

# **Ron F. Morrison, Ph.D.**

## **Curriculum Vitae**

### **Address**

Work: Department of Nutrition  
310 Stone Building  
UNC Greensboro  
Greensboro, NC 27402  
rfmorrison@uncg.edu

### **Place of Birth**

Galax, Virginia, USA

## **I. PROFESSIONAL EXPERIENCE**

### **Education**

1973-1975 A.A. Science, Mitchell College, Statesville, NC  
1975-1978 B.S. Biology, East Carolina University, Greenville, NC  
1988-1994 Ph.D. Physiology, East Carolina University School of Medicine, Greenville, NC;  
Mentor: Edward R. Seidel, Ph.D.

### **Academic Positions**

1978-1984 Research Technician, Physiology, East Carolina University School of Medicine, Greenville, NC  
1985-1988 Research Associate, Cardiac Surgery, East Carolina University School of Medicine, Greenville, NC  
1994-1999 Postdoctoral Fellow, National Institutes of Health Fellow; Biochemistry, Boston University School of Medicine, Boston, MA; Mentor: Stephen R. Farmer, Ph.D.  
1999-2001 Research Assistant Professor, Biochemistry, Boston University School of Medicine, Boston, MA  
2001-2007 Assistant Professor, Nutrition, The University of North Carolina at Greensboro, Greensboro, NC  
2005-2015 Research Faculty; USDA Agricultural Research Services; North Carolina State University – UNC Greensboro  
2007-2015 Associate Professor, Nutrition, UNC Greensboro  
2015- Associate Professor & Department Chair, Nutrition, UNC Greensboro

## Honors and Awards

- 1992 Young Investigators Award. International Symposium on Polyamines in Cancer, MD Anderson Cancer Center, Houston, TX.
- 1993 American Gastroenterological Association Research Fellowship. Physiology, East Carolina University School of Medicine, Greenville, NC.
- 1996 National Institutes of Health Research Fellowship. Biochemistry, Boston University School of Medicine, Boston, MA.
- 2002 Award – Outstanding Academic Advisor Award. School of Human Environmental Sciences, UNC Greensboro, Greensboro, NC.
- 2005 Award – Research Excellence Award. School of Human Environmental Sciences, UNC Greensboro, Greensboro, NC.
- 2006 Award – Mary Francis Stone Outstanding Teacher Award. School of Human Environmental Sciences, UNC Greensboro, Greensboro, NC.
- 2013 Nominee – Outstanding Teaching Award, School of Health and Human Sciences, UNC Greensboro, Greensboro, NC.
- 2013 Elected as Chair for American Society for Nutrition Nutrient-Gene Interaction Research Interest Section. (2013-14: Chair Elect; 2014-2015: Chair; 2015-2016: Past-Chair)
- 2014 Nominee – Board of Governors Excellence in Teaching Award, UNC Greensboro
- 2014 Nominee – Mary Settle Sharp Award for Teaching Excellence, UNC Greensboro
- 2014 UNC Greensboro Leadership Institute (Jan-Dec 2014)
- 2015 Nominee – Board of Governors Excellence in Teaching Award, UNC Greensboro
- 2015 Nominee – Mary Settle Sharp Award for Teaching Excellence, UNC Greensboro
- 2015 Nominee – School of Health and Human Sciences Teaching Excellence Award, UNC Greensboro
- 2016 Nominee – School of Health and Human Sciences Teaching Excellence Award, UNC Greensboro
- 2017 Nominee – School of Health and Human Sciences Teaching Excellence Award, UNC Greensboro
- 2017 Award – School of Health and Human Sciences Graduate Mentoring Award, UNC Greensboro
- 2018 Nominee – School of Health and Human Sciences Teaching Excellence Award, UNC Greensboro

## National Honors and Awards by Graduate Mentees

Corinth A. Auld, PhD

- One of three national winners of the Proctor and Gamble Graduate Student Research Competition at Experimental Biology 2003 in San Diego, CA.
- Recipient - McNeil Nutritional's Predoctoral Fellowship (2003).

Bradley S. Ferguson, PhD

- Won the American Society of Nutrition Clinical Emerging Leader Research Competition Award at Experimental Biology 2008 in San Diego, CA.
- Recipient - NIH National Research Service Research Award Predoctoral Fellowship (2010).

Heesun Nam, PhD

- Recipient - Wrigley Research Institute Predoctoral Award (2011).

Wei Guo, PhD

- Selected as one of twelve students, out of 400 entrants, to compete in the ASN Graduate Student Research Competition at Experimental Biology 2017, Chicago, IL. (Oral Presentation)
- Winner – American Society for Nutrition's Emerging Leader Poster Competition, Experimental Biology 2017, Chicago, IL. (Poster presentation)

## II. RESEARCH

### Professional Membership

1990 Sigma Xi  
1992 American Society for Biochemistry and Molecular Biology (ASBMB) †  
1999 American Association for the Advancement of Science (AAAS)  
2001 American Diabetes Association (ADA)  
2002 North American Society for the Study of Obesity (NASSO)  
2002 North Carolina Academy of Sciences (NCAS)  
2008 American Society for Nutrition (ASN) †  
(† *current membership*)

### Grants (Principal Investigator)

#### Completed Research Support

Period: 1977-1978  
Source: North Carolina Academy of Sciences  
Title: "Magnesium's protection of the heart"  
Institution: Physiology, East Carolina School of Medicine  
Role: PI, Amount: \$150

Period: 1991-1992  
Source: American Heart Association (NC91G28)  
Title: "Regulation of endothelial cell proliferation"  
Institution: Physiology, East Carolina University School of Medicine  
Role: PI, Amount: \$10,000

