NANCY A. RICE, PH.D.

Department of Biomedical Sciences
Pat Capps Covey College of Allied Health Sciences
University of South Alabama
HAHN 4020 5721 USA Drive North
Office: (251) 445-9265
Mobile: (270) 991-1133
E-Mail: nrice@southalabama.edu

EDUCATION

Master of Public Health (2014-present) Western Kentucky University, Bowling Green, Kentucky
Doctorate of Philosophy in Biochemistry (1994-1999) University of Tennessee Health Sciences Center, Memphis, Tennessee; "Interactions of the α subunit of phosphorylase kinase"; Advisor: Dr. Gerald Carlson
Bachelor of Science (1989-1993) Major: Recombinant Genetics, Minor: English Literature; Western Kentucky University, Bowling Green, Kentucky, c*um laude*

ACADEMIC POSITIONS

Professor and Chair of Biomedical Sciences (2019-present) University of South Alabama, Mobile, AL
Professor of Biology (2016- 2018) Western Kentucky University, Bowling Green, KY
Associate Professor of Biology (2008-2016) Western Kentucky University, Bowling Green, KY
Assistant Professor of Biology (2003-2008) Western Kentucky University, Bowling Green, KY
Visiting Professor / Scholar in Residence (2010-2011; 2016) Harlaxton College, Grantham, England
Adjunct Instructor (2001-2002) Front Range Community College, Westminster, CO
Postdoctoral Research Associate (2000-2001) University of Colorado, Boulder, CO
Department of Molecular, Cellular and Developmental Biology; Advisor: Dr. Leslie Leinwand
National Academy of Sciences Science Policy Intern (1999) Commission on Life Sciences, National Research Council; Washington, D.C.
NSF Summer Institute in Japan Research Fellow (1996) University of Tokyo, Komaba

HONORS AND AWARDS

2017	Western Kentucky University Faculty Leadership Year (FLY) Fellow
2017	Ogden College of Science and Engineering Faculty Excellence in Teaching Award
2015	American Society of Biochemistry and Molecular Biology Education Fellow
2014	Ogden College of Science and Engineering Women in Science and Engineering (WISE) Award
2013	Western Kentucky University Faculty Excellence in Public Service Award
2013	Ogden College of Science and Engineering Faculty Excellence in Public Service Award
2007	Ogden College of Science and Engineering Faculty Excellence in Research/ Creativity Award

1997	National Science Foundation Summer Institute in Japan Review Panel participant
1995-2006	Travel Awards from 5 professional societies to attend their national meetings
1989-1993	Western Kentucky University –Cherry Presidential scholarship (highest academic scholarship) President's List (2 semesters); Dean's List (6 semesters)
1989	Warren Co. Junior Miss Scholarship

GRANTS AND FELLOWSHIPS

External

Pending

Role: PI; "Epigenetic Studies of Household Air Pollution-Associated Essential Hypertension in Rural Kenya"
NIH-NIEHS R15 AREA
10/01/18 – 9/30/21; $420,780

Completed

Role: P.I.; "Epigenetic regulation of renin angiotensin system (RAS) genes linked to hypertension"
Kentucky Academy of Sciences
03/01/2015 -03/31/2016; $4866

Role: P.I.; **"**The Molecular Epidemiology of Essential Hypertension in Kasigau, Kenya"
NIH-NCRR P20 RR16481
Kentucky INBRE – AREA award
05/01/11-04/30/13; $50,085

Role: P.I.; **"**The Role of Nitric Oxide Signaling in Myofibroblast Function"
NIH-NCRR P20 RR16481
Kentucky INBRE Research Proposal Subcontract
05/01/09-04/30/11; $105,049

Role: PI; "Mechanical Stress and Myofibroblast Function: Implications in Pulmonary Fibrosis Pathology"
NIH-NHLBI R15 AREA
03/01/07 – 02/28/10; $204,750

Role: Co-I; Dr. Clyde Herreid, P.I. (SUNY); "Interactive Case Study Teaching in Large Classrooms"
NSF-CCLI Phase II
01/01/07-12/31/09; $5000

Role: P.I.; **"**Mechanisms of Transcriptional Coordination among Phosphorylase Kinase Genes"
NIH-NCRR P20 RR16481
Kentucky INBRE Research Proposal Subcontract
08/06/04 – 04/30/09; $530,740

