

8-28-09

CURRICULUM VITA

Michael K. McIntosh, Ph.D., R.D.

Lucy S. Keker Excellence Professor

DEPARTMENT OF NUTRITION

SCHOOL OF HUMAN ENVIRONMENTAL SCIENCES

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A. PERSONAL DATA

NAME: Michael Kenneth McIntosh
DEGREES: Ph.D., R.D., M.S., B.S.
BIRTHPLACE: Cleveland, Ohio
STATUS: American citizen
ADDRESS: Department of Nutrition, 318 Stone Bldg, UNC-Greensboro
Greensboro, NC 27402-6170
(336) 256-0325 (office), 334-4129 (fax), mkmcinto@uncg.edu

B. EDUCATION

1. **Registered Dietitian** (RD #720055):
R.D.: December, 1988 (10/22/88 exam) by The American Dietetic Association
Completed 6 mo. A.D.A. Qualifying Experience: Jan.-June, 1988
Advisor: Mr. Tom Phillips, M.S., R.D.
Department Food and Nutrition, UW-Stout, Menomonie, WI 54751 (715) 232-2183

2. **L.D.N.:** 1992-2004 State of North Carolina

3. **Doctorate of Philosophy Degree:**
August 1987; Human Nutrition
Dissertation: "Adrenal and Thyroid Hormone Interactions in Non-insulin Dependent Diabetes Mellitus and Obesity"
Advisor: Dr. Carolyn D. Berdanier
Department of Foods and Nutrition, University of Georgia, Athens, Georgia 30602
(706) 542-4858

Achievements:

G.P.A. 3.8 (4.0)
U.S.D.A. National Needs Research Fellow, 1984-87
Professional Honor Society Member: Phi Upsilon Omicron & Gamma Sigma Delta
Member Society for International Development
President FDN Graduate Student Association (1985-86)

4. **Master of Science Degree:**

M.S.: March 1983, Animal Nutrition
Thesis: "Canola Meal as a Protein Supplement for Swine"
Advisor: Dr. Frank X. Aherne
Department of Animal Science, University of Alberta, Edmonton, Alberta T6G 2P5
(404) 432-2118

Achievements:

G.P.A. 3.8 (4.0)
Full teaching assistantship
Member American Society of Animal Science
University of Alberta Tae Kwon Do Club, 1979-82

5. **Bachelor of Science Degree:**

B.S. Zoology (Pre-Vet) Cum Laude, 1973
Ohio University, Athens, Ohio

Achievements:

Member Honors College
Vice President Freshman Class
University Scholarship, 1971-72
Ohio University Karate Team, 1970-73

6. High School:

High School Graduate, 1969
Avon Lake H.S., Avon Lake, Ohio

Achievements:

National Honor Society
Varsity Football, Track
Vice President Senior Class

C. CURRENT RESEARCH INTERESTS & PROJECTS

1. Area of interest: Hormonal and nutritional regulation of energy metabolism and gene expression in human (pre)adipocytes; (pre)adipocyte growth, differentiation, cell signaling, and metabolism; obesity; diabetes; inflammation and insulin resistance

2. Projects:

- Antiadipogenic mechanisms of conjugated linoleic acid (CLA) in human adipocytes
- Role of non-adipocytes from visceral vs. subcutaneous human adipose tissue in mediating inflammation
- Bioactive food components that prevent inflammation or insulin resistance associated with obesity

D. WORK EXPERIENCE

- Lucy S. Kecker Excellence Professor, UNCG, 2006-
- Professor of Nutrition, UNCG, 2002 -
- Associate Professor of Nutrition & Adjunct Associate Professor of Biology, UNCG, 1995-02
- Director of the Graduate Program in Nutrition, UNCG, 1994-96; 2000-03
- Assistant Professor of Nutrition, UNCG, 1989-95
- Assistant Professor/Extension Nutrition Specialist, Univ. of Wisconsin-Stout, 1987-89
- U.S.D.A. National Needs Research Fellow, Univ. of Georgia, Athens, GA, 1984-87
- Teaching Assistant, Univ. of Alberta, Edmonton, Alberta & Univ. of Georgia, Athens, 1980-84
- American Embassy Club Manager and Staff Housing Coordinator, Niamey, Niger, 1978-79
- Peace Corps Inland Fisheries Volunteer, Cameroun, West Africa, 1974-78,
- TEFL Teacher (part time), Lutheran Mission, Ngaoundere, Cameroun & American Cultural Center, Niamey, Niger, 1974-79
- Peace Corps Fisheries Training Administrator, Mbengwi-Foumban, Cameroun, 1976-77
- Carpenter (full and part time, including self-employment), G. & G. Builders, L. Gates Builders, Avon Lake, OH, & Miscott Corp., Ft. Lauderdale, FL, 1970-83
- Machine Operator (evenings, weekends and summers), 1966-70, Formmet Corp, Avon, OH

E. LABORATORY EXPERIENCE

- Rearing, handling & preparation of pigs, cattle, & rats for research procedures, including feedmill operation, ration formulation, feeding, surgery, injections, & specimen sampling
- Proximate analysis techniques (nitrogen, energy, lipids, ash, fiber)
- In vitro bioassays (enzymes, metabolites, radioisotope metabolism, RIAs, lipid peroxidation)
- Hepatocyte & adipocyte isolation & incubations with radiolabelled substrates
- Subcellular fractionations (mitochondria, peroxisomes, microsomes, cytosol, plasma membrane), immunolocalization
- RNA isolation; cDNA amplification; labeling cDNA; Northern & Western blotting; real time- and RT-PCR; autoradiography & densitometry, transient transfections, ChIP assay, siRNA
- Isolation & culturing animal (hepatocytes, [pre]adipocytes) & human cells ([pre]adipocytes)

F. TEACHING & STUDENT ADVISING/MENTORING

1. Course Development & Teaching Responsibilities:

- Advanced Nutrition (NTR 560)
- Community Nutrition (NTR 523)
- Current Trends in Nutrition (NTR 623)
- Directed Study in Nutrition (NTR 601)
- Dissertation Problem (NTR 799)
- Doctoral Research (NTR 790)
- Energy, Lipids, Carbs, & Alcohol (NTR669)
- Geriatric Nutrition (229-705)
- Graduate Seminar (NTR 609)
- Intermediate Nutrition (NTR 413)
- Nutrient Metabolism I/II (NTR 625/626)
- * Nutrition (NTR 213)
- * Nutrition Research Methodology (NTR 673)
- * Nutrition Throughout Life Cycle (NTR 313)
- * Obesity & Energy Balance (229-711)
- * Problems Food & Nutrition (NTR 653)
- * Research Skill Development (NTR 670)
- * Sports Nutrition (229-525)
- * Teaching Practicum (NTR 666)
- * Thesis (NTR 699)
- * Undergraduate Research (NTR427/527)

2. Graduate/Undergraduate Student Research Mentoring:

Ph.D. Dissertation Committee Chair (Current position):

- R. Lea-Currie (1994-99) "Dehydroepiandrosterone (DHEA) metabolism and its role in preadipocyte growth and differentiation" (Director R&D, Zen Bio, Inc, RTP, NC)
- M. Evans (1998-01) "Trans-10, cis-12 conjugated linoleic acid alters lipid metabolism and induces apoptosis in 3T3-L1 preadipocytes" (Program Director, NIH-NIDDK, Bethesda, MD)
- J. Mark Brown (2000-04) "Isomer-specific mechanisms by which conjugated linoleic acid opposes human adipogenesis" (Assistant Professor, WFU Sch Med, Winston Salem, NC)
- K. O'Connell (2001-05) "Enhancing dairy food consumption of children and adolescents in Guilford County Schools" (Nutritionist, USDA Ctr Nutrition Policy & Prom., Alexandria, VA)
- S. Chung (2002-06) "Mechanisms by which conjugated linoleic acid causes human adipocyte delipidation" (Post-Doc Fellow, WFU Sch Med, Winston Salem, NC)
- A. Kennedy (2004-09) "Conjugated linoleic acid activates cell signals that cause human adipocyte delipidation"(Post-doc fellow, Vanderbilt Sch Med, Nashville, TN)
- K. Martinez (2006-) "Inflammatory capacity of human (pre)adipocytes exposed to conjugated linoleic acid"
- C.-C. Chuang (2007-) "Anti-inflammatory components of grape powder extract in human adipocytes"
- W. Shen (2009-) "Upstream mediator of inflammation and insulin resistance in CLA-treated human adipocytes".