Period: 1992-1993  
Source: American Gastroenterological Association  
Title: "Influence of cell shape on polyamine metabolism"  
Institution: Physiology, East Carolina University School of Medicine  
Role PI, Amount: \$4,000

Period: 1996-1997

Source: National Institutes of Health; National Research Service Award (1F32CA69765-01A1)

Title: "Ornithine decarboxylase and oncogenic transformation"

Institution: Biochemistry, Boston University School of Medicine

Role: PI, Amount: \$23,000

Period: 1998-2000

Source: Boston Obesity Nutrition Research Center

Title: "Molecular Mechanisms Contributing to the Balance of Adipocyte Growth & Differentiation"

Institution: Biochemistry, Boston University School of Medicine

Role: PI, Amount: \$32,000

Period: 2001-2002

Source: School of Human Environmental Sciences; UNC Greensboro

Title: "Regulation of p21 (Cip1) gene expression by PPAR $\gamma$  during adipogenesis"

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$5,000

Period: 2001-2003

Source: North Carolina Institute of Nutrition (50701)

Title: "Molecular mechanisms of PPAR $\gamma$  ligand-dependent repression of adipocyte gene expression."

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$10,000

Period: 2002-2003

Source: School of Human Environmental Sciences; UNC Greensboro

Title: "Regulation of adipocyte proliferation through Skp2-mediated p27 destruction."

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$5,000

Period: 2002-2003

Source: New Faculty Grant; UNC Greensboro

Title: "Molecular mechanisms of p27 destruction during adipocyte differentiation".

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$5,000

Period: 2002-2003

Source: Summer Excellence Award; UNC Greensboro

Title: "Role of p27 destruction during adipocyte differentiation."

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$4,000

Period: 2002-2004

Source: The North Carolina Institute of Nutrition

Title: "Nutritional pathways regulating Skp2 and p27(Kip1) during adipocyte hyperplasia"

Institution: Nutrition, UNC Greensboro  
Role: PI, Amount: \$10,000

Period: 2001-2004

Source: Gene Microarray Application Project; UNC Greensboro

Title: "Expression analysis of the antimitotic activity of PPAR $\gamma$  with oligonucleotide microarrays."

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$27,000

Period: 070102-063004

Source: American Heart Association (0265418U)

Title: "Regulation of Adipocyte Hyperplasia through Skp2 mediated p27(Kip1) Degradation"

Institution: Nutrition, UNC Greensboro

Role : PI, Amount: \$132,000

Period: 071505-063008

Source: National Institutes of Health (1R21DK072067-01)

Title: "Nedd8 Regulation of Ubiquitin E3 Ligases in Adipocytes"

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$383,625

Period: 081207-123008

Source: W.H. Kellogg Institute for Food and Marketing Research

Title: "Screening Bioactive Food Ingredients that Attenuate Adipocyte Growth, Differentiation and / or Inflammation Associated with Obesity"

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$24,995

Period: 070109-063011

Source: National Institutes of Health (1F31DK084770-01)

Title: "Role of DUSPs in adipocytes in response to inflammatory stress"

Ruth L. Kirschstein NRSA fellowship: Bradley S. Ferguson, PhD Candidate

Institution: Nutrition, UNC Greensboro

Role: PI/mentor, Amount: \$55,922

Period: 03010-022814

Source: National Institutes of Health (1R15DK082799-01)

Title: "Regulation of JNK Signaling by Dual Specificity Phosphatases in Adipocytes"

Institution: Nutrition, UNC Greensboro

Role: PI, Amount: \$209,250

Period: 090110-083115

Source: North Carolina Agriculture Research Service

Title: Anti-inflammatory role of dual specificity phosphatases in adipocytes

Role: PI, Institution: Nutrition, UNC Greensboro

## **Grants (Collaborative)**

Period: 2003-2005

Source: National Science Foundation

Title: "Acquisition of a confocal microscope for multiple users at UNCG"

Institution: Biology/Nutrition, UNC Greensboro

Role: Co-PI (PI: Esther Leise, PhD; Biology), Amount: \$204,927

Period: 2004-2006

Source: National Science Foundation

Title: "Acquisition of a MALDI Mass spectrophotometer for undergraduate education"

Institution: Chemistry/Biochemistry/Nutrition, UNC Greensboro

Role: Co-PI (PI: Nadja Cech, PhD; Chemistry/Biochemistry), Amount: \$292,024

Period: 2005-2006

Source: United States Departmental of Agriculture

Title: "Multi-Detection Microplate Reader to Enhance Research Competitiveness in Nutrition"

Institution: Nutrition, UNC Greensboro

Role: Co-PI (PI: Michael McIntosh, PhD; Nutrition), Amount: \$15,750

## **Grant Review Panel – Reviewer**

1. North Carolina Biotechnology Center (NCBC): ad hoc review, 2006.
2. National Institutes of Health (NIH): Challenge Grants in Health & Science Research, Scientific Review Group: ZRG1 EMNR-C 58 R, RFA OD-09-003 Grants Panel 15; SRO: Reed Graves. Jul 20-21, 2009.
3. National Institutes of Health (NIH): ARRA Academic Research Enhancement Award, Scientific Review Group: ZRG1 EMNR-H 52 R, RFA OD-09-007 Grants Panel 06; SRO: Reed Graves. Dec 3-4, 2009.
4. National Institutes of Health (NIH): Integrative Physiology of Obesity and Diabetes Study Section (IPOD); SRA: Reed Graves. Sept 2011.
5. British Diabetes Association; ad hoc review, Feb 2013.
6. Louisiana Board of Regents' Research Competitiveness Subprogram, Jan 2014.
7. National Institutes of Health (NIH): Endocrinology, Metabolism, Nutrition and Reproductive Sciences IRG (EMNR); SRO: Nancy Sheard. March-April, 2014.