Role: P.I.; "Nitric oxide mediated mechanisms in regulating pulmonary myofibroblasts"
NIH-KBRIN Faculty Fellowship
05/01/03 – 07/31/04; $20,000

Role: P.I.; F32 National Research Service Award – NIH / NHLBI
01/01/02-12/31/04; $117,024 (declined last two years)

Role: P.I.;Lymphangioleiomyomatosis (LAM) Foundation Pilot Project Award
01/01/01 –12/31/01; $50,000

Internal
Role: P.I.; **"**Prevalence and Mechanism of Essential Hypertension in Kasigau, Kenya"
WKU-Research and Creative Activities Program (RCAP)
01/01/14-05/30/15; $4,960

Role: P.I.; **"**Prevalence and Mechanism of Essential Hypertension in Kasigau, Kenya"
WKU-Research and Creative Activities Program (RCAP)
01/01/12-05/30/13; $9,692

Role : P.I.;"Muscle adaptation in response to voluntary exercise in phosphorylase kinase deficient mice"
WKU Research Foundation
Faculty Fellowship
10/01/06-09/30/07; $2000

Role: P.I.; "Role of Nitric Oxide Signaling in Myofibroblast Differentiation"
Junior Faculty Research Grant
WKU Research Foundation
03/11/03 – 03/10/04; $ 4000

PUBLICATIONS

Peer-reviewed papers

Submitted

20. Dobrovolskaite, A. and **Rice, N.A.** (2018) Dietary salt intake and hypertension in a rural population of East Africans. *Int. J. Hypertens.*

In preparation

19. Williams, L., Freeman, J.C. Wright, S., Porter, L., **Rice, N.A**. (201x) Polymorphic variants of renin angiotensin genes are the predominant allele but not correlate with an increased risk for hypertension in a cohort of rural East Africans**.** *Int. J. Mol. Epidemiol. Genet.,* In preparation.
18. Sharma, B.V., Rowland, N.S., Faughn, J. Eastes, A. N. , Walch, E.M. and **Rice, N.A.** (201x) Pulmonary proto-myofibroblast differentiation increases endothelial nitric oxide synthase expression and cell survival. *Cell. Mol. Biol. Lett.* In preparation

Published

17. Knapp, K.L. and **Rice, N.A.** (2015) Human Coinfection with Borrelia burgdorferi and Babesia microti in the United States. *J. Parasit. Res.* **2015**: 587131.
16. Sharma, B.V., Rowland, N.S., Clouse, M.M., and **Rice, N.A.** (2014) An improved bioassay for measuring low levels of nitric oxide in cultured pulmonary myofibroblasts. *Adv. Biol. Chem.*,**4:** 214-221.

