

# Katherine Heimburger Ingram, Ph.D.

Postdoctoral Scholar

University of Alabama at Birmingham

Department of Nutrition Sciences

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## EDUCATION

B.S.	Sport Management, 1993	Tulane University
M.S.	Exercise Physiology, 1998	University of Nevada, Las Vegas
Ph.D.	Exercise Phys./ Nutrition minor, 2009	Georgia State University
Postdoctoral	Biostatistics, 2009-2011	University of Alabama at Birmingham
Postdoctoral	Nutrition Sciences, 2011- present	University of Alabama at Birmingham

## ACADEMIC POSITIONS

### POST-DOCTORAL FELLOW

Department of Nutrition Sciences, University of Alabama at Birmingham, October 2011- present

- Research includes metabolomic profiling of insulin resistant and diabetic patients; examination of surrogate measures of insulin resistance; lipid peroxidation in insulin resistance
- Training in major center grant renewal for UAB Diabetes Research and Training Center
- Mentors: W. Timothy Garvey, David B. Allison

Department of Biostatistics, University of Alabama at Birmingham, October 2009 – 2011

- Funded by competitive Nutrition and Obesity Research Center T32 grant
- Research included a meta-analysis of design issues in obesity clinical trials; body fat distribution and insulin resistance in women during weight gain; and a photographic method for assessing human body composition
- Training in clinical trials, statistics, grant writing, and writing and reviewing manuscripts
- Mentors: Olivia T. Affuso, David B. Allison, Gary Cutter

### TEACHING/ RESEARCH ASSISTANT

Department of Kinesiology and Health, Georgia State University, June 2004 – December 2006

- Taught regular exercise physiology lab courses in the Human Performance Laboratory
- Frequent guest lecturer for undergraduate and graduate exercise physiology courses
- Researched obesity, inactivity, and diabetes; intramyocellular lipids and oxidative stress within skeletal muscle tissue; exercise intervention in obesity and diabetes; and anthropometric assessment techniques. *Recipient of Gatorade Sport Science Institute student research grant*

Department of Nutrition Sciences, UAB, Birmingham, Alabama, January 2007 – October 2009

- Visiting doctoral student in the Comprehensive Diabetes Research and Training Center
- Investigated relationships among fat distribution and insulin resistance in overweight and obese sedentary adults

### INSTRUCTOR

Department of Exercise Science and Sports Medicine, Samford University, Birmingham, Fall 2008

Taught health promotion course emphasizing fitness and nutrition for undergraduates

#### INVITED LECTURER

Emory University, Evenings at Emory program, Atlanta, Georgia, 2002-2003  
Community education courses on exercise benefits and program design

#### INVITED LECTURER

Heritage College, Medical Assistant program, Las Vegas, Nevada, 1998  
Course on medical benefits of exercise

#### TEACHING/ RESEARCH ASSISTANT

Department of Kinesiology and Health, University of Nevada- Las Vegas, 1994–1996

- Taught undergraduate courses in the Department of Kinesiology
- Assistant for research studies on the effects of fitness on aging and disease

#### NON-ACADEMIC PROFESSIONAL EXPERIENCE

##### WELLNESS/ FITNESS CENTER COORDINATOR

Atlanta Federal Fitness Center, Federal Occupational Health, 2000–2004

- Provided group lectures and individual counseling on lifestyle and wellness topics
- Supervised, directed, and mentored staff and interns
- Designed incentive programs to enhance member motivation and participation in the center
- Created and administered fitness assessment batteries
- Developed marketing strategies to recruit members
- Received Excellent Achievement Award for outstanding member support

##### PERSONAL TRAINER EDUCATOR

National Aerobics and Fitness Trainers Association, Las Vegas, Nevada, 2000

- Taught courses on anatomy/physiology, kinesiology, exercise testing/prescription, strength conditioning, working with special populations, and more, for training fitness professionals
- Provider for ACE (American Council on Exercise) and AFAA

##### EXERCISE PHYSIOLOGIST

Canyon Ranch Spa Club, Las Vegas, Nevada, 1999–2000

- Provided group lectures and individual counseling on exercise and lifestyle topics
- Trained and mentored fitness staff in evaluating exercise needs of clientele
- Created and administered fitness assessment batteries for Canyon Ranch clientele

##### EXERCISE PHYSIOLOGIST

Health and Wellness Center, Nellis Air Force Base, 1997–2000

- Provided counseling, training, and exercise prescriptions for healthy and diseased individuals
- Assessed fitness status of Air Force personnel, dependents, and retirees
- Provided group lectures on fitness, weight-loss, and nutrition for Air Force personnel
- Launched and led “PACE: People with Arthritis Can Exercise” program