## **Editorial Board Membership**

2002-2008	Obesity Research
2005-2010	Adipocyte - An International Journal
2009-2017	Journal of Obesity
2010-	Adipocyte

## **Publications – Dissertation**

1. Morrison RF. (1994) Regulation of cellular polyamines for anchorage dependent and independent cell proliferation. Department of Physiology, East Carolina University School of Medicine.

## **Published Manuscripts (peer reviewed)**

1. Lust RM, Beggerly CE, Morrison RF, Austin EH, and Chitwood, Jr WR. (1988) Improved protection of chronically inflow-limited myocardium using retrograde cardioplegia. *Circulation* 78:III-217-223.
2. Hopson SB, Lust RM, Sun YS, Zeri RS, Morrison RF, Otaki M, Chitwood, Jr WR. (1995) Allopurinol improves myocardial reperfusion injury in a xanthine oxidase free model. *J Natl Med Assoc* 87(7):480-484.
3. Morrison RF, Seidel ER. (1995) Cell spreading and the induction of ornithine decarboxylase. *J Cell Science* 108:3787-3794.
4. Morrison RF, Seidel ER. (1995) Vascular endothelial cell proliferation: regulation of cellular polyamines. *Cardiovasc Res* 29(6):841-847.
5. Stephens JM, Morrison RF, Pilch PF. (1996) The expression and regulation of STATs during 3T3-L1 adipocyte differentiation. *J Biol Chem* 271:10441-10444.
6. Wu Z, Xie Y, Morrison RF, Bucher NLR, Farmer SR. (1998) PPAR $\gamma$  induces the insulin-dependent glucose transporter GLUT4 in the absence of C/EBP $\alpha$  during the conversion of 3T3 fibroblasts into adipocytes. *J Clin Invest* 101:22-32.
7. Morrison RF, Farmer SR. (1999) Role of PPAR $\gamma$  in regulating a cascade expression of cyclin dependent kinase inhibitors, p18 (INK4c) and p21 (Waf1/Cip1), during adipogenesis. *J Biol Chem* 274:17088-17097.
8. Stephens JM, Morrison RF, Wu Z, Farmer SR. (1999) PPAR $\gamma$  ligand-dependent induction of STAT1 and STAT5 during adipogenesis. *Biochem Biophys Res Comm* 262:216-222. Note: first two authors shared first authorship.
9. Stewart WC, Morrison RF, Long SL, Stephens JM. (1999) Regulation of STATs by effectors of adipogenesis: Coordinate regulation of STATs 1, 5A, and 5B with PPAR $\gamma$  and C/EBP $\alpha$ . *Biochem Biophys Res Comm* 262:216-222.
10. Morrison RF, Farmer SR. (1999) Insights into the transcriptional control of adipocyte differentiation. *J Cell Biochem S32-S33*:59-67. (Invited Review)
11. Morrison RF, Farmer SR. (2000) Hormonal signaling and transcriptional control of adipogenesis. *J Nutr* 130:3116-3121. (Invited Review)
12. Morrison RF and Farmer SR (2001) Nutrition and Adipocyte gene expression. In: *Nutrient-gene interactions in health and disease*. p24-48. Eds: Moustaid-Moussa N, Berdanier CD. CRC Press. (Invited Book Chapter)
13. Brown JM, Boysen MS, Jensen SS, Morrison RF, Storkson J, Lea-Currie R, Pariza M, Mandrup S, McIntosh MK. (2003) Isomer-specific regulation of metabolism and PPAR- $\gamma$  signaling by CLA in human preadipocytes. *J Lipid Res* 44(7):1287-300.
14. Moldes M, Zuo Y, Morrison RF, Silva D, Park BH, Liu J, Farmer SR. (2003) Peroxisome proliferator-activated receptor gamma suppresses Wnt/beta-catenin signaling during adipogenesis. *Biochem J* 376:607-13.