15. Ochwang'i D, Kimwele C, Kiama SG, **Rice N.** (2013) Transcriptional regulation of rat endothelial nitric oxide promoter in pulmonary myofibroblasts cells and its implications in pulmonary fibrosis. *Afr. J. Pharmacol. Ther.* **2**:1–8.
14. Mefford, A.M., Ayers, C.C., Rowland, N.S. and **Rice, NA. (**2013) The *phka*1 deficient I/LnJ mouse exhibits endurance exercise deficiency with no compensatory changes in glycolytic gene expression. *Open J. Mol. Integr. Physiol., **3*:** 87-94
13. Kang, H. et al. (2012) Gender differences in student performance in large lecture classrooms using personal response systems ("clickers") with case studies. *Learn. Media. Technol.* **37**: 53-76. *(Large pedagogical work from NSF CCLI grant– listed as Associate Author due to journal limitation of author number)*
12. Wolter, B. *et al* (2011) Students' perceptions of using personal response systems ("clickers") with cases in science. *J. Col. Sci. Teach.* **40:** 14-19. *(Large pedagogical work from NSF CCLI grant– listed as Associate Author due to journal limitation of author number)*
11. Lundeberg, M.A., Kang, H., Wolter, B., delMas, R., Armstrong, N., Borsari, B., Boury, N., Brickman, P., Hannam, K., Heinz, C., Horvath, T., Knabb, M., Platt, T., **Rice, N**., Rogers, B., Sharp, J., Ribbens, E., Maier, K.S., Deschryver, M., Hagley, R., Goulet, T. , and Herreid, C.F. (2011) Context matters: increasing understanding with interactive clicker case studies. *Educ. Technol. Res. Dev.* **59**:645–671.
10. Winchester, J. S. , Rouchka, E.C., and **Rice, N.A.** (2007) *In silico* characterization of phosphorylase kinase: evidence for an alternate intronic polyadenylation site in PHKG1. *Mol. Genet. Metab.* **92**: 234-242.
9. Archila, S., King, M.A., Carlson, G.M. and **Rice, N.A.** (2006) The cytoskeletal organizing protein Cdc42-interacting protein 4 associates with phosphorylase kinase in skeletal muscle. *Biochem. Biophys. Res. Comm.* **345,** 1592-1599.
8. **Rice, N.A.** and Leinwand, L.A. (2003) Skeletal Myosin Heavy Chain Function in Cultured Lung Myofibroblasts *J. Cell Biol.* **163**: 119-129.
7. Andreeva, I.E., **Rice N. A.**, and Carlson, G.M. (2002) The regulatory alpha subunit of phosphorylase kinase may directly participate in the binding of glycogen phosphorylase. *Biochemistry (Moscow*) **67**, 1197-1202.
6. **Rice, N.A.,** Nadeau, O.W., Yang, Q. and Carlson, G.M. (2002) The calmodulin-binding domain of the catalytic gamma subunit of phosphorylase kinase interacts with its inhibitory alpha subunit: Evidence for a Ca2+-sensitive network of quaternary interactions. *J. Biol. Chem.* **277**, 14681-14687.
5. **Rice, N.A.** and Carlson, G.M. Phosphorylase kinase. *Wiley Encyclopedia of Molecular Medicine. Vol.4* John Wiley and Sons, Inc., New York, 2001, pp. 2487-2490.
4. **Ayers[Rice], N.A**., Wilkinson, D.A., Fitzgerald, T.J. and Carlson, G.M. (1999) Self-association of the alpha subunit of phosphorylase kinase as determined by two-hybrid screening. *J. Biol. Chem,* **274**, 35583-35590.
3. **Ayers [Rice], N.A**., Nadeau, O.W., Read, M.W., Ray, P. and Carlson, G.M. (1998) Effector-sensitive crosslinking of phosphorylase-*b* kinase by the novel crosslinker 4-phenyl-1,2,4-triazoline-3,5-dione. *Biochem. J.* **331**, 137-141.
2. **Ayers[Rice], N.A**., Kapás, L. and Krueger, J.M. (1997) The inhibitory effects of N -nitro-L-arginine methyl ester on nitric oxide synthase activity vary among brain regions in vivo but not in vitro. *Neurochem. Res.* **22**, 81-86.

1. **Ayers[Rice], N.A**., Kapás, L. and Krueger, J.M. (1996) Circadian variation of nitric oxide synthase activity and cytosolic protein levels in rat brain. *Brain Res.* **707**, 127-130.

Peer-reviewed instructional materials

4. **Rice, N.A.** (2010) The Wolfman: A Mendelian Monster? The Chromosomal Basis of Heredity *National Center for Case Study Teaching in Science.* http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=480&id=480
3. Rice, N.A. (2010) Face the Fats: The Biochemistry of Lipids *National Center for Case Study Teaching in Science.* http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=592&id=592
2. Davis, C.D. and **Rice, N.A**., (2009) Another Can of Bull? Do Energy Drinks Really Provide a Source of Energy? *National Center for Case Study Teaching in Science Collection.* http://www.sciencecases.org/energy_drinks_clicker/prelude.asp.
1. **Rice, N.A**. and Borsari, B. (2008) But I'm Too Young! A Case Study of Ovarian Cancer. *National Center for Case Study Teaching in Science Collection.* http://www.sciencecases.org/ovarian_cancer/prelude.asp

