Research Assistant, September 2019-present, University of Alabama at Birmingham.
2. Abigayle Kraus, Research Assistant, 2018-2019, University of Alabama at Birmingham.
3. J. Miller Allan, Research Assistant, 2017-2019, University of Alabama at Birmingham.
4. William C. Hamrick, Research Assistant, 2015-2016, University of Alabama at Birmingham.
5. Andrew Abad, Research Assistant, 2014-2015, University of Alabama at Birmingham.
6. Kevin Battles, Research Assistant, 2013-2014, University of Alabama at Birmingham.

F. High school students

1. Molly Thornson, High school student, 2008, Medical College of Wisconsin.
2. Serena Clark, High school student, summer 2006, St. Cloud State University.
3. Brianna Brown, High school student, summer 2006, St. Cloud State University.

PANEL PARTICIPATION:

1. NIDDK T32 Best Practices Workshop, sharing my experience as a T32 postdoctoral trainee at UAB. Bethesda, MD. May 2019.
2. Careers Panel in the Physiology for Life Sciences Student/Teacher Workshop, talking to high school students about my scientific career path. Experimental Biology 2018, San Diego, CA. April 2018.
3. Postdoctoral panel discussion for UAB Neuroscience Roadmap Scholars Program, sharing postdoctoral experiences and advising graduate students in the program how to choose wisely for an optimal postdoctoral experience. Birmingham, AL. February 2016.

SCIENCE OUTREACH, MENTORING AND OTHER ACTIVITIES

1. 2020 UAB Medical Student Research Day Judge, judging medical student research poster presentations. University of Alabama at Birmingham, AL. September 2020.
2. ASN Communities Mentor, July 2020-present
3. Summer UAB Expo Judge, judging undergraduate research poster session. University of Alabama at Birmingham, AL. July 2019.
4. Judge, UAB Department of Medicine Trainee Research Day, Birmingham, March 4th 2020.
5. CHAMP (Council on Hypertension Advisory and Mentoring Program) panel organizer and session moderator, AHA Council on Hypertension 2019 Scientific Sessions. New Orleans, LA. September 2019.
6. Judge, Hypertension Early Career Oral Award Session, AHA Council on Hypertension 2019 Scientific Sessions. New Orleans, LA. September 2019.
7. Spring UAB Expo Judge, judging undergraduate research poster session. University of Alabama at Birmingham, AL. April 2019, April 2020.
8. Judge, oral presentations from finalists for the APS WEH pre- and postdoctoral awards. Experimental Biology. April 2019.
9. Mentor, "Posters and Professors" Program of the Renal Section, American Physiological Society. Experimental Biology. April 2019.
10. Science Outreach blog post writer, American Physiological Society PhUn week blog, October 2018.
11. American Physiological Society Undergraduate Horwitz/Horowitz Awards. Selecting abstracts, leading a team of judges and judging undergraduate students posters at Experimental Biology (EB) April 2018; April 2019.
12. Mentor, "Mentoring on the Go" Program of the Water and Electrolyte Section, American Physiological Society. Experimental Biology. April 2018, April 2019.
13. Mentor, "Minority Travel fellow" mentoring program, American Physiological Society. Experimental Biology. April 2018; April 2019.
14. Physiology Understanding (PhUn) Week Coordinator, Organizer and Volunteer (American Physiological Society), helping to spread interest in science, in particular physiology, to students in inner city elementary schools and libraries. Birmingham, AL. 2012-present.
15. Mentor - 1,000 Girls, 1,000 Futures Mentoring Program, Global STEM Alliance, New York Academy of Sciences. March 2018-present.
16. Fall UAB Expo Judge, judging undergraduate research poster session. University of Alabama at Birmingham, AL. November 2016-present.
17. UAB Medical Student Research Day Judge, judging medical student research poster presentations. University of Alabama at Birmingham, AL. November 2017, August 2018.
18. AHA Council of Hypertension Scientific Sessions Judge, trainee/junior faculty session poster judge. San Francisco, CA. September 2017.
19. Poster judge, NIH 2017 Kidney, Urologic, and Hematologic Diseases (KUH) Undergraduate Research Conference. Washington, D.C., August 2017.
20. UAB Kidney Undergraduate Research Experience (KURE) Symposium Organizer and Award Selection Committee Chair. University of Alabama at Birmingham, AL. July 2017, 2018.
21. UAB Kidney Undergraduate Research Experience (KURE) Poster Competition Organizer and Judge. University of Alabama at Birmingham, AL. July 2017.
22. Summer UAB Expo Judge, judging undergraduate research poster and oral sessions. University of Alabama at Birmingham, AL. 2014-present.
23. Fellow of the New York Academy of Sciences, NEXT Scholar Program, mentoring young women scholars interested in the STEM field, with the goal of helping them to pursue STEM degrees and increase the numbers of women in this field. March 2017-present.
24. Judge of scientific posters at the 2016 Annual Biomedical Research Conference for Minority Students (ABRCMS), Tampa, FL. November 2016.
25. American Physiological Society Special Judge at the Intel International Science and Engineering Fair (ISEF) 2016, Phoenix, AZ. May 2016. Organizing, selecting and leading a team of local judges and judging high school student's science projects from all over the world.
26. American Physiological Society 2016 Undergraduate David S. Bruce Awards. Selecting abstracts, organizing, leading a team of judges and judging undergraduate students posters at Experimental Biology (EB) 2016. San Diego, CA. April 2016.