Ph.D. Dissertation Committee Member:

- D. D'Souza (1989-90) "Effects of Dietary Fatty Acids, Polyunsaturated / Saturated Ratio, and Fat Levels on Growth and Mineral Deposition in Young Male Rats "
- C. Lewis (1990-92) "Effects of vitamin E supplementation on muscle soreness, plasma creatine kinase and malondialdehyde following an endurance ergometer ride."
- R. Bell (1990-93) "Nutrient intake and the effectiveness of a community-based nutrition education program in reducing dietary cancer risk in adult Lumbee Indian women "
- J. Fatouros (1992-94) "The effects of beta-endorphin on glucose homeostasis and hormonal responses during exercise."
- O. Han (1992-94) "Trace metal transport system study by Caco2 human colonic cell line"
- K. Martin (1992-96) "Development of a cellular model to evaluate the hypothesis that carotenoids are antioxidants"
- C. Chen (1993-96) "Modified HDL by cigarettes smoke extract and its impact on reverse cholesterol transport"
- A. Jamurtas (1994-97) "The effects of beta-endorphin infusion on plasma glucose, catecholamines and free fatty acids during exercise in rats".

- R. Hopkins (1991-98) "Influence of copper status on interleukin-2 gene expression in lymphocytes"
- S. Foster (1992-99) "Impact of iron status of CaCo2 cells on invasion and survival of Salmonella Enteriditis and expression of pro-inflammatory cytokines"
- Akkarach Bumrungpert (2007-) "Anti-inflammatory and Insulin Sensitizing Actions of Mangosteen in Human Adipocytes"
- Mri Datta (2008-) "Impact of Tomato Juice Supplementation on the Outcomes of Radiation Therapy for Patients with Prostate Cancer".

M.S. Thesis Committee Chair:

- M. Harmon (1987-88) "Nutrition Education Preparation of College Coaches in Wisconsin"
- J. Green (1987-88) "A Nutrition Education... on Optimal Calcium Nutriture for Adolescents"
- R. Gallup (1988-89) "Factors Influencing Eating Behaviors of Children"
- C. Haydock (1987-89) "Post-operative Assessment of Dietary Intakes of Vertical Banded Gastroplasty Patients"
- S. Knutson (1988-89) "Nutrition Knowledge and Dietary Intakes of UW-Stout Athletes"
- H. Knutson (1988-89) " The Effects of Weight Cycling Techniques Practiced by the College Wrestler on Long-term Health Status"
- K. Granley (1988-90) "The Incidence of Adolescent Obesity in a Wisconsin County and the Implementation of an Educational Program to Arrest its Advancement"
- M. Shrank (1988-90) "The Effect of the Eat Well, Be Well Program on the Eating Attitudes, Eating Behaviors, and Body Weight of Failed Chronic Dieters."
- M. Carnaghi, (1989-90) " Development and Evaluation of Programmed Instruction for Educating Individuals with Diabetes on Dietary Fat Modification "
- D. Chance (1992-94) "Effects of hypolipidemic agents on peroxisomal and mitochondrial fatty acid oxidation.
- H. Bao (1993-95) "Dietary fat and vitamin E supplements alter hepatic peroxisomal fatty acid oxidation and the activities of antioxidant enzymes in rats"
- C. Lee (1993-95) "Dietary fat and vitamin E intakes alter tissue susceptibility to lipid peroxidation and affect indices of chronic disease risk"
- Y.-Y. Liu (1994-95) "DHEAS reduces PMA-induced respiratory burst in macrophages elicited from rats"
- P. Wen (1995-97) "The influence of DHEA on the lipid content and CCAAT/enhancer binding protein expression in cultures of 3T3-L1 preadipocytes"
- J.N. Provo (2003-05) "Adipokine gene expression and protein secretion in human adipose tissue explants treated with CLA"
- Angel Overman (2008-). "Anti-inflammatory role of grape powder extract in human macrophages"

MS Committee Member:

- K. Swanberg (1987-88) "Implementation and Evaluation of a Nutrition Education Program for a Selected Population of College Football Players."
- L. Lanningham (1994-95) "Phenolic substances which inhibit oxidative modification of human LDL"
- F. Eksir (1999-01) "Vitamin D receptor regulation in CaCo2 cells"
- J. Lumpkin (1999-01) " Digestion, micellarization, and intestinal cell uptake of B-carotene isomers"
- B. Mutamba (2002-04) "PPAR γ ligand dependent repression of adipocyte gene expression"

Undergraduate Research Assistants (supported by grants; 10-15 h/wk):

- | | | |
|-----------------------|---------------------------|------------------------|
| • P. Coty (1989-90) | * A. Assani (1990-91) | * O. Fabiyi (2001-04) |
| • D. Chance (1992-93) | * R. Whitehead (1993-94) | * T. Beighle (2002-03) |
| • C. McGhee (1994-95) | * D. Monroe (1997-98) | * H. Wooten (2002-03) |
| • J. Cook (1998-99) | * M. Brown (1999-00) | * R. Miller (2003-04) |
| • K. Kay (2000) | * L. C. Redmond (2000-01) | * M. Joyce (2003-04) |

- L. Budd (2004-05)
- K. Bryda (2006-07)
- * N. Thompson (2005)
- * A. Overman (2007-08)
- * K. Martinez (2005-06)
- * S. Shyamasundar (2009-)

3. Courses for Teaching Assistantships (I was responsible for teaching the labs):

- Population Genetics (ANSC 484, Univ. of Alberta), 1980
- Animal Physiology (ANSC 300 & 310, Univ. of Alberta), 1981
- Production and Management (ANSC 473, Univ. of Alberta), 1982
- Swine Production (ANSC 470, Univ. of Alberta), 1982
- Feeds and Feeding (ANSC 331, Univ. of Georgia), 1984

C. PUBLICATIONS

1. Peer-reviewed papers (*= graduate student; # = undergraduate student):

McIntosh, M. & Aherne, F. X. 1985. Utilization of nitrogen and amino acids in canola meal by starter pigs. Can. J. Anim. Sci. 65:197-204.

McIntosh, M., Baidoo, S.*, & Aherne, F. X. 1986. Canola meal as a protein supplement for 6 to 20 kilogram pigs. Can. J. Anim. Sci. 66(4): 1051-1059.

Baidoo, S.*, McIntosh, M., Aherne, F. & Bowland, J. 1986. Selection preferences of starter pigs fed canola meal and soybean meal supplemented diets. Can. J. Anim. Sci. 66(4):1039-1049.

McIntosh, M. & Berdanier, C. 1987. Interaction of DHEA and glucocorticoids in the responses of BHE rats to starvation-refeeding. Nutr. Rep. Int. 36 (1): 183-191.

McIntosh, M. & Berdanier, C. 1988. Strain differences in the dose-response curves of adrenalectomized, starved-refed rats to dehydroepiandrosterone. Proc. Soc. Exp. Biol. Med. 187: 216-222.

McIntosh, M. & Berdanier, C. 1988. Differential effects of adrenalectomy and starvation-refeeding on hepatic lipogenic responses to dehydroepiandrosterone (DHEA) and glucocorticoid in BHE and Sprague-Dawley rats. J. Nutr. 118: 1011-1017.

McIntosh, M., Berdanier, C. & Kates, A.* 1989. Studies on thyroxine 5' deiodinase activity in rats differing in hepatic lipogenic activity. FASEB J. 3: 1734-1740.