Published Abstracts

21. Dobrovolskaite, A. and **Rice, N.A.** (2017) Urine electrolyte excretion in a hypertensive population of East Africans. *FASEB J* 31:lb821.
22. **N.A. Rice**, J. Freeman, L. Porter, S. Wright, N. Rowland (2015) Single nucleotide polymorphisms of the renin angiotensin system linked to high prevalence of essential hypertension in the Taita tribe of Kasigau, Kenya. *Annals of Global Health*, 81 (1): 101.
20. **Rice, N.A**., Freeman, J.C and Lengube, B.M. (2013) Allelic Variability in the AGT M235Tand AT1 A1166C Single Nucleotide Polymorphisms from a Cohort of East Africans *FASEB J.* 27:1189.10.
19. Mefford, A.M. and **Rice, N.A** (2009) Muscle Adaptation in Response to Voluntary Exercise in Phosphorylase Kinase Deficient Mice *FASEB J.* 23:506.10
18. Polireddy, K. and **Rice, N.A.** (2009) Searching for binding partners for the phosphorylase kinase variant PhK γ181 *FASEB J.* 23:LB292
17. Sharma, B.V., Clouse, M.. and **Rice, N.A.** (2009) Evaluation of nitric oxide production in cultured pulmonary myofibroblasts. *FASEB J.* 23:LB294
16. **Rice, N.A**. (2008) The glycogenolysosome: A protein interaction network determined by students in an undergraduate hypothesis-driven cell biology laboratory course *FASEB J.* 22:658.5
15. Boulatnikov, I., Chavarria-Smith, J. ., Carlson, G.M., and **Rice, N.A**. (2008) A Truncated Catalytic γ Subunit of Phosphorylase Kinase Is Present in Human Brain: Proteomics and Beyond *J. Biomol. Tech.* 19 (1).
14. Chavarria-Smith, J. and **Rice, N.A.** (2008) A mutation in the coding region of Phka1 results in transcriptional repression of all phosphorylase kinase genes in the I/LnJ mouse *FASEB J.* 22:1050.6.
13. Hancock, J.M. and **Rice, N.A.** (2006) Characterization of the Human PHKG2 Promoter. *FASEB J.* 20 (5):A957.
12. Elliott, N.E. and **Rice, N.A.** (2006) Isolation of the promoter region of the PHKG1 gene. *FASEB J.* 20 (5): A957.

11. Rowland, N.S. and **Rice, N.A.** (2006) Nitric Oxide Suppresses Pulmonary Myofibroblast Proliferation and Actin Expression. *FASEB J.* 20 (4): A510.
10. Archila, S., Carlson, G.M. and **Rice, N.A.** (2004) Identification of Phosphorylase Kinase α Subunit Binding Partners in Skeletal Muscle *FASEB J.* 8:C83.
9. **Rice, N.A.**, Robinson, A.S., Resnicow, D.L., Holton, L.E., Leinwand, L.A. (2002) Expression of the human IId and extraocular myosin S1 motors. *Prot. Sci* 11 (Suppl1): 116.
8. **Rice, N.A.** and Leinwand, L.A. (2001) Pulmonary myofibroblasts express skeletal muscle proteins. *Mol. Bio. Cell* **12**, 516a.
7. **Rice, N.A.** and Leinwand, L.A. (2001) Sarcomeric gene expression in pulmonary myofibroblasts. *LAMposium 2001- The LAM Foundation/ NHLBI Research Conference*, 306.
6. **Ayers[Rice], N.A.,** Hatch, B.A., Law, D.J. and Carlson, G.M. (2000) Phosphorylase kinase interacts with skeletal muscle proteins of both the thin and thick filament. *FASEB J.* **14** (8) A1491.
5. **Ayers[Rice], N.A.** and Carlson, G.M. (1999) Homodimeric interactions of the regulatory subunit of phosphorylase-*b* kinase. *FASEB J.* **13** (7) A1491.
4. **Ayers[Rice], N.A**., Arciniegas, S.F. and Carlson, G.M. (1998) Subunit interactions of phosphorylase-*b* kinase evaluated by the two-hybrid system. *FASEB J.* **12** (8) A1440.
3. **Ayers[Rice], N.A**., Nadeau, O.W., Read, M.W., Ray, P. and Carlson, G.M. (1997) Chemical crosslinking of phosphorylase-*b* kinase by the novel crosslinker, 4-phenyl-1,2,4-triazoline-3,5-dione. *FASEB J.* **11** (9), A1180.
2. **Ayers[Rice], N.A**., Kapás, L. and Krueger, J.M. (1995) Circadian cycling of nitric oxide synthase(NOS) activity and cytosolic protein content in rat brain. *Soc. Neurosci. Abstr.* **21** (Part 2), 868.
1. **Ayers[Rice], N.A**., Kapás, L. and Krueger, J.M. (1995) Brain nitric oxide synthase activity and sleep. *Sleep Res.* **24**, 36.