27. 2016 Spring UAB Expo judge, judging for undergraduate research poster session. University of Alabama at Birmingham, AL. April 2016.
28. 2016 Central Alabama Regional Science and Engineering Fair (CARSEF) judge, judging high school student's science projects. University of Alabama at Birmingham, Birmingham, AL. March 2016.
29. Community outreach program "Science Tuesdays" at Avondale Library, participating in after school program at the library, bringing 2 hands-on science activities to inner city children. Avondale, AL. February 2016.
30. Mentor at the Summer Cardio-Renal Physiology Undergraduate Research Experience (SeCURE) Program, a collaborative training program between the University of California at Merced and University of Alabama at Birmingham, Birmingham, AL. Summer 2015, Summer 2016.
31. 2015 Center for Community Outreach Development (CORD) Summer Research Interns Poster Session Judge, University of Alabama at Birmingham, Birmingham, AL. July 2015.
32. 2015 Summer Undergraduate Research Expo Poster Session Judge, University of Alabama at Birmingham, Birmingham, AL. July 2015.
33. American Physiological Society Special Judge at the Intel International Science and Engineering Fair (ISEF) 2015, Pittsburgh, PA. May 2015. Judging high school student's science projects from all over the world.
34. American Physiological Society 2015 Undergraduate David S. Bruce Awards. Selecting abstracts and judging undergraduate students posters at Experimental Biology (EB) 2015. Boston, MA. April 2015.
35. Fellow of the New York Academy of Sciences, NEXXT Scholar Program, mentoring young women scholars interested in the STEM field, with the goal of helping them to pursue STEM degrees and increase the numbers of women in this field. November 2014 – July 2016.
36. 2014 Undergraduate Research Expo Poster Session Judge, University of Alabama at Birmingham, Birmingham, AL. July 2014.
37. 2014 Graduate Biomedical Sciences Spring Poster Session Judge, University of Alabama at Birmingham, Birmingham, AL. May 2014.
38. Mentor at the Undergraduate Physician Scientist Research Training (UPSTaRT) Program, a collaborative training program between the University of California at Merced and Georgia Regents University/University of Alabama at Birmingham. Augusta, GA and Birmingham, AL. Summer 2013 and 2014.
39. 2013 Student Training and Research (STAR) Program Workshop Volunteer, Georgia Regents University. Explaining how to study diabetic renal damage using histology, immunohistochemistry and microscopy to undergraduate participants. May 2013.
40. 2012 Science Fair Judge, Copeland Elementary School, Augusta, GA. Judging science projects from 2nd-5th grade students. February 2012.
41. Physiology Understanding (PhUn) Week Volunteer (American Physiological Society), helping to spread interest in science, in particular physiology, to students in elementary schools. Augusta, GA. 2010-2011.
42. 2011 Student Training and Research (STAR) Program Workshop Volunteer, Georgia Health Sciences University. Explaining how to study diabetic renal damage using histology, immunohistochemistry and microscopy to undergraduate participants. June 2011.
43. Online tutoring of students grades K-5 to 10 on how to develop scientific projects for Student Science Fairs. At www.sciencebuddies.com. January 2006-present.
44. Graduate student volunteer at the 8th World Congress for Microcirculation, Milwaukee, WI. August 15-19, 2007.
45. Student Judge at the 55th Central Minnesota Regional Science Fair at St Cloud State University, MN. Judging scientific projects from high school students. February 2005.
46. Tutor of Anatomy, Physiology and Biology at the Multicultural Studies Center, St Cloud State University, MN. October 2004-July 2005.
47. Instructor in the *Scientific Discovery Program for Minority High School Students*, held at St Cloud State University, MN. Instructing high school students to work in a scientific environment, how to perform endocrinology studies and how to present their results to an audience. Summer 2004.