Berdanier, C. & McIntosh, M. 1989. Further studies on the effects of DHEA on hepatic metabolism in BHE rats. Proc. Soc. Exp. Biol. Med. 192: 242-247.

Green, J.*, McIntosh, M., & Wilson, A. 1991. Changes in nutrition knowledge scores and calcium intake in female adolescents. Home Econ. Res. J. 19(3): 207-214.

Berdanier, C. & McIntosh, M. 1991. Weight loss - weight regain: A vicious cycle. Nutr. Today Sept-Oct.: 6-12.

McIntosh, M. & Berdanier, C. 1991. Antiobesity effects of dehydroepiandrosterone (DHEA) mediated by futile substrate cycling in hepatocytes of BHE rats. J. Nutr. 121: 2037-2043.

McIntosh, M. & Berdanier, C. 1992. The influence of dehydroepiandrosterone (DHEA) on the thyroid hormone status of BHE/cdb rats. J. Nutr. Biochem. 3: 194-199.

McIntosh, M., Goldfarb, A., Curtis, L. & Cote, P.* 1993. Vitamin E alters hepatic antioxidant enzymes in rats treated with dehydroepiandrosterone (DHEA). J. Nutr. 123:216-224

- McIntosh, M., Ju-Shin, P.* & Berdanier, C. 1993. In vitro studies on the effects of dehydroepiandrosterone and corticosterone on hepatic steroid receptor binding and mitochondrial respiration. Comp. Biochem. Physiol. 104: 147-154
- Berdanier, C., Parente, J.* & McIntosh, M. 1993. Is DHEA an antiobesity agent? FASEB J. 7: 414-419
- McIntosh, M., Parente, J.* & Berdanier, C. 1993. Repeated cycles of food restriction reduce fatty acid synthesis and oxidation in hepatocytes isolated from BHE/cdb rats. Nutr. Res. 13: 339-347
- McIntosh, M., Goldfarb, A., Cote, P.* & Griffin, K.* 1993. Vitamin E reduces peroxisomal fatty acid oxidation and indicators of oxidative stress in exercised rats treated with dehydroepiandrosterone (DHEA). J. Nutr. Biochem. 4: 298-303.
- Goldfarb, A., McIntosh, M., Boyer, B.* & Fatouros, J.* 1994. Vitamin E effects on indices of lipid peroxidation in muscle from DHEA-treated and exercised rats. J. Appl. Physiol. 76:1630-1635.
- Chance, D.* & McIntosh, M. 1994. Rates of beta-oxidation of fatty acids of various chain length and degree of unsaturation in purified peroxisomes isolated from rat liver. Comp. Biochem. Physiol. 109B: 273-280.
- Chance, D.*, Wu, S. & McIntosh, M. 1995. Inverse relationship between peroxisomal and mitochondrial beta-oxidation in HEPG2 cells treated with dehydroepiandrosterone and clofibrate. Proc. Soc. Exp. Biol. Med. 208: 378-384.
- Chance, D.* & McIntosh, M. 1995. Hypolipidemic agents alter hepatic mitochondrial respiration in vitro. Comp. Biochem. Physiol. 111C: 317-323.
- Goldfarb, A., McIntosh, M., Boyer, B.* & Fatouros, J.* 1996. Vitamin E attenuates myocardial oxidative stress induced by DHEA in rested and exercised rats. J. Appl. Physiol. 80:486-490.
- Lea-Currie, R.*, Wu, S., & McIntosh, M. 1997. Effects of acute administration of dehydroepiandrosterone sulfate on adipose tissue mass and cellularity in male rats. Int. J. Obesity 21: 147-154.
- Lea-Currie, R.*, Ping, W.*, & McIntosh, M. 1997. Dehydroepiandrosterone sulfate attenuates adipocyte hyperplasia associated with feeding rats a high fat diet. Int. J. Obesity 21: 1058-1064.
- McIntosh, M., Hausman, D., Martin, R. & Hausman, G. 1998. Dehydroepiandrosterone attenuates preadipocyte growth in primary cultures of stromal-vascular cells. Am J. Physiol. 275 (Endocrin. Metab. 38): E285-293.
- Lea-Currie, R.*, Ping, W.*, & McIntosh, M. 1998. Dehydroepiandrosterone reduces proliferation and differentiation of 3T3-L1 preadipocytes. Biochem. Biophys. Res. Comm. 248 (3): 497-504.
- Lea-Currie, R.*, Monroe, D.#, & McIntosh, M. 1999. Dehydroepiandrosterone and related steroids alter 3T3-L1 preadipocyte proliferation and differentiation. Comp. Biochem. Physiol 123C: 17-25.
- McIntosh, M., Bao, H.* & Lee, C.* 1999. Opposing actions of DHEA and corticosterone on lipid metabolism in rats. Proc. Soc. Exp. Biol. Med. 221: 198-206.
- McIntosh, M., Lea-Currie, R.*, Geigerman, C. & Pavevourous, L. 1999. Dehydroepiandrosterone alters the growth of stromal-vascular cells from human adipose tissue. Int. J. Obesity 23: 595-602.

- Evans, M.*, Geigerman, C., Cook, J.#, Curtis, L., Kuebler, B.# & McIntosh, M. 2000. Conjugated linoleic acid suppresses triglyceride content and induces apoptosis in 3T3-L1 preadipocytes. Lipids 35: 899-910.
- McIntosh, M. & Miller, C. 2001. A diet containing food rich in soluble and insoluble fiber improves glycemic control and reduces hyperlipidemia among patients with type 2 diabetes. Nutrition Reviews 59: 52-55.
- Brown, J.M.#, Evans, M* & McIntosh, M. 2001. Linoleic acid partially reverses the suppressive effects of conjugated linoleic acid on preadipocyte triglyceride content. J. Nutr. Biochem.12: 381-387
- Brown, J.M.*, Halverson, Y.-D., Lea-Currie, R., Geigerman, C., & McIntosh, M. 2001. Trans-10, cis-12, but not cis-9, trans-11, conjugated linoleic acid attenuates lipogenesis in primary cultures of stromal vascular cells from human adipose tissue. J. Nutr. 131: 2316-2321.
- Evans, M*, Park, Y. Pariza, M., Curtis, L., Kuebler, B.#, & McIntosh, M. 2001. Trans-10, cis-12 conjugated linoleic acid reduces triglyceride content while differentially affecting PPAR- α expression in 3T3-L1 preadipocytes. Lipids 36: 1223-1232.
- Evans, M*, Odle, J., Xi, L. & McIntosh, M. 2002. Trans-10, cis-12 conjugated linoleic acid increases fatty acid oxidation in 3T3-L1 preadipocytes. J. Nutr. 132: 450-455.
- Evans, M.*, Brown, J.M.*, & McIntosh, M. 2002. Isomer-specific effects of conjugated linoleic acid on adiposity and lipid metabolism. J. Nutr. Biochem.: 13: 508-516.
- Brown, M. *, Sandberg-Boysen, M.*, Skov, S.*, Morrison, R., Storkson, J., Lea-Currie, R., Pariza, M., Mandrup, S., & McIntosh, M. 2003. Isomer-specific regulation of metabolism and PPAR γ by conjugated linoleic acid (CLA) in human preadipocytes. J. Lipid Research 44: 1287-1300.
- Brown, J.M.*, & McIntosh, M. 2003. Conjugated linoleic acid in humans: Regulation of adiposity and insulin sensitivity. J. Nutr 133: 3041-3046.
- Brown, J.M.* , Boysen, M.S.* , Chung, S.* , Fabiyi, O.#, Morrison, R., Mandrup, S., & McIntosh, M. 2004. Conjugated linoleic acid (CLA) induces human adipocyte delipidation: autocrine/ paracrine regulation of MEK/ERK signaling by adipocytokines. J. Biol. Chem. 279: 26735-26747.
- House, R.* , Cassady, J., Eisen, E., McIntosh, M., & Odle, J. 2005. Conjugated linoleic acid evokes delipidation through the regulation of genes controlling lipid metabolism in adipose tissue and liver. Obesity Reviews 6: 247-258.
- Chung, S.* , Brown, J.M.* , & McIntosh, M. 2005. *Trans*-10, *cis*-12 CLA increases adipocyte lipolysis and alters lipid droplet-associated proteins: role of mTOR and ERK signaling. J. Lipid Research. 46: 885-895.
- Chung, S.* , Brown, J.M.* , Provo, J.N.* , Hopkins, R., & McIntosh, M. 2005. Conjugated linoleic acid promotes human adipocyte insulin resistance through NF κ B-dependent cytokine production. J. Biol. Chem. 280: 38445-38456.
- Chung, S.* , LaPoint, K., Kennedy, A.* , Martinez, K.#, Boysen-Sandberg, M,* & McIntosh, M. 2006. Preadipocytes mediated LPS-induced inflammation and insulin resistance in primary cultures of newly differentiated human adipocytes. Endocrinology 147: 5340-5351.
- Kennedy, A.* , Chung, S.* , LaPoint, K., Fabiyi, O.#, & McIntosh, M. 2008. Trans-10, Cis-12 Conjugated Linoleic Acid Antagonizes Ligand -Dependent PPAR γ Activity in Primary Cultures of Human Adipocytes. J. Nutr. 138: 455-461. (Editors' Pick of the Month for March '08).