CONFERENCE PRESENTATIONS (64 total since 1995; 2011-2017 only listed)

20. Shelton, D. , Hounshell, C. , and **Rice, N.A**. (2017) An examination of epigenetic factors and methylation patterns in promoter regions of *AT1* and *ACE*. Kentucky Academy of Science annual meeting, Murray, KY [talk]
19. Dobrovolskiate, A. and **Rice, N.A.** (2017) Urine electrolyte excretion in a hypertensive population of East Africans. Experimental Biology meeting, Chicago, April 2017 [poster]
18. McDaniel, C., Nugent, J. and **Rice, N.A.** (2017) *ACE* Gene Methylation and Hypertension in a Cohort of East Africans. WKU Student Research Conference [poster] – **Received 1st place in division**
17. Harney, B., Johnson, V. and Rice, N.A. (2017) Colocalization of PhKgamma-181 and NA-14 in SH-SY5Y Cells. WKU Student Research Conference [poster]
16. Dobrovolskiate, A. and Rice, N.A. (2016) Urine electrolyte excretion in a hypertensive population of East Africans. Kentucky Academy of Science annual meeting, Lousiville, KY [talk] – Received **1st place in the Physiology Graduate Competition**
15. **N.A. Rice**, J. Freeman, L. Porter, S. Wright, N. Rowland (2015) Single nucleotide polymorphisms of the renin angiotensin system linked to high prevalence of essential hypertension

in the Taita tribe of Kasigau, Kenya. Consortium of Universities for Global Health conference, Boston, MA. [poster]

14. Porter, L.R., Rowland, N.S. and **Rice, N.A.** (2014) Allelic Variability in the Angiotensin Converting Enzyme Polymorphism ACE I/D in an East African Population. National Conference for Undergraduate Research. Lexington, KY [talk]
13. Wright, S. and Rice, N.A. (2014) Allelic Variability in the CYP11B2 C344T Single Nucleotide Polymorphism from a Cohort of East Africans. WKU Student Research Conference. [talk]
12. Porter, L.R., Rowland, N.S. and **Rice, N.A.** (2014) Allelic Variability in the Angiotensin Converting Enzyme Polymorphism ACE I/D in an East African Population. WKU Student Research Conference [talk] **Received 2nd place in her division**
11. Dodson, A. and **Rice, N.A**. (2013) Correlation of Environmental Risk Factors with the Prevalence of Essential Hypertension in Kasigau, Kenya. Kentucky Academy of Science annual meeting, Morehead, KY. [talk] **2nd place in the Health Sciences Undergraduate Competition**
10. Wright, S. and Rice, N.A. (2013) Allelic Variability in the CYP11B2 C344T Single Nucleotide Polymorphism from a Cohort of East Africans. Kentucky Academy of Science annual meeting, Morehead, KY. [talk]
9. Williams, L.D. and **Rice, N.A. (**2012) Prevalence of Essential Hypertension in Kasigau, Kenya. WKU Student Research Conference [talk]
8. Freeman,J.C. and **Rice,N.A.** (2012) Single Nucleotide Polymorphisms linked to Essential Hypertension in Kasigau, Kenya. WKU Student Research Conference [talk]
7. Eastes, A, Welch, E, and **Rice, N.A.** (2012) Nitric Oxide Synthase 3 Gene Regulation in Pulmonary Myofibroblasts. WKU Student Research Conference [poster]
6. Eastes, A, Welch, E, and **Rice, N.A**. (2012) Nitric Oxide Synthase 3 Gene Regulation in Pulmonary Myofibroblasts. National Conference for Undergraduate Research, Weber, UT. [poster]
5. **Rice, N.A.** and Stokes, M. (2012) Project based Study Abroad in Africa. WKU State-wide Study Abroad Symposium, Bowling Green, KY
4. Freeman, J.C. Lengube, B.M., Trawick, M.W. and **Rice, N.A.** (2012) Single Nucleotide Polymorphisms linked to Essential Hypertension in Kasigau, Kenya. Kentucky Academy of Science annual meeting, Richmond, KY. [talk]
3. Clouse, M.M., Wright, S. and **Rice, N.A.** (2012) Global DNA Methylation Patterns Are Not Correlated with Essential Hypertension in Rural Kenyans. Kentucky Academy of Science annual meeting, Richmond, KY. [talk]
2. Faughn, J**.** and **Rice, N.A**. (2011) Protein Kinase C Regulation of Pulmonary Myofibroblasts SouthEast Regional IDEA Meeting, New Orleans, LA
1. **Rice, N.A.** (2011) Assessment of Prenatal Care and Perinatal Outcomes in Kasigau, Kenya. AAFP International Family Medicine Workshop, San Diego, CA [invited presentation].

