

Curriculum Vitae

Molly S. Bray, PhD

Departments of Nutritional Sciences
University of Texas at Austin
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Education

- BS in Kinesiology, 1989, University of Houston
- MEd in Exercise Physiology, 1991, University of Houston, "Caltrac Validity for Estimating Energy Expenditure with Children," Advisor: Dr. James Morrow, Jr.
- PhD in Human and Molecular Genetics, 1998, University of Texas Graduate School of Biomedical Sciences, "Candidate Genes for Obesity in Mexican Americans from Starr County, Texas," Advisor: Dr. Craig Hanis
- Postdoctoral Fellow, 1998-2000, University of Texas Institute of Molecular Medicine, 1998-1999, Advisor: Dr. Eric Boerwinkle

Academic Appointments

- 1989-1993 Editorial Assistant, *Research Quarterly for Exercise and Sport*, University of Houston, Houston, TX
- 1990-1993 Teaching Fellow, University of Houston, Houston, TX
- 1993-1998 Graduate Research Assistant, Univ of Texas Grad School of Biomed Sci, Houston, TX
- 1993-1994 Instructor, Rice University, Houston, TX
- 1998-1999 Postdoctoral Fellow, Institute of Molecular Medicine, Univ of Tex-Houston HSC, Houston, TX
- 1999-2000 Research Scientist, Institute of Molecular Medicine, Univ of Tex-Houston HSC, Houston, TX
- 2000-2004 Assistant Professor, School of Public Health, Univ of Texas-Houston HSC, Houston, TX
- 2001-2005 Adjunct Professor, U.T. Grad School of Biomed Sci, Univ of Tex-Houston HSC, Houston, TX
- 2001-present Adjunct Professor, University of Houston, Houston, TX
- 2004-2009 Associate Professor, Baylor College of Medicine, Houston, TX
- 2009-2013 Professor, University of Alabama at Birmingham, Birmingham, AL
- 2009-2013 Director, Heflin Center for Genomic Science Genomics Core Laboratory, University of Alabama at Birmingham, Birmingham, AL
- 2013-present Adjunct Professor, University of Alabama at Birmingham, Birmingham, AL
- 2103-present Professor and Susan T. Jastrow Human Ecology Chair for Excellence in Nutritional Sciences, University of Texas at Austin, Austin, TX

Honors or Awards

- Schissler Foundation Fellowship - September 1996 to August 1997
- Graduate Achievement Award - Department of Health and Human Performance, University of Houston - 1992

Research Support

Active

R01DK062148-07 (Bray) 6/1/10-5/31/15

NIH/NIDDK

"Training Interventions and Genetics of Exercise Response"

This study is designed to investigate potential genetic factors that influence an individual's response to a 20-week aerobic exercise intervention.

UM1DK072493 (Inge) 4/01/05-03/31/16

NIH/NIDDK

"Teen Longitudinal Assessment of Bariatric Surgery (Teen LABS)"

The purpose of this proposal is to elucidate the benefits and define complications to be expected when bariatric surgery is performed in adolescence compared to the alternative, bariatric surgery in adulthood.

P30CA013148 (Partridge) 4/01/11-3/31/2016

NIH/NCI

"Comprehensive Cancer Center Core Support Grant"

The Cancer Center's research enterprise is organized around seven programs, including three basic science programs and two translational/clinical programs. Dr. Bray serves as the director of the Microarray Shared Facility for the CCC.

P30DK056336 (Bray-Genomics Core) 6/01/2000-5/31/2015

NIH/NIDDK

"UAB Nutrition Obesity Research Center"

The Nutrition Obesity Research Center (NORC) was established to foster a multidisciplinary approach to basic, clinical, and translational research with an emphasis on understanding the metabolic factors, environmental influences, and associated genetic traits underlying nutrition and obesity-related health problems. Dr. Bray serves as the director of the NORC Genomics Core laboratory.