Kennedy, A*, Martinez, K.*, Chuang, C.C.*, LaPoint, K., & McIntosh, M. 2008. Saturated fatty acid-mediated inflammation and insulin resistance in adipose tissue- Mechanisms of action and implications. J. Nutr. 139:1-4.

Kennedy, A. *, Overman, A. *, Martinez, K. *, LaPoint, K., Hopkins, R., Chuang, C.C. *, West, T., Bell, D. & McIntosh, M. 2009. Conjugated Linoleic Acid (CLA)-Mediated Inflammation and Insulin Resistance in Human Adipocytes are Attenuated by Resveratrol. J. Lipid Research 30: 225-232.

Bumrungpert, A,* Kalpravidh, R., Chitchumroonchokchai, C., Chuang, C. *, West, T., Kennedy, A. *, McIntosh, M. 2009. Xanthones from Mangosteen Prevent Lipopolysaccharide-Mediated Inflammation and Insulin Resistance in Primary Cultures of Human Adipocytes J. Nutr. 139: 1185-1191.

Kennedy, A. *, Martinez, K. *, Schmidt, S. *, Mandrup, S., Lapoint, K. McIntosh, M. 2009. Anti-obesity Mechanisms of Action of Conjugated Linoleic Acid. (J. Nutr. Biochem.- in press)

2. Manuscripts under review: (* = graduate student; # = undergraduate student):

Kennedy, A. *, Martinez, K. *, Chung, S. *, LaPoint, K. West, T., Hopkins, R, Schmidt, S. *, Andersen, K., Mandrup, S., McIntosh, M. Inflammation and Insulin Resistance Induced by Trans-10, Cis-12 Conjugated Linoleic Acid are Dependent on Intracellular Calcium Levels in Primary Cultures of Human Adipocytes. (under first revision for the J. Lipid Research- under revision after 2nd review)

Martinez, K. *, Kennedy, A. *, West, T., Milatovic, D., Aschner, M., McIntosh, M. Trans-10, cis-12 Conjugated Linoleic Acid Promotes Inflammation to a Greater Extent in Human Adipocytes Compared to Preadipocytes. (J. Biol. Chem- under revision after 1st review)

Chuang, C. *, Bumrungpert, A. *, Kennedy, A. *, West, T., Dawson, B., McIntosh, M. Grape Powder Extract Attenuates Tumor Necrosis Factor α -Mediated Inflammation and Insulin Resistance in Primary Cultures of Human Adipocytes (J. Nutr. Biochem)

Overman, A. *, Bumrungpert, K. *, Kennedy, A. *, Martinez, K. *, Chuang, C. *, West, T., McIntosh, M. Grape Powder Extract Attenuates Inflammation in Human Macrophages (J. Immunology)

3. Books, Book Chapters and Proceedings (* = graduate student):

Berdanier, C. & McIntosh, M. 1988. Lessons learned from genotypic differences in response to DHEA treatment. In "*Frontiers in Diabetes Research: Lessons from Animal Diabetes II*". (E. Schafrir & A.E. Renold, ed.). pp.356-361. J. Libbey & Co. London.

Berdanier, C. & McIntosh, M. 1989. Genotypic differences in metabolic responses to DHEA. In "*Hormones, Thermogenesis, and Obesity*". (H. Lardy & F. Stratman, ed.). pp 385-397. Elsevier Sci. Publ. Co., Inc., NY, NY.

Berdanier, C. & McIntosh, M. 1990. DHEA and mitochondrial respiration. In "*The Biological Role of Dehydroepiandrosterone*." (W.Regelson & M. Kalimi, ed.) pp. 222-242. W. De Gruyter Pub. Co., W. Berlin, Germany.

McIntosh, M., Nitzkie, S. & Greger, J. 1990. *Handbook on Cholesterol, Fats and Coronary Heart Disease*. Madison, WI: UW-Madison Nutrition Educ. Program-Kellogg Found. Publ. 18 p.

McIntosh, C. & McIntosh, M. 1996. Dietary Applications. In "*U.S. Soccer's Sports Medicine of Soccer*." (W.Garrett, R.Contigulia, D. Kirkendall, Eds.) p.28-43 Williams & Wilkins, Media, PA.

McIntosh, M. 1999. Dehydroepiandrosterone (DHEA) and obesity: Potential antiadipogenic mechanisms of action. In "*Dehydroepiandrosterone: Biochemical, Physiological and Clinical Aspects.*" (W.Regelson & M.Kalimi, ed.) p.131-156. W. DeGruyter Pub. Co., W. Berlin, Germany.

McIntosh, M. 2001. Nutrients and compounds affecting body composition and metabolism. Compend. Contin. Educ. Pract. Vet. 23 (9A; Sept.): 18-28.

Brown, J.M.*, Chung, S.*, & McIntosh, M. 2006. Lipid-lowering actions of trans-10, cis-12 CLA in primary cultures of human (pre)adipocytes. In "*Advances in Conjugated Linoleic Acid Research, Vol. 3*" (P. Yurawecz & M. Pariza, ed.). p. 233-244, Chapter 13. AOCS, Champaign, IL.

LaPoint, K. & McIntosh, M. 2008. Potential Role of Resveratrol in Preventing Inflammation and Diseases Associated with Obesity and Aging. Chapter 14, p. 219-228. In "*Handbook of Nutrition in the Aged*" Taylor and Francis, Boca Raton, FL

4. Seven Extension Publications and Two Videos (UWEX, Madison, WI)

5. Presentations/Abstracts (*= graduate student; # = undergraduate student):

McIntosh, M. & Aherne, F. 1982. An evaluation of canola meal (cv Candle) as a protein supplement for starter pigs. J. Anim. Sci. 55:285.

McIntosh, M. & Aherne, F. 1983. The feeding value of canola meal as a protein supplement for starter pigs. The Sixth International Rapeseed Conference. Paris, France. May 17-19, 1983.

McIntosh, M. & Aherne, F. 1983. The influence of graded levels of protein on the utilization of nitrogen and amino acids of canola meal by starter pigs. The Sixth International Rapeseed Conference. Paris, France. May 17-19, 1983.

Aherne, F. & McIntosh, M. 1983. Selection preferences of starter pigs fed canola meal and soybean meal supplemented diets. 1983 CSAS Western branch meeting. Univ. of Saskatoon. June 14-16, 1983.

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Chung, S.*, Brown, J.M.*, Fabiyi, O.# & McIntosh, M. 2004. Trans-10, cis-12 conjugated linoleic acid (CLA) alters the levels and localization of proteins regulating lipid droplet morphology in primary cultures of mature human adipocytes. FASEB J. 18: A876.