RESEARCH MENTORSHIP

Post-doctoral Fellow

- Bethel Sharma, Ph.D. (2007- 2009); Currently Associate Professor in Chemistry University of the South, Sewanee, Tennessee

Graduate – Thesis

Western Kentucky University

- Aiste Dobrovolskiate – M.S. awarded May 2017; **Thesis**: "Urine Electrolyte Excretion in a Population of East Africans"
- Julia Freeman – M.S. awarded December 2013; **Thesis: "**Single Nucleotide Polymorphisms linked to Essential Hypertension in Kasigau, Kenya"
- Jon Faughn – M.S. awarded August 2011; **Thesis: "**Regulation of Endothelial Nitric Oxide Synthase Localization in Pulmonary Myofibroblasts"
- Dominic Ochwangi – Visiting Research Scholar from University of Nairobi; M.Sc. candidate- August 2008- February 2009; **Thesis: "**Transcriptional Regulation of the *NOS3* Promoter in Pulmonary Myofibrobalst Differentiation and Implications in Pumonary Fibrosis"
- Kishore Polireddy – M.S. awarded August 2009; **Thesis: "**Searching for Binding Partners for the Novel PHKG1 Variant γ181"
- Clara Figueirinhas –M.S. awarded August 2009; **Thesis: "**Assessment of the Endandered Species *Podarcis Carbonelli* on Microgeographic Scale: A Molecular, Morphological, and Physiological Approach**"; Awarded *Kentucky Academy of Sciences –1st Place Graduate Research competition (Zoology)* – 2007; *Dillard/Hoyt Graduate Student Award* – 2008**;
- Soleil Archila –M.S. awarded August 2004; **Thesis: "**Identification of Phosphorylase Kinase Alpha Binding partners in Skeletal Muscle"

Graduate – Non-thesis

- Kristen Knapp – M.S. awarded May 2013
- Kiranmai Bangalore - M.S. awarded May 2006

Undergraduate

University of South Alabama

- Sellers Swan – May 2019 – present
- Sarah Ehmke – May 2019 – present

Western Kentucky University

- Conner Hounshell – August 2017 – present;
- Dimond Shelton – August 2017 –present;
- Brent Harney – August 2016 – May 2017 ***Awarded FUSE grant from WKU Research Foundation***
- Christopher McDaniel – January 2016 – May 2017 ***Awarded FUSE grant from WKU Research Foundation***
- Lindsey Porter – August 2012 – May 2014; [Gatton Academy of Math and Science student]

- Addie Dodson – August 2012 – May 2014; **Honor's Thesis: "**Correlation of Environmental Risks with the Prevalence of Essential Hypertension and Chronic Cardiac Disease in Kasigau, Kenya" (Defended with Distinction); ***Awarded L.Y. Lancaster Award for Excellence in Pre-medical Education***
- Spencer Wright – August 2012 – May 2014; **Honor's Thesis: "**Allelic Variability in the CYP11B2 C344T Single Nucleotide Polymorphism from a Cohort of East Africans"**; *Awarded FUSE grant from WKU Research Foundation***
- Lindsay Williams – January 2012- May 2012 ; **Honor's Thesis: "**The Prevalence of Essential Hypertension in Kasigau, Kenya"
- Andrea Eastes – August 2011- May 2012 [Gatton Academy of Math and Science student]
- Erin Walch - August 2011- May 2012 [Gatton Academy of Math and Science student]
- Meredith Clouse – Summer research student from Rose Hulman Institute of Technology; June – August 2011
- Allison Smith – January 2010 – May 2011; **Honor's Thesis: "**Assessment of Prenatal Care and Perinatal Outcomes in Kasigau, Kenya"
- Andrew Cardwell – June 2010 – August 2011
- Claci Ayers – August 2009 – May 2010 [Gatton Academy of Math and Science student]
- Ashley Mefford – August 2006 – May 2010; **Honor's Thesis: "**Voluntary Exercise in Phosphorylase Kinase Deficient Mice"**; *Awarded WKU Outstanding Biology Student 2010***
- Margaret Clouse – June –August 2009; [Rose Hulman Institute of Tech summer student]
- Lauren Parsons – August 2007 – May 2009
- Olivia Price – April 2007 – May 2009
- Matthew Kirk – August 2008-December 2008 [Gatton Acadmey of Math and Science student]
- Jameson Mattingly – January 2007 – May 2008
- Joseph Chavarria-Smith – August 2005 – May 2009; Awarded ***Larry Gleason Award for Outstanding Undergraduate Research*** **and the** ***Barry W. Goldwater Scholarship*** **in 2006; Awarded** ***Kentucky Academy of Sciences –1st place Undergraduate competition (Cell and Molecular Division)*** **in 2007 and** ***Outstanding Biotechnology Student in 2008 and 2009***
- Joni Winchester – January 2006 – December 2006
- Natalina Elliott – May 2004 – May 2006; Awarded ***WKU Outstanding Biology Student***
- Jessica Hancock – August 2004 – May 2006
- Deborah Cook [Wolfe] – January 2006 – May 2006
- Michelle Dodson – August 2005- May 2006
- James Ralph Heltsley –January 2004- May 2005
- Mark King –January 2004 – May 2005; Awarded ***WKU Outstanding Biotechnology Student***;
- Tim Shehan – January 2004 – May 2005
- Rebecca Sharp – August 2004 – May 2005
- John Handshoe –August 2003 – May 2004
- Angela Thacker – August 2003 – May 2004