Federal IPA (Bray) 5/15/12-5/14/13

NIH/NCI

"Intergovernmental Personnel Act"

Under this contract, Dr. Bray provides expertise in the areas of obesity, metabolism, genomics, gene-environmental interaction, and nutrition in order to assist in formulating initiatives for the NCI in these areas.

Pending

R01 (M. Bray) 4/1/13-3/31/18

NIH/NIDDK

" Familial and Genetic Components of Early Onset Morbid Obesity "

This study is designed to identify functional variation pre-disposing to extreme, early onset obesity in adolescent bariatric surgery patients and their families.

R01 (M. Bray) 4/1/13-3/31/18

NIH/NIDDK

"Timing of Food Intake and Energy Balance"

This study is designed to examine the role of timing of macronutrient intake in energy balance and the development of adiposity.

Completed

R01HL074259-08 (Young) 4/1/08-3/31/13

NIH/NHLBI
"Role of the Molecular Circadian Clock within the Heart"

6250-51000-046 (M. Bray) 10/1/05-9/30/09

USDA/ARS
"Childhood Obesity: Regulation of Energy Balance and Body Composition"

R01 (P. Bray, no relation) 4/1/07-3/31/12

NIH/NHLBI
"Mapping loci for platelet reactivity"

R01EY018571-01 (Chen) 12/01/07-11/30/11

NIH-NIE
"Genetics of Early Onset Retinal Diseases"

R01DK062148-01A1 (M. Bray) 8/1/03-7/31/08

NIH/NIDDK
"Genetic Factors in Physical Activity and Obesity"

Kraft Foods (M. Bray) 8/1/07-9/31/08

"The Development of Morning and Evening Foods"

R01HL074377-01 (North) 7/1/03-6/30/06

NIH/NHLBI
"Gene-by-smoking interaction and risk of atherosclerosis"

UR6/CCU617218-01 (M. Bray) 9/30/99-9/29/03

Centers for Disease Control
"Gene-Environment Interaction in Cardiovascular Disease"

QXI30353 (Zeldin) 9/1/03-8/31/04

NIH/NIEHS
"Role of Cytochrome P450-Derived Eicosanoids in Endothelial Dysfunction and Cardiovascular Disease"

R01HL073366-01 (M. Bray) 7/1/03-6/30/04

NIH/NHLBI
"Gene-environment Interaction in Complex Disease"

National Scientific Participation

Journal reviewer

American Journal of Epidemiology
Arteriosclerosis, Thrombosis, and Vascular Biology
Circulation
Human Molecular Genetics
Human Mutation
JAMA
Journal of Applied Physiology
Nature Pharmacogenomics
Physiological Genomics
Genetics in Medicine
Diabetes
Obesity Research
Pediatric Nephrology

Pediatrics
 Human Genomics
 Cardiology
 Journal of Clinical Endocrinology and Metabolism
 Metabolism
 Journal of Clinical Investigation
 International Journal of Obesity
 Journal of Clinical Nutrition
 Biomed Central Genetics
 British Journal of Nutrition

Review panels

AHA Western Consortium Review Panel Study Section, 2002-2006
 NIH Study Section Geriatrics and Rehabilitative Medicine, April 2004
 NIH Special Review Panel, The Insulin Resistance Atherosclerosis Study (IRAS),
 Competing Renewal, July 2004.
 NIH Study Section, Genetics of Health and Disease, April 2006
 NIH Study Section - Neurological, Aging and Musculoskeletal Epidemiology Study
 Section, June 2008
 NIH Study Section - Neurological, Aging and Musculoskeletal Epidemiology Study
 Section, Feb 2009
 Framingham Heart Study DNA Committee, July 2008 - present
 NIH Study Section - Genetics of Human Disease – June 2009
 NIH Challenge Grant Review - June 2009
 NIH Study Section – Clinical and Integrative Diabetes and Obesity – October 2009
 NIH Study Section – Behavioral Genetics and Epidemiology – June 2010
 NIH Study Section – Clinical and Integrative Diabetes and Obesity – February 2011
 NIH Study Section – Genetics of Human Disease – Sept 2010 to present
 ARS/USDA National Program Panel 107 – June 2014