15. Brown JM, Boysen MS, Chung S, Fabiyi O, Morrison RF, Mandrup S, McIntosh MK (2004) Conjugated linoleic acid (CLA) induces human adipocyte delipidation: autocrine/paracrine regulation of MEK/ERK signaling by adipocytokines. *J Biol Chem* 279(25):26735-47.
16. Auld CA, Hopkins RG, Fernandes KM, Morrison RF. (2006) Novel effect of Helenalin on Akt signaling and Skp2 expression in 3T3-L1 preadipocytes. *Biochem Biophys Res Comm* 346(1):314-20.
17. Auld CA, Morrison RF. (2006) Evidence for cytosolic p27(Kip1) ubiquitylation and degradation during adipocyte hyperplasia. *Obesity* 14(12):2136-44.
18. Auld CA, Caccia CD, Morrison RF. (2007) Hormonal induction of adipogenesis induces Skp2 expression through PI3K and MAPK pathways. *J Cell Biochem* 100(1):204-16.
19. Auld CA, Fernandes KM, Morrison RF. (2007) Skp2-mediated p27(Kip1) degradation during S/G<sub>2</sub> phase progression of adipocyte hyperplasia. *J Cell Physiol* 211(1):101-111.
20. Consitt LA, Wideman L, Hickey MS, Morrison RF (2008) Phosphorylation of the JAK2-STAT5 pathway in response to acute aerobic exercise. *Med Sci Sports & Exer* 40(6):1031-1038.
21. Fernandes KM, Auld CA, Hopkins RG, Morrison RF. (2008) Helenalin-mediated post-transcriptional regulation of p21(Cip1) inhibits 3T3-L1 preadipocyte proliferation. *J Cell Biochem* 105(3):913-921.
22. Ferguson BS, Nam H, Hopkins RG, Morrison RF (2010) Impact of reference gene selection for target gene normalization on experimental outcome using real-time qRT-PCR in adipocytes. *PLoS ONE* 5(12): e15208. doi:10.1371/journal.pone.0015208.
23. Nam H, Ferguson BS, Stephens JM, Morrison RF (2013) Impact of obesity on IL-12 family gene expression in insulin responsive tissues. *Biochim Biophys Acta* 1831(1):11-19.
24. Sanchez-Infantes D, White UA, Elks CM, Morrison RF, Gimble JM, Considine RV, Ferrante AW, Ravussin E, Stephens JM (2014) Oncostatin M is produced in adipose tissue and is regulated in conditions of obesity and type 2 diabetes. *J Clin Endocrinol Metab.* 99(2):E217-25.
25. Ferguson BS, Nam H, Stephens JM, Morrison RF (2016) Mitogen-dependent regulation of DUSP1 governs ERK and p38 signaling during early 3T3-L1 adipocyte differentiation. *231(7):1562-1574.*
26. Nam H, Ferguson BS, Stephens JM, Morrison RF. (2016) Modulation of IL-27 in adipocytes during inflammatory stress. *Obesity* 24(1):157-166.
27. Ferguson BS, Nam H, Morrison RF (2016) Curcumin inhibits 3T3-L1 preadipocyte proliferation by mechanisms involving post-transcriptional p27 regulation. *Biochem Biophys Rep.* 5:16-21.
28. Habibian JS, Jelic M, Schepps A, Bagchi RA, McKnight RA, McKinsey TA, Morrison RF, Ferguson BS. (2017) DUSP5 Functions in a Feedback Loop to Suppress TNF $\alpha$ -Induced ERK1/2 Phosphorylation and Adipose Tissue Inflammation. *Sci Rep.* 7(1):12879.
29. Jenks MZ, Fairfield HE, Johnson EC, Morrison RF, Muday GK. (2017) Sex Steroid Hormones Regulate Leptin Transcript Accumulation and Protein Secretion in 3T3-L1 Cells. *Sci Rep.* 2017 Aug 15;7(1):8232.
30. Ferguson BS, Nam H, Morrison RF. Dual-specificity phosphatases regulate mitogen-activated protein kinase signaling in adipocytes in response to inflammatory stress. (submitted)
31. Oberlin DJ, Fecych M, Goldfarb AH, Morrison RF, Starnes JW, Beverly JL. Neither Chronic nor Acute Moderate Intensity Exercise Alters MCT Content within Skeletal or 2 Cardiac Muscles. (submitted)



### **Symposia Presentations (with published abstracts)**

1. Yeager JC, Morrison RF, Iams SG. (1978) The hemodynamic action of magnesium during isoproterenol stress. *Physiologist* 21:130.
2. Morrison RF, Yeager JC, Iams SG. (1981) The effects of gonadectomy on the inotropic responses of the isolated hearts from male spontaneously hypertensive rats. *J Elisha Mitchell Scientific Society* 97(4):247.
3. Yeager JC, Lieberman EM, Iams SG, Morrison RF. (1983) Myocardial calcium compartmentalization following isoproterenol stress in the rat. *J Mol Cell Cardiology* 15:43.
4. Iams SG, Morrison RF. (1985) The effects of gonadectomy and testosterone treatment on total peripheral resistance (TPR) in male SHR. *Federation Proceedings* 44:1645.
5. Chitwood Jr WR, Beggerly CE, Morrison RF, Austin EH, Lust RM. (1987) Protective effects of retrograde coronary cardioplegia in chronic inflow restricted myocardium. *Circulation* 76(4):IV-287.
6. Lust RM, Kasagi Y, Chapman SF, Morrison RF, Sun YS, Chitwood Jr WR. (1987) Influence of unilateral and bilateral internal mammary artery takedown on sternal blood flow. *Circulation* 76(4):IV-488.
7. Morrison RF, Chapman SF, Sun YS, Chitwood Jr WR, Austin EH and Lust RM. (1987) Analysis of mechanisms of cardiovascular compromise secondary to tension pneumothorax. *Physiologist* 30(4):215.
8. Sun YS, Etemad-Moghadam R, Morrison RF, Lust RM. (1988) Allopurinol improves reperfusion in a xanthine oxidase free pig model of reversible myocardial ischemia. *Physiologist* 31:A36.
9. Skipper ES, Lust RM, Morrison RF, Sun YS, Austin EH, Chitwood Jr WR. (1988) Superior protection of severe hypertrophy using retrograde coronary sinus cardioplegia. *Circulation* 78(4):II-184.
10. Lust RM, Morrison RF, Austin EH, Sun YS, Chitwood Jr WR. (1988) Chronic cyanosis and regulation of coronary vascular flow distribution. *Circulation* 78(4):II-445.
11. Lust RM, Kasagi Y, Morrison RF, Sun YS, Austin EH, Chitwood Jr WR. (1988) Residual sternal ischemia following median sternotomy repair despite retention of one intact internal mammary artery. *Circulation* 78(4):II-477.
12. Lust RM, Chapman SF, Morrison RF, Etemad-Moghadam R, Chitwood Jr WR and Austin EH. (1989) Possible mechanisms of cocaine-induced sudden cardiac death. *FASEB J* 3(3):A407.
13. Groblewski GE, Morrison RF, Ways K, Seidel ER. (1990) Relationship between polyamine accumulation, IEC-6 cell proliferation and protein kinase C. *Gastroenterology* 98(5):A413.
14. Morrison RF, Seidel ER. (1992) Control of intestinal epithelial cell growth: Influence of cell shape on polyamines. *Gastroenterology* 102(4):A936.
15. Morrison RF, Seidel ER. (1992) Regulation of putrescine in cultured vascular endothelial cells. *Circulation* 86(4):I292.
16. Morrison RF, Farmer SR. (1995) Inhibition of ODC inhibits serum induced C2C12 skeletal muscle cell proliferation in G0/G1 without induction of differentiation. *Mol Cell Biol* 6:345A.
17. Stephens JM, Morrison RF, Pilch PF. (1995) Induction of STATs during 3T3-L1 adipocyte differentiation. *Mol Cell Biol* 6:344A.
18. Auld CA, Sanders CD, Morrison RF (2002) The F-box protein Skp2 promotes adipogenesis by targeting p27 for destruction. *FASEB J* 16:A261.