University of Colorado

- Laura Holton – August 2000 – December 2012; [Howard Hughes Medical Institute - Undergraduate Research Opportunities Participant]

TEACHING EXPERIENCE

BIOL 113:	**Introductory Biology**
BIOL 103:	**Introduction to Environmental Science**
BIOL 120:	**Introductory Biology -Cells, Genetics, Biochemistry**
BIOL 120H:	**Introductory Biology -Cells, Genetics, Biochemistry**
BIOL 153:	**Bioethics**
BIOL 275:	**Special Topics: The British Contribution to Science**
BIOL 319H:	**Intro to Molecular Biology and Cell**
BIOL 403O/403G:	**Molecular Basis of Cancer**
BIOL 411/H/G:	**Cell Biology**
BIOL 412:	**Cell Biology lab**
BIOL 560:	**Adv. Cell Biology**
BIOL 485/H:	**Medicine in Kenya**

INVITED TALKS

May 2016	University of Nairobi; Department of Medical Physiology "The genetic epidemiology of essential hypertension in rural Kenya: maladaptive or inconsequential?"
April 2014	University of Louisville; Department of Epidemiology "The genetic epidemiology of essential hypertension in rural Kenya: maladaptive or inconsequential?"
October 2012	Kentucky Girls STEM Collaborative Conference – Panelist speaker – "Women in Science"
October 2012	Kentucky Academy of Sciences Annual Meeting – "Undergraduates in International Research in Global Health"
February 2012	Murray State University; Department of Biological Sciences "Nitric Oxide Regulation of Myofibroblasts: Implications for Pulmonary Fibrosis Therapeutics"
April 2010	Morehead University; Department of Biology and Chemistry "Alternative splicing of the glycogenolytic enzyme phosphorylase kinase yields the smallest, active kinase known"
May 2004	University of Southern Indiana; Department of Biology "Myofibroblasts: Molecular Crossdressers"
March 2002	The LAM Foundation, LAMposium "Transcriptional regulation of skeletal muscle myosin expression in pulmonary myofibroblasts"

September 2001	University of Colorado Health Science Center; Division of Pulmonary Sciences "Myofibroblasts: Molecular Crossdressers"
April 2000	Bemidji State University; Department of Chemistry "Pathways to Policy Careers: The National Academy of Science's Policy Intern Programs"
March 1999	Western Kentucky University; Department of Biology "Phosphorylase Kinase: A new paradigm in skeletal muscle architecture"

SOCIETY MEMBERSHIPS

American Physiology Society (2012-present)
Western Kentucky University Sigma Xi (2003 - present)
The Kentucky Academy of Science (2003 – present)
American Society of Cell Biology (2001- present)
American Society of Biochemistry and Molecular Biology (1998-present)
The Protein Society (2002-2003)
Sleep Research Society (1994)
Beta Beta Beta Biological Honor Society; Mu Gamma (1991-1993; President 1992-1993)

PROFESSIONAL LEADERSHIP AND SERVICE

Professional

American Society of Biochemistry and Molecular Biology
- CourseSource Learning Frameworks Representative for Biochemistry and Molecular Biology (2014)
- Program accreditation committee (2013-2016)
- Undergraduate poster competition judge (2008, 2009)