Professional Societies

North American Association for the Study of Obesity
 American Diabetes Association
 American College of Sports Medicine

Invited Lectures and Presentations

DNA 2000, Boston, MA “SNP Genotyping by MALDI-TOF Mass Spectrometry”	June, 2000
48 th Ann Conf on Mass Spectrometry and Allied Topics, Long Beach, CA “High throughput genotyping with MALDI-TOF Mass Spectrometry”	July, 2000
3 rd Natl Conference on Genetics and Public Health, Ann Arbor, MI “Genetic Factors in Obesity: Public Health Impact and Implications”	Sept, 2000
2 nd Natl Conference on Sex and Gene Expression, Greensboro, NC “Interaction of Genotype and Environment in Complex Disease”	March, 2001
Experimental Biology 2001, Orlando, FL “The Role of Genetics in Exercise Physiology”	April, 2001
V Congreso Argentino de Obesidad, Buenos Aires, Argentina “Genetics, Nutrition and Obesity”	June, 2001

V Congreso Argentino de Obesidad, Buenos Aires, Argentina "Genetic Mechanisms in Response to Functional Foods"	June, 2001
Texas Southern University Seminar Series, Houston, TX "Analyzing DNA Sequence Variation Using Mass Spectrometry"	November, 2001
Centers for Disease Control Genomics Summit, Atlanta, GA "The Genetics of Human Obesity"	January, 2002
University of North Carolina Molecular Genetics Seminar Series "Whole Genome Approaches to Disease Gene Identification"	February, 2002
Centers for Disease Control and Prevention, Atlanta, GA "Obesity in Adults and Children: How Important Are Genes?"	May, 2002
Sequenom Genomics Seminar, San Diego, CA "Optimizing the Sequenom System for High Throughput"	May, 2002
ATKL Symposium, Vienna, Austria "Genetic predictors of performance and exercise response: The role of exercise"	December, 2002
Centers for Disease Control and Prevention, Atlanta, GA "Genetics of Response to Obesity Treatments"	September, 2003
University of Texas Pediatric Grand Rounds, Houston, TX "The Role of Genetic Variation in Obesity and Treatment"	January, 2004
National Birth Defect Prevention Symposium, Atlanta, GA "Genotyping Technologies for the New Millenium"	April, 2004
Center for Research on Environmental Disease Symposium, Austin, TX "The Role of Exercise in Human Cancers"	May, 2004
Mars Nutrition and Research Council Meeting, Houston, TX "The Role of Genetic Variation in Metabolic Syndrome"	January 2005
NIDDK Digestive Diseases Center, Houston, TX "The Role of Genetic Variation in Obesity and Response to Treatment"	January, 2005
Illumina, Inc. Scientific Symposium, San Diego, CA "Mining the Genome for Human Obesity Genes"	February, 2005
28th Annual Pediatric Postgraduate Symposium, Houston, TX "Mining the Human Genome for Obesity Genes"	March, 2006
Experimental Biology 2006, San Francisco, CA "Genetic and Dietary Influences on Obesity"	April, 2006
CDC International Congress on Physical Activity, Atlanta, GA "Genetic Considerations for Physical Activity and Public Health"	April, 2006
Illumina Seminar Series, Houston, TX "Genetic Discovery in Obesity using the Illumina BeadStation"	June, 2006