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Chung S.*, Brown J.M.*, LaPoint K., Sandberg-Boysen M.*, Mandrup S., & McIntosh, M. 2005. Trans-10, cis-12 conjugated linoleic acid (CLA) causes delipidation and insulin resistance in human adipocytes via NFkB-dependent activation of adipokine gene expression and protein secretion. FASEB J. 19: A69 S. *Chung was one of twelve winners of the 2004-05 ASNS P&G Student Research Awards Abstract Competition on April 2, 2005 and was awarded \$750.*

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O'Connell, K.*, Miller, R.#, Mayer, J., Fowler, W., & McIntosh, M. 2005. A school-based, nutrition intervention increases vegetable intake among seventh graders in Guilford County (GC), NC. FASEB J. 18: A833.1.

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Chung, S.*, J. M. Brown*, J. N.Provo*, R. Hopkins, & M. McIntosh. 2006. Conjugated linoleic acid (CLA) causes NFkB-induced insulin resistance in human adipocytes. Keystone Symposia J4: Adipogenesis, Obesity, and Inflammation, Jan.21-26, 2006 Vancouver, BC. J4: #121, p. 152. *S. Chung was a Recipient of the Pfizer Global Research and Development Travel Scholarship \$1000.*

Chung, S.*, LaPoint, K., Kennedy, A.*, Troy, A.*, & McIntosh, M. 2006. Proinflammatory cytokine secretion from preadipocytes decreases PPAR γ expression and activity in primary cultures of human adipocytes. FASEB J. 20: A163. *S. Chung was one of twelve winners of the 2005-06 ASNS P&G Student Research Awards Abstract Competition held on April 1, 2006 \$750.*

Troy, A.*, Martinez, K.#, Chung, S. *, LaPoint, K., & McIntosh, M. 2006. Proinflammatory cytokine gene expression is influenced by the degree of differentiation of primary cultures of human adipocytes. FASEB J. 20: A163.

Kennedy, A*, K. Martinez*, R. Hopkins, S. Chung*, K. LaPoint, & M. McIntosh. 2007. Inflammation and delipidation induced by trans-10, cis-12 conjugated linoleic acid (CLA) are linked to intracellular calcium accumulation in primary cultures of human adipocytes. Keystone Symposium Z1/Z2. Nuclear Receptors Pathways to Metabolic regulation/Metabolic Syndrome. *A. Kennedy is a Recipient of a \$1,000 Travel Scholarship awarded by the Keystone Symposia.*

Martinez, K.*, S. Chung*, K. LaPoint, A. Troy*, A. Kennedy*, & M. McIntosh. 2007. Docosahexanoic acid (DHA) suppresses inflammation in primary cultures of human (pre)adipocytes. Keystone Symposium Z1/Z2. Nuclear Receptors Pathways to Metabolic regulation/Metabolic

Syndrome. *K. Martinez is a Recipient of a \$1,000 Travel Scholarship awarded by the Keystone Symposia.*

Kennedy, A.* Chung, S., Hopkins, R., LaPoint, K. & McIntosh, M. 2007. Inflammation and delipidation induced by trans-10, cis-12 conjugated linoleic acid (CLA) are linked to intracellular calcium accumulation in primary cultures of human adipocytes. *FASEB J.* 21:A703 *A. Kennedy is one of four winners of the 2006-07 ASNS P&G Student Research Awards Abstract/oral Competition held on April 28, 2007 in Washington, DC \$1,250.*

Martinez, K.* , S. Chung*, K. LaPoint, A. Troy*, A. Kennedy*, & M. McIntosh. 2007. Docosahexanoic acid (DHA) Attenuates Inflammation in Primary Cultures of Human (Pre)adipocytes. *FASEB J.* 21: A735. *K. Martinez received a FASEB-MARC travel award to EB07 \$1,450*

A. Kennedy.* , K. LaPoint, R. Hopkins, T. West, A. Overman#, K. Martinez.* , & M. McIntosh. 2008. Resveratrol Attenuates Conjugated Linoleic Acid (CLA)-Mediated Inflammation, Endoplasmic Reticulum (ER) Stress, and Delipidation of Human Adipocytes. Keystone Symposium X3 Banff, CND entitled "Molecular Control of Adipogenesis and Obesity". *A. Kennedy is a Recipient of a \$1,000 Travel Scholarship awarded by the Keystone Symposia.*

K. Martinez*, S. Chung, K. LaPoint, A. Kennedy*, T. Walker West, & M. McIntosh. 2008. Conjugated linoleic acid (CLA) promotes inflammation to a greater extent in human adipocytes compared to preadipocytes. Keystone Symposium X3 Banff, CND entitled "Molecular Control of Adipogenesis and Obesity". *K. Martinez is a Recipient of a \$1,000 Travel Scholarship awarded by the Keystone Symposia.*

K. Martinez*, S. Chung*, K. LaPoint, A. Kennedy*, T. Walker West & M. McIntosh. 2009. Trans-10, cis-12 Conjugated Linoleic Acid (CLA)-Mediated Inflammatory Signaling: Essential Role of Adipocytes in Initiating Cross-talk with Preadipocytes EB09 New Orleans, LA. *K. Martinez was the Overall winner of the 2008-09 ASN Clinical Emerging Leaders Award Abstract/Oral Competition held on April 18 at EB09 \$750.*

A. Kennedy*, K. Martinez, T*. West & M. McIntosh. 2009 JNK inhibitor SP600125 attenuates 10,12 conjugated linoleic acid (CLA)- mediated inflammation and suppression of adipogenic and lipogenic genes in human (pre)adipocytes. EB09 New Orleans, LA

C.-C. Chuang*, A. Bumrungpert*, A. Kennedy*, K. Martinez*, T. West, M. McIntosh. 2009. Role of Grape Powder Extract (GPE), Quercetin (QUE), and Resveratrol (RSV) in Attenuating Markers of Inflammation in Primary Cultures of Human Adipocytes. EB09 New Orleans, LA

A. Overman* , A. Bumrungpert*, A. Kennedy*, K. Martinez*, T. West, R. Hopkins, C. Chuang*, M. McIntosh. 2009. Anti-inflammatory Effects of Grape Powder Extract (GPE) in Human Macrophages. EB09 New Orleans, LA

A. Bumrungpert*, R. Kalpravidh, C. Chitchumroonchokchai, C. Chuang*, T. West, A. Kennedy*, M. McIntosh 2009. Anti-Inflammatory Effects of Xanthenes from Mangosteen in Primary Cultures of Human Adipocytes. EB09 New Orleans, LA

H. PROFESSIONAL MEMBERSHIPS, AWARDS, & SERVICES

1. Society membership and activities and licensure:

- Member, Editorial Board for the Journal of Nutritional Biochemistry (2009-)
- Fellow, North American Association for the Study of Obesity
- Member, American Society Biochemistry & Molecular Biology, American Society of Nutrition (ASN), Society of Experimental Biology and Medicine, NC Academy of Science
- ASN Research Interest Sections (RIS); 1) Nutrient-Gene Interactions, 2) Dietary Bioactive Components, and 3) Nutritional Immunology
- Member, Gamma Sigma Delta and Phi Upsilon Omicron Honor Societies

- NC Academy of Science Annual Meeting Organizer and Session Chair (2000-01)
- NC Summit on Overweight in Children and Youth Planning Committee (2001)

2. Awards:

- USDA National Needs Fellow (1984-87)
- Recipient, School of Human Environmental Sciences (HES)- 1999 Board of Governors Outstanding Teacher Award, Year (one HES faculty member chosen per year)
- Recipient, USDA's National Awards Program for Excellence in University Teaching in the Food and Agricultural Sciences Nov. 11, 2000 (one of two from Southern Region of U.S. chosen).
- Recipient, 2000-01 NC Board of Governors Teaching Excellence Award (one UNCG faculty member chosen)
- Recipient, 2003-04 UNCG Research Excellence Award (one UNCG faculty member chosen)
- Recipient, Lucy S. Kecker Excellence Professorship, 2006- (one of eight Excellence Professorships at UNCG)