Council on Postsecondary Education General Education Workgroup - Natural Sciences (2010)
Sigma Xi
- WKU Chapter
  - Secretary Treasurer (2004-2005); Vice-President (2005-2006); President (2006-2007)
- National Organization
  - Student Research Competition Judge (2005); Southeast Region Teller (2005)

Kentucky Academy of Science
- Molecular and Cellular Biology Section Secretary (2008)
- Molecular and Cellular Biology Section President (2009)
- Grant Disbursement Committee (2007, 2008)

Reviewer

Journals - British J. of Medicine and Medical Res., Journal of the Ky Acad of Science, Intl. J. of Cancer , PLOS One, National Center for Case Study Teaching in Science

Textbook Chapters - McGraw-Hill, Pearson, Benjamin Cummings, Prentice Hall, Academic Press / Elsevier, Sinauer Publishing

Grants and Fellowships - Institute of International Education –Boren Fellowships; WKU FUSE grants; NIH-National Institute of General Medicine – SCORE awards; Research Corp for

Science Advancement - Cottrell College Science Awards; NIH-National Heart, Lung, Blood Institute –R13 Study Section; Kentucky Academy of Science Research grants; Murdoch Foundation

University

WKU Pre-Professional Student Advising Committee (2004 – present)
General Education / Colonnade committee – Ogden College Senate representative (2014 – 2016)
Gatton Academy Admissions interview committee (2014)
QEP Advisory committee- Assessment working group (2014 – 2015)
University Faculty Awards review committee (2014, 2015)
Study Abroad and Global Learning (SAGL) Director Search Committee - member (2013-2014)
Ogden College At-Large WKU Faculty Senate Representative (2012 – 2015)
WKU ALIVE CCP Faculty Advisory Board (2012 – 2015)
WKU Sustainability Conference, Barren River Lake State Park – round-table speaker (2010)
WKU Engaging the Spirit Conference – Discussion Leader (2009)
WKU Institute for Citizenship and Social Responsibility (ICSR) Advisory Board (2009- 2012)
WKU's General Education Review Task Force (2008 – 2011)
WKU Presidential Scholarships review/interview committee (2009, 2010, 2012- 2015)
WKU Biotechnology Center Director / Co-Director (2008 –2013)
Ogden College Sabbatical Review Committee (2009)
Gatton Academy Search Committee – Director of Research, Internships, and Scholarships (2008)
Honors College –Distinct Dialogues: "Stem Cells" Promise, Perils and Politics" (2007, 2008, 2011)
WKU Political Engagement Project (PEP) Team (2007-2009)
University Curriculum Committee (2007-2009)
Undergraduate Student Research Conference Task Force (2006- 2007)
Ogden College Curriculum Committee (2006-2009)
Ogden College Faculty Awards Committee (2006)
VAMPY instructor (2005)
Girls in Science Day instructor (2003-2006, 2009, 2012)
Science Olympiad – Cell Biology (2004, 2006, 2008)
Potter Gray Science Day (2005, 2012, 2014)

Departmental

Junior Faculty Mentoring Committees – Drs. Noah Ashley and Simran Banga (2012-present)
Graduate Curriculum Committee (2014 – 2016)
Undergraduate Curriculum Committee – member (2004-2006); Chair (2006 – 2009)
Search Committees

- Vertebrate Physiologist Assistant Professor Search Committee- Chair (2011; 2017)
- Geneticist Assistant Professor Search Committee – member; candidate host (2010)
- Developmental Biologist Assistant Professor Search Committee – member (2010)
- Biology Office Associate Search Committee (2009)
- Sygen Professor Search Committee – member (2004)
- Biotechnology Center Coordinator Search Committee- member (3x)

Neuroscientist Assistant Professor Search Committee – member (2004)

COMMUNITY ENGAGEMENT AND HOBBIES

Alumnae Advisory Committee – Alpha Omicron Pi AX Chapter
First Baptist Church, Bowling Green – Member, Adult Sunday School Teacher, University/Youth Ministry, Deacon, Handbell and Sanctuary Choirs
Southland Family Club and Pool – Board of Directors Member
Kentucky High School Athletic Association – Stroke and Turn Official

Hobbies include traveling, hiking, water sports and activities, jazzercise, and backyard chicken husbandry