<p> Illumina, Inc. Scientific Symposium, San Diego, CA "Using the Illumina Gene Expression Platform to Identify Genes Directly Regulated by the Intrinsic Circadian Clock within the Cardiomyocyte" </p>	<p> March, 2007 </p>
<p> American Diabetes Association, Chicago, IL "Genetics of Exercise-Induced Changes in Body Composition - Implications for the Prevention of Cardiovascular and Other Diseases" </p>	<p> July, 2007 </p>
<p> Gene-Nutrition and Gene-Physical Activity Interactions in the Etiology of Obesity, Special NCI Workshop, Bethesda, MD "Implications of Gene-Behavior Interactions: Prevention and Intervention in Obesity" </p>	<p> September 2007 </p>
<p> NHLBI Workshop on Circadian-Coupled Cellular Function and Disease in Heart, Lung, and Blood Issues, Bethesda, MD "Genetic Links between Circadian Rhythms and Obesity" </p>	<p> September 2007 </p>
<p> The Obesity Society (North American Association for the Study of Obesity), New Orleans, LA "The Interaction between Exercise and Genes in the Development of Obesity" </p>	<p> October 2007 </p>
<p> 60th Annual Symposium on Cancer Research, Houston, TX "Genes, Obesity, and Cancer" </p>	<p> October 2007 </p>
<p> American Heart Association Scientific Sessions 2007 "The Genetics of Obesity", Orlando, FL </p>	<p> November 2007 </p>
<p> Gastroenterology Scientific Seminar Cincinnati Children's Hospital Medical Center, Cincinnati, OH "New Approaches to Gene Discovery in Obesity" </p>	<p> January 2008 </p>
<p> NIDDK Clinical Obesity Research Panel (CORP), Bethesda, MD "Genes and Physical Activity in the Development of Obesity" </p>	<p> February 2008 </p>
<p> Obesity Seminar Series, University of Alabama at Birmingham, AL "New Approaches to Gene Discovery in Obesity" </p>	<p> May 2008 </p>
<p> American Dietetic Association, Chicago, IL "Interaction between Exercise and Genes in the Development of Obesity" </p>	<p> Oct 2008 </p>
<p> The Obesity Society, Phoenix, AZ "Genetic Predictors of Exercise Adherence" </p>	<p> Oct 2008 </p>
<p> Pennington Biomedical Research Center, Baton Rouge, LA "Unraveling the Complexity of Human Obesity" </p>	<p> Dec 2008 </p>
<p> USC Childhood Obesity Research Center Symposium, Los Angeles, CA "Genetic Factors in Physical Activity: Is Exercise Genetic?" </p>	<p> Apr 2009 </p>
<p> 2009 Pennington Scientific Symposium, Baton Rouge, LA "Genetic Variation in Circadian Genes: Relation to Obesity and Adipocyte Biology" </p>	<p> Apr 2009 </p>
<p> University of Texas Health Science Center Educator Conference, Austin, TX "The Genetics of Obesity and Response to Treatment" </p>	<p> June 2009 </p>
<p> Midwest Student Biomedical Research Forum, University of Nebraska, Omaha, NB "Circadian Rhythms, Genes and the Underpinnings of Obesity" </p>	<p> Feb 2010 </p>
<p> University of Illinois at Urbana-Champaign, Nutritional Sciences Seminar "The Genetics of Obesity and Response to Treatment" </p>	<p> March 2010 </p>
<p> University of Texas MD Anderson Pediatric Cancer Symposium, Houston, TX "The Genetic Basis of Obesity in Childhood" </p>	<p> April 2010 </p>
<p> Texas Lyceum Great Debate Series: Beyond Health Care Reform, Houston, TX </p>	<p> April 2010 </p>