##### GROUP EXERCISE LEADER (*partial list*)

YMCA Mountain Brook, Birmingham, Alabama, 2008 – 2009

Health and Wellness Center, Nellis Air Force Base, Nevada, 1998–2000

Program for individuals with arthritis

Canyon Ranch Spa Club, Las Vegas, Nevada, 1999 – 2000

The Health Connection, Columbia, Missouri, 1993 – 1994

Program for patients with osteoporosis and arthritis

Boone Hospital Cardiac Rehabilitation Center, Columbia, Missouri, summers 1990–1994

Program for cardiac rehab patients

## SERVICE

### COMMITTEE MEMBERSHIPS

UAB Postdoctoral Association, Executive Board member, 2011 - present  
UAB Nutrition and Obesity Research Center, postdoctoral member, 2010 - present  
UAB School of Public Health Diversity Committee, 2010-2011  
Alabama Obesity Initiative, member, 2010 – present

### GRANT REVIEWER

NSF Division of Integrative Organismal Systems-- Processes, Structures and Integrity (PSI) Program, October 2011

## PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science, member 2011 - present  
American College of Sports Medicine, member 1992- present  
American Physiological Society, member 2007 – present  
American Society for Nutritional Sciences, member 2005 – present  
The Obesity Society (formerly NAASO), member 2006 – present  
American Diabetes Association, member 2007 – present

## SCHOLASTIC AWARDS/ RECOGNITION

UAB Postdoctoral Research Day, 2<sup>nd</sup> Place award, February 2011  
UAB Office of Postdoctoral Education Career Development Award Recipient, January 2011  
Global Obesity Summit “Hot Topics” and Travel Award Recipient, November 2010  
National Scholars Honor Society, 2008 - 2009  
Golden Key International Honour Society, 2007-2009  
Student Research Award, Gatorade Sport Science Institute, 2007  
Excellent Achievement Award, Federal Occupational Health, 2001  
Who's Who in America's Colleges and Universities Award, 2008, 2009, 1992, 1993  
National Dean's List, 1996  
Dean's List, Tulane University, New Orleans, Louisiana 1992 - 1993  
Dean's List, Trinity University, San Antonio, Texas, 1990-1991

## PUBLICATIONS

**KH Ingram**, H Hill, D Moellering, C Lara-Castro, B Hill, B Newcomer, LJ Brandon, C Ingalls, M Penumetcha, J Rupp, WT Garvey. Skeletal muscle lipid peroxidation in humans. *Under review at JCEM*.

**KH Ingram**, C Lara-Castro, BA Gower, R Makowsky, DB Allison, BR Newcomer, AJ Munoz, TM Beasley, J Clunk Lawrence, R Lopez-Ben, D Rigsby, WT Garvey. Intramyocellular lipid, insulin resistance, and adiposity: Differential relationships in European Americans and African Americans. *Obesity* (2011) 19; 7: 1469-1475.

**Ingram, Katherine H.** Skeletal muscle lipid peroxidation and its relationships with intramyocellular lipids and insulin sensitivity in obese subjects. *Kinesiology Dissertations*. Paper 6, 2009.

## PROJECTS UNDERWAY

**KH Ingram**, KA Kaiser, O Affuso, TL Cox, F Abbas, TM Beasley, G Cutter, DB Allison. Predictors of dropout rates in recent obesity RCTs. *Manuscript in preparation.*

KH Ingram and Gary Cutter. Nutrition Monitoring and Research Studies: Observational Studies. Book chapter for *Handbook of Nutrition and Food*. *In preparation.*

KA Kaiser, O Affuso, **KH Ingram**, TL Cox, F Abbas, G Cutter, DB Allison. Is Intervention Intensity Related to Participant Dropout Rates in Obesity Randomized Controlled Trials? *Manuscript in preparation.*

O Affuso, TL Cox, K Kaiser, **K Ingram**, H Robertson, F Abbas, DB Allison. Reporting quality of pediatric obesity randomized controlled trials. *Manuscript in preparation.*

KH Ingram, PB Higgins, W Granger, J Alvarez, J Fernandez, BA Gower. Meal-derived indices of insulin sensitivity and secretion are useful for assessing metabolic risk in children. *Manuscript in preparation.*

KH Ingram, R Makowsky, G Hunter, B Gower. Relationships among IAAT, SAAT, VO<sub>2</sub>max, insulin sensitivity, and ethnicity in obesity-prone women after weight loss and two years of regain. *Manuscript in preparation.*