19. Auld CA, Morrison RF. (2003) PI3K and MAPK pathways signal the obligatory degradation of p27(Kip1) during adipocyte hyperplasia. *FASEB J* 17:A198.2.
20. Auld CA, Morrison RF. (2004) Proteasome-dependent mechanisms regulating the degradation of p27(Kip1) during adipocyte hyperplasia. *FASEB J* 18:585.10.
21. Fernandes KM, Morrison RF. (2004) Molecular mechanisms regulating cyclin D1 and p21(Cip1) during the G1 phase of adipocyte hyperplasia. *FASEB J* 18:A585.7.
22. Mutamba B, Morrison RF. (2004) PPAR $\gamma$  ligand-dependent repression of adipocyte gene expression. *FASEB J* 18:A585.6.
23. Auld CA, Caccia CD, Morrison RF. (2006) Regulation of Skp2 promoter activity by PI3K and NF $\kappa$ B during preadipocyte proliferation. *FASEB J* 20:A127.8.
24. Fernandes KM, Auld CA, and Morrison RF. (2006) Mechanisms Regulating the Expression of p21(Cip1) during Adipocyte Hyperplasia Nutrition. *FASEB J* 20:A127.7.
25. Batiz LK, Auld CA, Fernandes KM, and Morrison RF. (2006) Mechanisms linking the ubiquitin proteasome system to adipocyte gene expression. *FASEB J* 20:A127.6.
26. Consitt LA, Wideman L, Hickey MS, Morrison RF. (2006) Growth hormone signaling is response to acute exercise. *FASEB J* 20(5):A925.
27. Fernandes KM, Morrison RF. (2007) GSK3 mediated regulation of cyclin D1 and p21(Cip1) during adipocyte hyperplasia. *FASEB J* 21:685.4. Experimental Biology 2007. Washington, DC. (poster presentation)
28. Ferguson BS, Fernandes KM, Auld CA, and Morrison RF. (2007) Regulation of the Cop9 signalosome during adipocyte hyperplasia. *FASEB J* 21:685.5. Experimental Biology 2007. Washington, DC. (poster presentation)
29. Ferguson BS, Morrison RF (2008) Curcumin alters MAPK intensity and duration in 3T3-L1 preadipocytes that correlates with diverse cellular function. *FASEB J* 22:700.33. Experimental Biology 2008. San Diego, CA. (poster presentation)
30. Ferguson BS, Nam H, Hopkins RG, and Morrison RF. (2009) Regulation of c-Jun N terminal kinase signaling by dual specificity phosphatases in adipocytes during inflammatory stress. *FASEB J* 23:910.12. Experimental Biology 2009. New Orleans, LA. (oral and poster presentation)
31. Nam H, Ferguson BS, Stephens, JM, Morrison RF. (2009) Regulation of IL-12 expression in adipocytes during inflammatory stress. *FASEB J* 23:910.13. Experimental Biology 2009. New Orleans, LA. (poster presentation)
32. Nam H, Ferguson BS, Rainey CF, Hopkins RG, Stephens JM, Morrison RF. (2010) Differential regulation of IL-27 expression during inflammatory stress in adipocytes. *FASEB J*, 24:476.6. Experimental Biology 2010. Anaheim, CA. (poster presentation)
33. Nam H, Ferguson BS, Rainey CF, Morrison RF. (2011) An inhibitory role of quercetin on adipocyte differentiation by mechanisms involving p27 protein stability and suppression of G1/S phase transition during preadipocyte proliferation. *FASEB J*. 25:920.5. Experimental Biology 2011. Washington, DC. (poster presentation)
34. Guo W, Ferguson BS, Nam H, Hopkins RG, Morrison RF. (2013) Role for dusp4 in the pathogenesis of TNF $\alpha$  induced proinflammatory gene expression in adipocytes. *FASEB J*. 27:865.6. Experimental Biology 2013. Boston, MA. (poster presentation)