3. Research awards to students I have mentored:

Graduate Students:

- **Y. Renee Lea-Currie** (Ph.D. student):
 - Minority NIH Predoctoral Fellowship (1998-00; \$42,000)
- **J. Mark Brown** (Ph.D. student):
 - ASNS 2002 Predoctoral Fellowship (1 of 4 winners- \$5,000)
 - SEBM 2002 Travel Award to EB 2002 (1 of 10 winners- \$500)
 - NCAS 2002 R. R. Bryden Graduate Research Award winner (\$300)
 - NFS 2001 Graduate Student of the Year
 - Winner (1 of 12) in 2002-03 ASNS P&G Student Research Awards Abstract Competition on April 11, 2003 in San Diego, CA \$750.
 - Recipient, NIH travel scholarship of \$1,000 awarded by R. Evans for abstract at 2003 Keystone Symposium B5 (PPARs), Keystone, CO Feb. 4-9, 2003.
 - Winner (1 of 3) of the 2003-04 ASNS P&G Student Research Awards Abstract-Oral Competition on April 17, 2004 in Washington, DC \$1,250.
 - Winner (1 of 2) of the EB04 Energy and Macronutrient RIS in Washington, DC \$400
 - Winner (1 of 6) of the EB04 Nutrient-Gene Interaction RIS in Washington, DC \$150
 - Winner (1 of 5) of the EB04 Dietary Bioactive Components in Washington, DC RIS \$500
 - Recipient, Peter Reeds Young Investigator Award, 2007 \$2,500 (during post-doc)
- **Kellie O'Connell** (Ph.D. student):
 - Guilford County Team Nutrition Grant (PI) from USDA \$10,000 8/03
 - Guilford County NC Healthy Weight Community Init. Grant (PI) from NCDHHS \$20,000. 9/03
- **Soonkyu Chung** (Ph.D. student)
 - Winner (1 of 12) in 2004-05 ASNS P&G Student Research Awards Abstract Competition on April 2, 2005 in San Diego, CA \$750.
 - Winner of the EB05 Energy & Macronutrient RIS Poster Competition in San Diego, CA \$500
 - Recipient, Pfizer Global Research and Development Travel Scholarship \$1000 to present her research at the Keystone Symposia entitled "Adipogenesis, Obesity, and Inflammation" from January 21-26, 2006 in Vancouver, CND.
 - Winner (1 of 12) in 2005-06 ASNS P&G Student Research Awards Abstract Competition held on April 1, 2006 at EB06 in San Francisco, CA \$750
 - Recipient, SEBM Young Investigator Award 2006. \$500.
 - Winner (1 of 3) of the EB06 Nutritional Immunology RIS Graduate Student Poster Competition \$350 in San Francisco, CA.
- **Arion Kennedy** (Ph.D. student)
 - Recipient, NIH-NIDDK Travel Scholarship, \$1000 to present her research at the Keystone Symposia entitled "Adipogenesis, Obesity, and Inflammation" from January 21-26, 2006 in Vancouver, CND

- Recipient, UNCF-Merck Graduate Science Dissertation Fellowship, 9/06-7/09. \$52,000
- Recipient, NIH F31 Minority Predoctoral Fellowship. 8/06 – 8/09. \$82,986.
- Recipient, Travel Scholarship of \$1000 to present her research at the Keystone Symposia entitled “Nuclear Receptor Pathways to Metabolic Control” from March 28- April 1, 2007 in Steamboat Springs, CO
- Winner (1 of 4) in 2006-07 ASN- P&G Student Research Awards Abstract/Oral Competition held on April 28, 2007 in Washington DC \$750.
- Recipient, Travel Scholarship of \$1,000 to present her research at the Keystone Symposium X3 in Banff, CANADA entitled “Molecular Control of Adipogenesis and Obesity” from Feb. 19-24, 2008 in Banff, Alberta.
- Winner (3rd place) of the EB08 Nutrient Gene RIS Graduate Student Poster Competition, April 5, 2008 in San Diego, CA.
- Winner (1 of 5) of the EB09 Nutrient Gene RIS Graduate Student Poster Competition, April 18, 2009 in New Orleans, LA.
- **Kristina Martinez** (Ph.D. student)
 - Recipient, Keystone Travel Scholarship of \$1000 to present her research at the Keystone Symposia entitled “Nuclear Receptor Pathways to Metabolic Control” from March 28- April 1, 2007 in Steamboat Springs, CO
 - Recipient, FASEB-MARC Travel Award to EB07 \$1,450
 - Winner (1 of 3) of the EB07 Nutritional Immunology RIS Graduate Student Poster Competition, April 28, 2007 in Washington DC \$350.
 - Recipient, Travel Scholarship of \$1,000 to present her research at the Keystone Symposium X3 in Banff, CANADA entitled “Molecular Control of Adipogenesis and Obesity” from Feb. 19-24, 2008 in Banff, Alberta.
 - Overall winner of the 2008-09 ASN-Clinical Emerging Leader Awards Abstract-Oral Competition held on April 18, 2009 in New Orleans, LA \$1,250.
 - Recipient, FASEB-MARC Travel Award to EB09 in New Orleans, LA.
 - Recipient, NIH F31 Minority Predoctoral Fellowship. 8/08 – 8/10. \$56,502.
- **Angel Overman** (MS student)
 - Finalist (1 of 10) of the 2009 Bioactive Compounds RIS Graduate Student Poster competition, April 18, 2009 in New Orleans, LA.

Undergraduate students:

- **J. Mark Brown**
 - First place, 2000 UNCG Undergraduate Research Poster Competition, 5/3/00
 - Second place (Derieux Research Award for undergraduate research) for his presentation at the 2000 NC Academy of Science annual meeting at NCSU
- **L. Chrissie Redmond**
 - First place (Derieux Research Award for undergraduate research) for her research presentation at the 2001 NC Academy of Science annual meeting at UNCG
- **Oluwatoyin Fabiyi**
 - Second place (Derieux Research Award for undergraduate research) for her research presentation at the 2002 NC Academy of Science annual meeting at UNC-Chapel Hill.
- **Lauren Budd**
 - First place, 2005 UNCG Undergraduate Research Poster Competition, 5/4/05
- **Kristina Martinez**
 - Second place, 2006 UNCG Undergraduate Research Poster Competition, 5/3/06

4. Invited presentations (since 2000)

"Conjugated Linoleic Acid Suppresses Triglyceride Content and Induces Apoptosis in (Pre)Adipocytes" on 5/24/00 at Zen Bio, Inc, RTP, NC, May 24, 2000.

"Nutrients and Compounds Affecting Body Composition and Metabolism" at the 2000 Purina Nutrition Forum in St. Louis, MO, Oct. 20, 2000.

"Antibobesity actions of CLA isomers in cultures of human adipocytes" at the Institute of Nutrition Research, University of Oslo, Oslo, Norway, June 19, 2002.

"Antibobesity actions of CLA isomers in cultures of human adipocytes" at the Center for Food Safety and Applied Nutrition, FDA, College Park, MD, Aug. 27, 2002.

"Antibobesity actions of CLA isomers in cultures of human adipocytes" at the Department of Human Nutrition, Foods, and Exercise, Virginia Tech, Blacksburg, VA, Sept. 5, 2002.

"Antibobesity actions of CLA isomers in cultures of human adipocytes" at the Department of Human Nutrition, Ohio State University, Columbus, OH, Nov. 8, 2002.

"Trans-10, cis-12 CLA induces human adipocyte delipidation: the obligatory role of cytokine-induced MEK/ERK signaling" at the Department of Agriculture, Food, and Nutritional Science, the University of Alberta, Edmonton, Alberta, CAN, March 3, 2003.