“The Role of Legislation in Weight Control”	
The Biologists Workshop: Obesity: The Gene-Environment Interaction and its Implications, Edinburgh, UK “Genes for Physical Activity”	May 2010
Hudson Alpha Genetics Retreat, Huntsville, AL “The Role of Genes in Physical Activity”	September 2010
The Obesity Society 60 th Anniversary of the NIDDK Symposium, San Diego, CA “What Drives Us to be Physically Active? The Role of Genes”	October 2010
UAB Comprehensive Cancer Center, Birmingham, AL “Gene-Physical Activity Interaction in Cancer Risk”	January 2011
Vanderbilt University Genetics Seminar Series, Nashville, TN “How Genes Drive Us to be Physically Active”	February 2011
Experimental Biology 2011, Washington, DC “The Role of Cell-Specific Clocks in Metabolism and Disease”	April 2011
American Dietetic Association Food Nutrition Conference, San Deigo, CA “Genes, Environment, and Chronic Disease: What is the Relationship?”	September 2011
Southeast Lipid Research Conference, Pine Mountain, GA “Clocks and Adipose Function”	October 2011
Illinois Transdisciplinary Prevention Program Conference, Champaign, IL “Obesity: A Multidisciplinary Approach for a Complex Disease”	October 2011
Cleveland Clinic Obesity Summit, Cleveland, OH “Genes, the Environment, and Exercise Response and Adherence”	October 2011
Centers for Disease Control and Prevention, Atlanta, GA “How Genes and Environments Influence Health Behaviors: Complex Problems Require Creative Solutions”	November 2011
UAB Comprehensive Cancer Center Seminar Series “Genomic Alterations Associated with Obesity and Exercise”	March 2012
UAB Nutrition Obesity Research Center Seminar Series “Genomics Resources for Gene Discovery in Obesity”	April 2012
International Society of Behavioral Nutrition and Physical Activity Annual Meeting “The Influence of Genes and Environments on Health Behaviors”	May 2012
Dell Pediatric Research Institute Seminar Series, Austin, TX “Obesity: A Multidisciplinary Approach for a Complex Disease”	May 2012
Florida Dietetic Association Annual Meeting, Orlando, FL “How Genes and Environments Influence Health Behaviors: Complex Problems Require Multidisciplinary Approaches”	July 2012
FASEB Summer Conference, Snowmass, CO “Genetic Factors in Physical Activity and Health Behaviors”	August 2012
American Heart Association, Los Angeles, CA “Genetics of Circadian Rhythms and Obesity”	November 2012
UAB Epigenetics Symposium, Birmingham, AL “DNA Methylation and Chronic Exercise Training”	December 2012
Southeast Chapter of the American College of Sports Medicine “The Genetic Underpinnings of Health Behaviors”	February 2013

University of Kentucky Seminar Series, Lexington, KY “How Genes and Environments Interact to Influence Health Behaviors”	March 2013
University of Texas Nutrition Institute, Austin, TX “The Genetics of Sticking with Diet and Exercise Goals”	June 2013
NIH/NCI Workshop: Genes, Behaviors and Response to Weight Loss Interventions “The Genetics of Physical Activity and Exercise Adherence”	May 2014
American College of Sports Medicine Annual Meeting, Orlando, FL “The Intergomics of Overweight and Obesity”	May 2014
University of Texas Nutrition Institute, Austin, TX “How Genes Influence Health Behavior”	June 2014

Publications

Full papers published in refereed journals

1. **Bray MS**, Morrow Jr. JR, Pivarnik JM, Bricker JT (1992) Caltrac validity for estimating energy expenditure with children. *Ped Exerc Sci* 4:166-179.
2. **Bray MS**, Wong WW, Morrow Jr. JR, Butte NF, Pivarnik JM (1994) Caltrac versus calorimeter determination of 24-hour energy expenditure in female children and adolescents. *Med Sci Sports Exerc* 26: 1524-1530.
3. Pivarnik JM, **Bray MS**, Hergenroeder AC, Hill RB, Wong WW (1995) Ethnicity affects aerobic fitness in US adolescent girls. *Med Sci Sports Exerc* 27: 1635-1638.
4. Hariharan R, **Bray MS**, Ganim R, Doenst T, Goodwin GW, Taegtmeyer H (1995) Fundamental limitations of [¹⁸F] 2-deoxy-2-fluoro-D-glucose for assessing myocardial glucose uptake. *Circulation* 91: 2435-2444.
5. **Bray MS**, Boerwinkle E, Hanis CL (1996) OB gene not linked to human obesity in Mexican American affected sib pairs from Starr County, Texas. *Hum Genet* 98: 590-595.
6. **Bray MS**, Boerwinkle E, Hanis CL (1999) Linkage analysis of candidate obesity genes among the Mexican American population of Starr County, Texas. *Genet Epidemiol* 16: 397-411.
7. Doenst T, Richwine RT, **Bray MS**, Goodwin GW, Frazier OH, Taegtmeyer H (1999) Insulin improves functional and metabolic recovery of reperfused working rat heart. *Ann Thorac Surg* 67:1682-1688.
8. **Bray MS** (2000) Genomics, Genes, and Environmental Interaction: The Role of Exercise. *J Appl Physiol* 88:788-792.
9. **Bray MS**, Boerwinkle E (2000) The Role of β 2-Adrenergic Receptor Variation in Human Hypertension *Curr Hyperten Rpts* 2:39-43.
10. Li R, Boerwinkle E, Olshan AF, Chambless LE, Pankow JS, Tyroler HA, Bray M, Pittman GS, Bell DA, Heiss G (2000) Glutathione S-transferase genotype as a susceptibility factor in smoking-related coronary heart disease. *Atherosclerosis* 149:451-62.
11. **Bray MS**, Boerwinkle E, Hanis CL (2000) Sequence variation within the neuropeptide Y gene and association with body fat patterning in Mexican Americans. *Obesity Research*, 8:219-226.