35. Guo W, Ferguson BS, Nam H, Hopkins RG, Morrison RF. (2014) Role for dusp4 in modulating PPAR $\gamma$  activity by covalent modification in adipocytes. FASEB J. 28:1037.1. Experimental Biology 2014. San Diego, CA (poster presentation)
36. Guo W, Ferguson BS, Hopkins RG, Morrison RF. (2016) Regulation of dusp4 by Erk-dependent and -independent mechanisms in adipocytes. FASEB J. 30:1169.6. Experimental Biology 2016. San Diego, CA (poster presentation)
37. DeSilva DM, Guo W, Hopkins RG, Morrison RF (2016) Hypoxia and Oncostatin M synergistically up-regulate HIF-1 $\alpha$  in 3T3-L1 adipocytes by different mechanisms. FASEB J. 30:1169.3. Experimental Biology 2016, San Diego, CA (poster presentation)
38. Oberlin DJ, Fecych M, Murray C, Morrison R, Wideman L, Beverly L. (2016) MCT expression in the ventromedial hypothalamus is not increased by recurrent hypoglycemia. FASEB J. 30:989.2. Experimental Biology 2016, San Diego, CA (poster presentation)
39. Guo W, Ferguson BS, Hopkins RG, Morrison RF. (2017) Regulation of endogenous dusp4 by agonist-specific MAPK activation in adipocytes. Experimental Biology 2017. Chicago, IL (oral & poster presentation)
40. DeSilva DM, Morrison RF. (2017) Oncostatin M regulation of adipocyte differentiation through cell cycle arrest in 3T3-L1. Experimental Biology 2017, Chicago, IL (poster presentation)

### **Symposia Presentations (without published abstracts)**

1. International Symposium: "Polyamines in Cancer". MD Anderson Cancer Center, Houston, TX. (1992) Morrison RF, Seidel ER. "Effect of cell shape on polyamine metabolism", Invited oral presentation.
2. Cold Spring Harbor Symposium: "Regulation of Liver Gene Expression in Health & Disease". Cold Spring Harbor Laboratory, Cold Spring Harbor, NY. (1997) Morrison RF, Farmer SR "Transcriptional events regulating the switch between growth and differentiation during adipogenesis." Invited oral presentation.
3. Keystone Symposium: "The Adipose Cell: Molecular Aspects of differentiation, gene expression and metabolic regulation in the normal cell and obese models". Park City, Utah. (1997) Morrison RF, Stephens JM, Farmer SR. "PPAR $\gamma$  ligand-dependent induction of STAT1 and STAT5 during adipogenesis". Poster presentation.
4. Symposium: Endocrine Society. New Orleans, LA. (1998) Morrison RF, Farmer SR. "Transcriptional regulation of cyclin dependent kinase inhibitors by peroxisome proliferator activated receptor gamma during terminal adipocyte differentiation". Poster presentation.
5. Nuclear Hormone Receptor Group. Children's Hospital, Boston, MA. (1999) Morrison RF, Farmer SR. "Molecular mechanisms regulating the balance of growth and adipocyte differentiation." Invited oral presentation.
6. Steenbock Symposium: "Adipocyte Biology and Hormone Signaling". University of Wisconsin, Madison, WI. (1999) Morrison RF, Farmer SR. "Role of PPAR $\gamma$  in regulating p18 and p21 during adipogenesis." Poster presentation.
7. Keystone Symposium, Taos NM. "Molecular Control of Adipogenesis and Obesity" (2000) Morrison RF, Farmer SR. "Cooperation between transcription factors in regulating the balance of adipocyte growth and differentiation". Poster presentation.

8. Connectivity Expo 2001, Winston Salem, NC (2001) Morrison RF. "Molecular Mechanisms Linking Obesity and Diabetes." Poster presentation.
9. Symposium: North Carolina Institute of Nutrition, Chapel Hill, NC. (2002) Mutamba B, Morrison RF. "Molecular mechanisms of PPAR $\gamma$  ligand-dependent repression of adipocyte gene expression". Poster presentation.
10. Keystone Symposium: "Molecular Control of Adipogenesis and Obesity", Banff, Alberta, Canada. (2004) Auld CA, Morrison RF. "Cytoplasmic/nuclear mechanisms for proteasome-dependent degradation of p27(Kip1) during adipocyte hyperplasia". Poster presentation.
11. Keystone Symposium: "Adipogenesis, Obesity and Inflammation", Vancouver, British Columbia, Canada. (2006) Auld, CA, Caccia, CD, Morrison RF. "KPC and Skp2 E3 ligases cooperatively mediate p27 protein degradation during adipocyte hyperplasia". Poster presentation.
12. Keystone Symposium: "Adipogenesis, Obesity and Inflammation", Vancouver, British Columbia, Canada. (2006) Fernandes KM, Auld CA, Morrison RF. "p21(Cip1): Role and regulation during adipocyte hyperplasia". Poster presentation.
13. Keystone Symposium: "Molecular Control of Adipogenesis and Obesity", Banff, British Alberta, Canada. (2008) Ferguson BS, Nam H, Hopkins RG, Morrison RF. "Duration and magnitude of MAPK signaling correlate with diverse function in adipocytes". Poster presentation.
14. NAASO Obesity Society Conference (2008). Ferguson BS, Nam H, Hopkins RG, Morrison RF. "Regulation of JNK Signaling by dual specificity phosphatases in adipocytes". Poster presentation.
15. Keystone Symposium: "Adipose Tissue Biology", Keystone, Colorado. (2010) Ferguson BS, Nam H, Rainey C, Morrison RF. "Divergent roles of Erk and Jnk/p38 signaling on dusp1 protein stability in adipocytes". Poster presentation.
16. Keystone Symposium: "Obesity", Keystone, Colorado. (2010) Ferguson BS, Nam H, Hopkins RG, Morrison RF. "Role of dual specificity phosphatases (DUSPs) on c-Jun N terminal kinases (JNK) signaling in adipocytes". Poster presentation.
17. Keystone Symposium: "Obesity", Keystone, Colorado. (2010) Nam H, Ferguson BS, Morrison RF. "Differential regulation of IL-27 expression in adipocytes during inflammatory stress". Poster presentation.
18. Keystone Symposium: "Genetic and Molecular Basis of Obesity and Body Weight Regulation". Santa Fe, New Mexico. (2012) Guo W, Nam H, Ferguson BS, Morrison RF. "Role of Dusp4 in the pathogenesis of TNF $\alpha$ -induced proinflammatory gene expression linking obesity and insulin resistance". Poster presentation.
19. Keystone Symposium: "Genetic and Molecular Basis of Obesity and Body Weight Regulation". Santa Fe, New Mexico. (2012) Nam H, Ferguson BS, Morrison RF. "Novel mechanism of golgi-mediated TNF $\alpha$ -induced inflammatory gene expression in adipocytes". Poster presentation.
20. Nutrition 2018. American Society for Nutrition (ASN). DeSilva DM, Morrison RF. (2018) "Role for Hypoxia-Inducible Factor 1 $\alpha$  in Oncostatin-Mediated Changes in Adipocyte Function". Poster presentation.
21. Nutrition 2018. American Society for Nutrition (ASN). DeSilva DM, Morrison RF. (2018) "Role for Hypoxia-Inducible Factor 1 $\alpha$  in Oncostatin-Mediated Changes in Adipocyte Function". Invited electronic poster/oral presentation.