"Trans-10, cis-12 CLA induces human adipocyte delipidation: the obligatory role of cytokine-induced MEK/ERK signaling" at the NIH Office of Dietary Supplements, Bethesda, MD, March 31, 2003.

"Trans-10, cis-12 CLA induces human adipocyte delipidation: the obligatory role of cytokine-induced MEK/ERK signaling" at the Danish Society of Biochemistry and Molecular Biology Symposia *Molecular Mechanisms of Diabetes- Signals from the Adipose Tissue*, Odense, Denmark, Nov. 24, 2004.

"Trans-10, cis-12 CLA induces human adipocyte delipidation: the role of cytokine-induced MEK/ERK signaling" at the U.S. CLA Network sponsored by Lodders Crokiaan in Chicago, IL, Feb. 11-12, 2005.

"Conjugated linoleic acid in humans: Regulation of adiposity and insulin sensitivity" at the FASEB Summer Research Conference "Nutritional Control of Gene Expression and Cell Signaling (Co-sponsored by the Endocrine Society), Aug. 2, 2005.

"CLA signaling in human adipocytes". Nebraska Research Expo 2006, Lincoln, NE, Mar 29, 2006.

"CLA activates cell signals that cause human adipocyte delipidation". Wake Forest School of Medicine, Center for Botanical Lipids, Winston Salem, NC. Aug. 17, 2006.

"The role of preadipocytes in mediating inflammation and insulin resistance in human adipose tissue" Wake Forest School of Medicine, Department of Pathology, Section on Lipid Sciences, Winston Salem, NC. Oct. 18, 2006.

"Dietary approaches for attenuating chronic inflammation associated with obesity" WB Kellogg Institute for Food and Nutrition Research, Battlecreek, MI, Feb. 16, 2007.

"Preadipocytes mediate inflammation and insulin resistance in human adipose tissue" Department of Human Nutrition, Ohio State University, Columbus, OH March 9, 2007.

"Potential Role of Nutraceuticals in Preventing Obesity, Insulin Resistance, and Inflammation" at the *Who We Are and What We Eat: The Role of Metabolomics and Nutrigenomics in Creating Healthier Foods and Healthier Lives* Symposium in Kannapolis, NC, April 16-17, 2007.

"CLA and Adipocyte Function" at The Second International Congress on Conjugated Linoleic Acid, Villasimius, Sardinia, Italy, Sept. 20, 2007.

“Obesity-associated inflammation and insulin resistance: The role of human preadipocytes” and “The French Paradox: Can grapes promote health and increase longevity” Department of Food Science and Human Nutrition, U. Fl, Gainesville. Feb. 19, 2008.

“Obesity, Chronic Inflammation, and Insulin Resistance” short course at the U. Fl., Gainesville, FL, May 26-30, 2009 sponsored by a U.FL. Faculty Enhancement Opportunity Award to Dr. Neil Shay.

5. Ad Hoc reviewer:

- Grant reviewer: USDA-NRI, NIH -IPOD, American Diabetes Assoc.,
- Manuscript reviewer (ad hoc): *Am. J. Phys.*, *Apoptosis*, *Biochem.*, *B.B.A.*, *Diabetes*, *Endocrinology*, *Mol. Cell Biochem.*, *J.B.C.*, *J. Nutr.*, *FASEB J.*, *Int. J. Obesity*, *Lipids*, *J. Lipid Res.*,
- Reviewer for the NIH-Office of Dietary Supplements *Annual Bibliography of Significant Advances in Dietary Supplement Research, 2004-*
- NIH/NIDDK IPOD study section, June, 2007
- NIH/NIDDK CADO study section, Feb, 2009

6. Community Activities:

- Member, Guilford Co. Heart & Stroke Partnership & Guilford Co. Fitness Council (1999-03)
- Member, Fitness Board, Central YCMA (1998-2004)
- Director, Community Watch, Woodland Hills Subdivision, Greensboro (1998-)
- Secretary, Advisory Board for District 3, Greensboro Police Department (1999-00)
- Columnist with C. McIntosh, Greensboro **News and Record** “What’s on Your Plate?” (every 3rd Tues, ~100,000 subscribers; 5/99-7/02; 52 articles):

7. University Service

a. University level:

- M. Russell Harter Awards (2001), Institutional Review Board for Human Subjects (IRB; 1998-04, Sp08), Institutional Animal Care and Use Committee (IACUC; 1989-98), Graduate Faculty (1990-), Biotechnology Interest Group (1990-98), Center for Women’s Health Issues Interest Group (1995-97), Institute of Nutrition Board of Scientific Advisers (1991-94), North Carolina Research Park (2006-), Undergraduate Research Assistantship Committee (2006-).

b. School (HES) level:

- Promotion and Tenure (1997-00; 2002-05), HES IRB repr. (1998-), Outstanding Teacher of the Year Award (1989-93; 1995-03), Elections (1990-94), Audiovisuals (1991-93)

c. Department (NTR) level:

- Search committees (3 as chair, 4 as member), Graduate Committee (1990-94; Director; 1994-96, 2000-03), Undergraduate Curriculum (Chair; 1998-2000), Scholarships and Awards (1992-94, 1997-), NFS Club (Advisor 1989-96; Co-advisor 2000-02), Executive Committee (1995-), Laboratory Instrumentation and Equipment Coordinator (1990-99), Promotion and Tenure (1996-), Masters Internationalist Program (Director 1992-97), IACUC representative (1989-98), Dietetic Internship Selections (1994-98), Undergraduate student advisor (~300 students), Graduate student advisor (Chair of 16 M.S. and 7 Ph.D. level students), Undergraduate Research advisor (20 students)

I. GRANT PROPOSALS FUNDED (\$4,322,434) or PENDING (PI = \$238,000; Co-investigator-(\$1,032,000)

As PI - External (\$3,197,248):

Effects of DHEA on cellular respiration rates. NIH Biomedical Sciences Research Support Award. 8/90 - 3/91. \$7053.

USDA National Research Initiative Competitive Grants Program. Equipment Grant #80.2. HPLC System to Determine Nutrient Adequacy. 7/94-6/95. \$48,638

Beneficial effects of high oleic acid safflower oil on antioxidant status and lipid peroxidation. Loriva Supreme Foods, Inc. Hauppauge, NY. 7/94 - 6/95. \$3,000.

What isomer of conjugated linoleic acid attenuates preadipocyte growth? USDA NRICGP Strengthening Award. 11/99-10/01. \$50,000.

CLA reduces adipogenesis in human preadipocytes. NIH-NIDDK R15/ Office of Dietary Supplements. 7/01-6/03. \$128,710

Antiobesity mechanism of CLA isomer in human adipocytes. NIH-NIDDK R01/ Office of Dietary Supplements 10/1/02-6/30/06. \$1,032,000.

YAQ evaluation for measuring food intake of school-aged children. The Moses Cone-Wesley Long Community Health Foundation. 10/1/03. \$2,000.

Research Career Enhancement Award to Develop Molecular and Cellular Tool Skills. USDA NRI. 10/04-5/05. \$102,864.

NIH-NIDDK/ODS Research Supplement for Underrepresented Minorities. 1/05 – 6/06. \$54,585.

USDA National Research Initiative Competitive Grants Program. Equipment Grant #80.2. Multi-Detection Microplate Reader to Enhance Research Competitiveness in Nutrition. 8/05-7/06. \$31,500

Differential effects of CLA isomers on adipocyte delipidation and insulin resistance. Cognis Deutschland GMBH & Co., KG. 3/06-2/08. \$195,300.

Antiobesity Mechanism of CLA Isomer in Human Adipocytes. NIH-NIDDK R01/ Office of Dietary Supplements 1/15/07 – 12/31/11. \$1,522,598 (priority score 123, percentile 2.4).

Undergraduate Student Experiential Learning In Adipocyte Biology and Nutrition Research. NIH Administrative Supplement. 5/09- 5/11. \$19,000.