KH Ingram, DB Allison, O Thomas Affuso. Pilot: A photographic method for human body composition assessment. *Analyzing final data for multiple publications.*

KH Ingram, WT Garvey. Metabolomics of insulin resistant and diabetic patients. *Analyzing data for publication.*

## PUBLISHED ABSTRACTS

**KH Ingram**, B Gower, G Hunter. Parity and race influence relationships among fitness, central fat accumulation, and insulin sensitivity. *Submitted to present at National ACSM meeting, 2012.*

**KH Ingram**, KA Kaiser, O Affuso, TL Cox, F Abbas, TM Beasley, G Cutter, DB Allison. Predictors of dropout rates in recent obesity RCTs. Obesity Society annual meeting, 2011.

KA Kaiser, O Affuso, **KH Ingram**, TL Cox, F Abbas, G Cutter, DB Allison. Is Intervention Intensity Related to Participant Dropout Rates in Obesity Randomized Controlled Trials? Obesity Society annual meeting, 2011.

O Affuso, TL Cox, K Kaiser, **K Ingram**, H Robertson, F Abbas, DB Allison. Reporting quality of pediatric obesity randomized controlled trials - a preliminary analysis. Obesity Society annual meeting, 2011.

**KH Ingram**, R Makowsky, G Hunter, B Gower. Change in insulin sensitivity with weight gain is determined by fatness better than by fitness. *Med Sci Sports Exerc*; 43 (5 Suppl), 2011. Poster presentation at National ACSM annual meeting, June 2011.

Kaiser KA, Affuso O, **Ingram KH**, Cox TL, Abbas F & Allison DB. Is intervention intensity related to dropout rates in diet/supplement randomized controlled trials (RCTs)? *Obesity Reviews*, 12 (Suppl. 1): 21-37, 2011. Presented at the European Congress on Obesity, Istanbul.

GB Chen, **KH Ingram**, G de los Campos, N Yi, XY Lou, D Pomp and DB Allison. A two-step modeling strategy for testing and estimating genetic susceptibility to the ill-effects of adiposity:

Illustration in an outbred F2 mice population. *Int J Obesity*: S2: 21, 2011. Presented at 9th International Symposium on In Vivo Body Composition Studies, Hangzhou, China, May 2011.

**KH Ingram**, LJ Brandon, CP Ingalls, JC Rupp, M Penumetcha, WT Garvey. Skeletal muscle HNE is related to insulin resistance in sedentary individuals. *FASEB J.*; 24 (Suppl), 2010. Poster presentation at Experimental Biology, May 2010.

Affuso O, Kaiser K, Cox TL, Robertson H, **Ingram K** & Allison DB. A preliminary analysis of the association of run-in periods with drop-out rates and weight loss in obesity randomized controlled trials. *Obesity Reviews*, 11 (Suppl. 1): 288, 2010. Presented at the European Congress on Obesity, Stockholm, 2010.

Cox TL, Affuso O, Kaiser K, **Ingram K**, Robertson H & Allison DB. Reporting quality of obesity randomized controlled trials: A preliminary review. *Obesity Reviews*, 11 (Suppl. 1): 335, 2010. Presented at the European Congress on Obesity, Stockholm, 2010.

**K Heimburger**, C Lara-Castro, B Newcomer, A Shiflett, D Rigsby, WT Garvey. Racial differences in intramyocellular lipids and their relationships to metabolic traits. *Obesity*; 15 (9 Suppl), 2007. Poster presentation at 2007 annual meeting Obesity Society.

**KD Heimburger** and LJ Brandon. Is BMI a good predictor of fatness? *Med Sci Sports Exerc*; 39 (5 Suppl), 2007. Poster presentation at 2007 National ACSM annual meeting.

LJ Brandon and **K Heimburger**. Comparison of the relationship of BMI, percent fat and skinfolds with blood pressure. *Med Sci Sports Exerc*; 39 (5 Suppl) S374-S375, 2007. Poster presentation at 2007 National ACSM annual meeting.

JC Rupp, MS Green, BT Corona, **KD Heimburger**, PR Pullen, AS Everest. Physiological predictors of 10 kilometer running performance. *Med Sci Sports Exerc*; 39 (5 Suppl), 2007. Poster presentation at 2007 National ACSM annual meeting.

**K Heimburger** and V Scales. A ten-week team challenge improves fitness scores in a corporate setting. Poster presentation at 2006 ACSM annual meeting, Southeast chapter.