## **Invited Oral Presentations and Research Seminars**

1. Department of Biology, University of North Carolina at Greensboro, Greensboro, NC. "Molecular mechanism regulating adipocyte hyperplasia in the development of obesity". Invited research seminar. (2003)
2. Department of Pathology; Lipids Section, Wake Forest University School of Medicine, Winston Salem, NC. "Role of E3 ligases in targeted protein degradation during adipocyte hyperplasia". Invited research seminar. (2006)
3. South East Lipid Research Conference, Pine Mountain, GA. "Ubiquitin E3 ligases in targeted protein degradation during adipocyte hyperplasia". Invited oral presentation. (2007)
4. Department of Biology, Middle Tennessee State University, Murfreesboro, TN. "Role of E3 ligases in targeted protein degradation during adipocyte hyperplasia". Invited research seminar. (2007)
5. Department of Biological Sciences, Louisiana State University, Baton Rouge, LA. "Regulating JNK signaling by dual specificity phosphatases in adipocytes". Invited research seminar. (2008)
6. North American Association for the Study of Obesity (NAASO); Phoenix, AZ. Invitation to chair scientific session of the annual meeting. (2008)
7. Keystone Symposium: "Pathogenesis of Diabetes". Santa Fe, NM. "Novel mechanism of golgi-mediated TNF $\alpha$ -induced inflammatory gene expression in adipocytes". Invited oral presentation. (2012)
8. Pennington Biomedical Research Center, Adipocyte Biology, Baton Rouge, LA. "MAPK Phosphatases in Adipocytes, Obesity and Insulin Resistance". Invited research seminar" (January 2015)
9. Department of Biology, Middle Tennessee State University, Murfreesboro, TN. "MAPK Phosphatases in Adipocytes, Obesity and Insulin Resistance". Invited research seminar" (April 2015)

## **III. TEACHING**

### **Courses Taught at UNC Greensboro**

NTR-213	Introductory Nutrition
NTR-401	Special Problems in NFS Systems
NTR-413	Intermediate Nutrition
NTR-427	Undergraduate Research
NTR-493	Honors Work
NTR-500	Supervised Professional Experience
NTR-531	Nutrient Metabolism
NTR-601	Directed Individual Study in Nutrition
NTR-609	Graduate Seminar
NTR-626	Energy, Carbohydrate, Lipid Metabolism
NTR-623	Current Trends in Nutrition
NTR-653	Problems in Food and Nutrition
NTR-670	Research Skills Development



Associate Scientist, BioAgilvix Labs, Research Triangle Park, Durham, NC

4. Bradley S. Ferguson                      PhD      2006-2011      Nutrition, UNCG  
     Dissertation: 'Role for Dual-Specificity Phosphatases on Mitogen-Activated Protein Kinase Signaling in Adipocytes.'  
     Postdoctoral Fellow, Cardiology, University of Colorado Medical Campus, Denver, CO (2011-2015)  
     Assistant Professor, Agriculture, Nutrition and Veterinary Science, University of Nevada, Reno
5. Heesun Nam                                      PhD      2007-2012      Nutrition, UNCG  
     Dissertation: 'Novel mechanisms regulating inflammatory gene expression in adipocytes.'  
     Professional Science Writer, Sydney, Australia
6. Wei Guo    PhD      2011-2017      Nutrition, UNCG  
     Dissertation: 'Role of DUSP4 in regulating PPAR $\gamma$  and inflammatory gene expression in adipocytes.'  
     Graduation: December 2017
7. Dana DeSilva                                      PhD      2014-              Nutrition, UNCG  
     Dissertation: 'Role of Oncostatin M on adipocyte bioenergetics'  
     Defense: May 2018 (expected)