As CO-PI- External (\$934,286):

Multicultural Scholars Program in Dietetics. USDA Higher Education Multicultural Scholars Program. 2/95-12/99. \$100,000. (Lovelady, C.-PI) (CO-PI's Failla, M., McIntosh, M., Taylor, M.)

NIH F32 Predoctoral Fellowship for Minorities. 6/96-6/99. \$42,000. (R. Lea-Currie, doctoral student)

Dickson Cellular and Molecular Nutrition Science Laboratory. Dickson and Harris Teeter Co., Charlotte, NC. 7/96-6/01. \$200,000. (Co-PI with P. Sullivan & S. Larson)

Children's Healthy Life Skills Initiative. CDC, Atlanta, GA. 8/01-7/02. \$278,000. (B. Gruchow- PI) (Co-PI's M. McIntosh, J. Kimbrough).

Get Walking Greensboro: Phase I. Moses Cone/Wesley Long Foundation. 12/30/01. \$34,000. (CO-PI with L. Wideman, J. Katula)

UNCF-Merck Graduate Science Dissertation Fellowship. 8/06-7/09. \$52,000. (A. Kennedy, doctoral student)

NIH F31 Predoctoral Fellowship for Minorities. 8/06 – 7/09. \$82,986. (A. Kennedy, doctoral student)

Screening Bioactive Food Ingredients that Attenuate Growth, Differentiation, and/or inflammation Associated with Obesity. 10/07-012-08. The W. K. Kellogg Institute for Food and Marketing. \$50,000. (Ron Morrison, CO-PI)

Predoctoral training grant. Mahidol U., Thailand. Anti-inflammatory mechanisms of mangosteen. 1/1/08-4/30/09. \$37,300 (A. Bumrungpert, doctoral student)

NIH F31 Predoctoral Fellowship for Minorities. 7/09 – 6/11. \$58,000. (K. Martinez, doctoral student; score = 130)

As PI - Internal (\$102,800):

The effects of DHEA on reducing energy efficiency, excess body fat, and chronic disease risk in BHE rats. UNCG New Faculty Grant, Research Council. 12/89 - 6/90. \$2500.

The effects of DHEA on thyroid hormone metabolism in BHE rats. HES Foundation. 12/89-3/90 \$1500.

The antiobesity effects of DHEA on triiodothyronine genesis in rats predisposed to hyperlipidemia and diabetes. NC Institute of Nutrition, Chapel Hill, NC. 3/90 - 6/91. \$4999.

Effects of DHEA treatment on thyroid hormone status in hyperlipemic, diabetic BHE rats. UNCG Faculty Grant. 6/90- 6/91. \$2000.

Developing skills in critical thinking to enhance student performance. UNCG Advancement of Curriculum and Teaching Grant. 5/90 - 12 /90. \$1000.

The antiobesity effects of DHEA via enhanced hepatic peroxisomal activity in BHE rats. HES Foundation. 12/90 - 11/91. \$1000.

Vitamin E and DHEA effects on oxidative stress and oxygen utilization: Implications with exercise. NC Institute of Nutrition, Chapel Hill, NC. 12/90- 6/91. \$5,000.

The effects of DHEA treatment on hepatic mitochondrial, peroxisomal, and microsomal fatty acid oxidation rates. UNCG Research Council Faculty Grant. 6/91- 6/92. \$2500.

Lipogenic effects of weight cycling on hepatocyte metabolism and body composition in prediabetic, lipemic BHE/cdb rats. NC Institute of Nutrition, Chapel Hill, NC. 8/91-6/92. \$5000.

Vitamin E and DHEA effects on oxidative stress and oxygen utilization: Implications with exercise-Continuation. NC Institute of Nutrition, Chapel Hill, NC. 8/91-6/92. \$2500.

Kinetics of DHEA-induced fatty acid oxidation and gene expression in the rat. NC Institute of Nutrition, Chapel Hill, NC. 7/92-6/93. \$5000.

In vitro effects of DHEA and distal metabolites on gene expression in monolayer cultures of hepatocytes. NC Institute of Nutrition, Chapel Hill, NC. 7/92- 6/93. \$5000.

UNCG Faculty and Instructional Mini-grant. 12/92. \$300.

Effects of the type and amount of fat on antioxidant status and oxidative damage in female rats NC Institute of Nutrition, Chapel Hill, NC. 7/93- 6/94. \$10,000.

Impact of DHEA on immunity in young and old rats. NC Institute of Nutrition, Chapel Hill, NC. 7/94-6/95. \$10,000.

The health benefits of high-oleic safflower oil. HES Foundation. 12/94 - 6/95. \$1000.

Mechanism of action of two antiobesity drugs in adipocytes isolated from obese subjects with diabetes. HES Foundation. 11/96-10/97. \$1,000.

Can dehydroepiandrosterone delay or reverse diet-induced obesity. NC Institute of Nutrition, Chapel Hill, NC. 7/95-6/96. \$10,000.

Impact of DHEAS on adipocyte growth and metabolism. NC Institute of Nutrition, Chapel Hill, NC. 7/96-6/97. \$5,500.

Attenuation of human adipocyte growth by DHEA. NC Institute of Nutrition, Chapel Hill, NC. 7/97-6/98. \$9,000

Antiadipogenic actions of DHEA. NC Institute of Nutrition, Chapel Hill, NC. 7/98-6/99. \$5,000

Antiadipogenic actions of conjugated linoleic acid. UNCG Faculty Grant, Research Council. 5/99 - 6/00. \$3,000.

Does CLA decrease the triglyceride content of human adipocytes by decreasing lipogenesis or by increasing lipolysis? UNCG Faculty Grant, Research Council. 5/01 - 6/02. \$5,000.

Reducing sugar consumption and obesity in Guilford Co. Schools. NC Institute of Nutrition. 3/1/02. \$5,000.

Learning new research tool skills at the University of Southern Denmark. The UNCG Kohler Fund. 5/04. \$1,000.

As CO-PI- Internal (\$5,600):

Childhood obesity prevention in Guilford Co. Assessment of physical activity and nutrition education status in preschool and afterschool programs. HES Found. 11/99-6/00. \$5,600. Co-PI (50%) with B. Gruchow

As PI- ARS Funding (\$97,500 + summer salary since 1989):

Nutritional/hormonal regulation of energy balance in the rat. North Carolina Agricultural Research Service. 1/90 - 9/93. \$22,500 + summer salary.

Hormonal regulation of energy metabolism and immunity in rodents. North Carolina Agricultural Research Service. 10/93- 9/98. \$30,000 + summer salary.

Influence of dietary lipids on the growth of human preadipocytes. North Carolina Agricultural Research Service. 9/98-8/04. \$20,000 + summer salary.

Antiobesity mechanism of trans-10, cis-12 conjugated linoleic acid in human adipocytes. 9/04-8/08. \$10,000 + summer salary.

Polyphenol-Rich Extract from Grapes inhibits inflammation and insulin resistance in Human Adipocytes. 10/08 – 9/13. \$15,000 + summer salary.

As PI- Pending Grants- External (\$238,000):

Determine the Role of CaMKII, JNK, and PLC in 10,12 CLA-Mediated Inflammation, Insulin resistance, and Delipidation in Human Adipocytes. NIH Administrative Supplement. 5/09- 5/11. \$238,000.

As Co-Investigator/Collaborator- Pending Grants- External (\$1,032,000):

Predicting persistent fatigue in older adults post-myocardial infarction. Co-Investigator (12.5%), P. Crane PI. NIH \$1,000,000.

NC Functional Foods Graduate Research Institute. 9/09-12/10. \$32,000. USDA AFRI. (Collaborator-UNCG portion). J. Odle, PI.

J. Gifts in Kind (\$62,536)

- Gift from Sigma Chemical Co., St. Louis, MO. 7/92. Reagents = \$2,658.
- Gift from Kraft General Foods. 8/93. Stainless steel rodents cages + accessories = \$58,678.
- Gift from Lab Products, Maywood, NJ. 1/94. 300 stainless-steel sipper tubes = \$1,200.

K. References

1. Former chair

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