#### ORAL PRESENTATIONS

**KH Ingram**. Skeletal muscle HNE is elevated in type 2 diabetic patients. UAB Postdoctoral Research Day oral presentation. February 2011. *Awarded 2<sup>nd</sup> place among presentations.*

**K Heimburger Ingram**, R Makowsky, G Hunter, B Gower. Change in insulin sensitivity with weight gain is determined by fatness better than by fitness. Selected for “Hot Topics” oral presentation, Global Obesity Summit, November 2010. *Recipient of Travel Award.*

**K Heimburger**, K Manning, J Owen, and LJ Brandon. Comparison of body composition estimated from DXA and skinfolds with BMI. Oral presentation at 2007 ACSM annual meeting, Southeast chapter.

## GRANTSMANSHIP

2011 K01 Mentored Scientist Award (*under review*)

- NIH NIDDK, October 2011
- Proposal to study ethnic differences in physical activity and abdominal adiposity during pregnancy and their impact on (1) the risk for gestational diabetes and (2) infant outcome

2011 Early Career Grant

- The Obesity Society, June 2011
- Proposal for pilot funding on ethnic differences in adipose tissue distribution and gestational diabetes-- *did not receive funding*

2011 Postdoctoral Career Enhancement Award

- Office of Postdoctoral Education, University of Alabama at Birmingham, January 2011
- \$1500 awarded to fund a visit to the laboratory of Sonia Caprio, MD at Yale University to learn new skills in pediatric obesity/diabetes research

2010 Travel Award

- Global Obesity Summit, Jackson, Mississippi, November 2010
- \$1000 awarded to present research at the Global Obesity Summit
- Presentation selected for “Hot Topics” seminar

2007 Student Research Award

- Gatorade Sport Science Institute, July 2007
- \$1500 awarded for dissertation research support

## SPECIALTY CERTIFICATIONS (*partial list*)

American College of Sports Medicine, Health / Fitness Specialist, since 1992

American Council on Exercise, Group Exercise Instructor, since 1990

CPR, AED, and Emergency Care, American Heart Association, since 1990

Perinatal Exercise, Moms in Motion, Sara’s City Workout, in progress

People with Arthritis Can Exercise (PACE), Arthritis Foundation, since 1998

Yoga instructor, YogaFit, since 2000

## COMMUNITY INVOLVEMENT

Intown Community Church, Atlanta, Georgia, International Missions, Summer 2006

Shelter for battered women in Cuzco, Peru

Junior League of Atlanta, Georgia, Public Affairs Committee, 2001-2004

State legislation concerning the welfare of women and children in Georgia

Habitat for Humanity, Atlanta Chapter, Summer 2001

Housing for needy families in a low-income area in Atlanta

American Heart Association, Green Valley / Henderson Division, 1994-1997

Secretary/ Treasurer, Board of Directors

Community educational events and fundraisers

Camp Hickory Hill, Columbia, Missouri, Summer 1994

Summer camp for educating children with diabetes, Volunteer

## REFERENCES

- W Timothy Garvey, MD, (205) 934-6103, [garveyt@uab.edu](mailto:garveyt@uab.edu)  
Butterworth Professor and Chair, Department of Nutrition Sciences, UAB  
Director, UAB Diabetes Research and Training Center  
Current mentor and previous doctoral advisory committee member, 2007 – present
- Olivia T. Affuso, PhD, (205) 975-7662, [othomas@ms.soph.uab.edu](mailto:othomas@ms.soph.uab.edu)  
Associate Professor, Department of Epidemiology  
University of Alabama at Birmingham  
Postdoctoral mentor, 2009 - 2011
- Gary R. Cutter, Ph.D., (205) 975-5048, [cutterg@prodigy.net](mailto:cutterg@prodigy.net)  
Professor of Biostatistics  
Head, Section on Research Methods and Clinical Trials  
UAB School of Public Health  
Postdoctoral advisory committee member, 2009-2011
- Christopher Ingalls, PhD, FACSM, (404) 413 8377, [cingalls@gsu.edu](mailto:cingalls@gsu.edu)  
Associate Professor, Department of Kinesiology and Health  
Georgia State University  
Doctoral advisory committee member, 2004 – 2009
- Meera Penumetcha, PhD, RD, (404) 413-1240, [mpenumetcha@gsu.edu](mailto:mpenumetcha@gsu.edu)  
Assistant Professor, Division of Nutrition  
Georgia State University  
Doctoral advisory committee member, 2005-2009
- Lawrence A. Golding, PhD, FACSM, (702) 895-3766, [LAGolding@aol.com](mailto:LAGolding@aol.com)  
Distinguished Professor; Director, Exercise Physiology Lab  
University of Nevada- Las Vegas  
Mentor, 1994 - 1998