**Member for MS Thesis Committee (UNCG)**

1. Keiko Takahashi                      MS      2001-2003      Nutrition, Mentor: G. Loo
2. Farnaz Jamshidi                      MS      2001-2003      Biology, Mentor: D. LaJeunesse
3. Olcay Boyacıoğlu                      MS      2001-2003      Biology, Mentor: V. Henrich
4. Karishma M. Fernandes              MS      2001-2003      Nutrition, Mentor: R. Wander
5. David Scott                                      MS      2003-2005      Nutrition, Mentor: G. Loo
6. Nathan Provo                                      MS      2003-2005      Nutrition, Mentor: M. McIntosh
7. Jen Oas    MS      2002-2007      Nutrition, Mentor: D. Kipp
8. Benjamin Novak                              MS      2005-2006      Biology, Mentor: D. LaJeunesse
9. Amy Kilbarger                                      MS      2005-2007      Nutrition, Mentor: D. Kipp
10. Steve Fordahl                                      MS      2008-2010      Nutrition, Mentor: K. Erikson
11. Angel Overton                                      MS      2008-2010      Nutrition, Mentor: M. McIntosh
12. Colette Miller                                      MS      2008-2010      Nutrition, Mentor: L. Brown
13. Shatha Farah                                      MS      2009-2011      Nutrition, Mentor: K. Erikson
14. Stephanie La                                      MS      2013-2014      Nutrition, Mentor: D. Kipp
15. Jessie Baldwin                                      MS      2013-2015      Nutrition, Mentor: M. McIntosh

**Member for PhD Dissertation Committee (UNCG)**

1. Jonathan M. Brown                      PhD      2001-2004      Nutrition, Mentor: M. McIntosh
2. Soonkyu Chung                                      PhD      2002-2006      Nutrition, Mentor: M. McIntosh

3. Shin-Pei Yang	PhD	2001-2003	Biochemistry, Mentor: G. Raner
4. Leslie Consitt	PhD	2003-2005	Kinesiology, Mentor: L. Wideman
5. Arion Kennedy	PhD	2004-2009	Nutrition, Mentor: M. McIntosh
6. Joel Anderson	PhD	2004-2009	Nutrition, Mentor: K. Erikson
7. Travis Thomas	PhD	2005-2009	Nutrition, Mentor: C. Lovelady
8. Kristina Martinez	PhD	2006-2011	Nutrition, Mentor: M. McIntosh
9. Chia-Chi Chuang	PhD	2008-2012	Nutrition, Mentor: M. McIntosh
10. Bryan Feger	PhD	2008-2012	Kinesiology, Mentor: J. Starnes
11. Steve Fordahl	PhD	2010-2013	Nutrition, Mentor: K. Erikson
12. Wan Shen	PhD	2009-2014	Nutrition, Mentor M. McIntosh
13. Jonathan Messer	PhD	2013-2014	Nutrition, Mentor: D. Kipp
14. Qian Sun	PhD	2010-2015	Nutrition, Mentor: Z. Zhou
15. DJ Oberlin	PhD	2013-2016	Kinesiology, Mentor: L. Wideman
16. Linda Friend	PhD	2017-	Nutrition, Mentor: M. Perrin
17. Michael Jarrett	PhD	2017-	Kinesiology, Mentor: P. Davis

#### **IV. PROFESSIONAL SERVICE**

##### **Journal Peer-Review**

Journal of Biological Chemistry, Hypertension, Diabetes, Obesity Research, Journal of Obesity, Adipocyte – An International Journal, Experimental Biology and Medicine, Adipocyte, American Journal of Physiology, FEBS Letters

##### **Grant Peer-Review**

North Carolina Biotechnology Center  
National Institutes of Health  
British Diabetes Association  
Louisiana Board of Regents' Research Competitiveness Subprogram

##### **Departmental Committees (Nutrition, UNCG)**

Graduate Faculty Committee (2001-2008)  
Undergraduate Curriculum Committee (2003-2011)  
Coordinator - Concentration in Nutrition Science (2002-2015)  
Facilities/Equipment Committee (2001-2003)  
Coordinator – Basic Science Laboratory Committee (2010-2015)  
Nutrition Liaison to Scientific Advisory Committee (2001-2003)  
Search Committee for Assistant Professor – Nutrition (2002)  
Search Committee for Assistant Professor – Chemistry/Biochemistry (2002)  
Search Committee for Research Associate – Nutrition (2003)



Search Committee for Professor/Co-director of Center for Excellence of Bioactive Food Components, NCRC – Nutrition (2008, 2009)

Search Committee for Assistant Professor – Chemistry/Biochemistry (2009)

Search Committee for Applied Professional – Nutrition (2011)

Search Committee for (2) Assistant Professors – Nutrition (2013)

### **School Committees (Human Environmental Sciences, UNCG)**

Search Committee (Co-chair) for Chairperson of Nutrition (2002)

Faculty Council (2006-2009)

### **School Committees (Health and Human Sciences, UNCG)**

Search Committee for Chairperson of Nutrition (2012)

Research Advisory Committee (2013-2015)

### **University Committees (UNCG)**

Health Careers Advisory Committee (2001-present)

Intellectual Property and Technology Transfer Committee (ad hoc; 2003-2011)

Institution Biosafety Committee (2003-present)

Biotechnology Committee (ad hoc; 2004-2011)

Patent Policy Rewrite Committee (2003-2004)

Search Committee for Technology Transfer Officer (2003)

Search Committee for Senior Research Scientists (2004)

Faculty Senate (2011-2015)

University Promotion & Tenure Committee (2012-2015)

### **National Committees**

Steering Committee, Nutrient-Gene Interaction RIS, ASN (2003-2006)

Editorial Board, Obesity (2002-2008)

Editorial Board, Adipocytes - An International Journal (2005-2010)

Editorial Board, Journal of Obesity (2009-2017)

Editorial Board, Adipocyte (2010-present)

Chair-Elect, Nutrient-Gene Interactions Research Interest Section ASN (2013-2014)

Chair, Nutrient-Gene Interactions Research Interest Section, ASN (2014-2015)

Past-Chair, Nutrient-Gene Interactions Research Interest Section, ASN (2015-2016)