12. **Bray MS**, Li L, Turner ST, Kardia SLR, Boerwinkle E (2000) Association and Linkage Analysis of the α -Adducin Gene and Blood Pressure. *Am J Hyperten.* 13:699-703.
13. **Bray MS**, Krushkal J, Li L, Ferrell R, Sing CF, Turner ST, Boerwinkle E (2000) Positional genomic analysis identifies β 2 adrenergic receptor as susceptibility locus to human hypertension. *Circulation* 101:2877-2882.
14. **Bray MS**, Boerwinkle E, Doris P (2001) High-throughput multiplex SNP genotyping with MALDI-TOF mass spectrometry: Practice, problems and promise. *Hum Mut.* 17:296-304.
15. Li R, Folsom AR, Sharrett AR, Couper D, **Bray MS**, Tyroler HA (2001) Interaction of the glutathione S-transferase genes and cigarette smoking in risk of lower extremity arterial disease: the Atherosclerosis Risk in Communities (ARIC) study. *Atherosclerosis* 154:729-738.
16. **Bray MS** (2002) Molecular and Genetic Basis of Obesity. *Sem Plastic Surg.* 16:187-194.
17. Wu X, Cooper R, Borecki I, Hanis C, **Bray M**, Lewis CE, Zhu X, Kan D, Luke A, Curb D (2002) A combined analysis of genome wide linkage scans for BMI from the NHLBI Family Blood Pressure Program. *Am J Hum Genet.* 70:1247-1256.
18. Morrison AC, Ballantyne CM, **Bray MS**, Chambless LE, Sharrett AR, Boerwinkle E (2002) LPL polymorphism predicts stroke risk in men. *Genet Epidemiol.* 22: 233-242.
19. Morrison AC, **Bray MS**, Folsom AR, Boerwinkle E (2002) ADD1 460W allele associated with cardiovascular disease in hypertensive individuals. *Hyperten* 39:1053-1057.
20. Little J, Bradley L, **Bray MS**, Clyne M, Dorman J, Ellsworth DL, Hanson J, Khoury M, Lau J, O'Brien TR, Rothman N, Stroup D, Taioli E, Thomas D, Vainio H, Wacholder S, Weinberg C. (2002) Reporting, appraising, and integrating data on genotype prevalence and gene-disease associations. *Am J Epidemiol.* 2002 Aug 15;156(4):300-10.
21. Kao WHL, Coresh J, Shuldiner AR, Boerwinkle E, **Bray MS**, Brancati FL (2003) Pro12Ala of the peroxisome proliferator activated receptor- γ 2 gene is associated with lower serum insulin levels in non-obese African Americans: The Atherosclerosis Risk in Communities (ARIC) Study. *Diabetes* 52(6):1568-72.
22. Olshan AF, Li R, Pankow JS, **Bray M**, Tyroler HA, Chambless LE, Boerwinkle E, Pittman GS, Bell DA. (2003) Risk of atherosclerosis: interaction of smoking and glutathione S-transferase genes. *Epidemiology.* 4:321-7
23. Miller EA, Pankow JS, Millikan RC, **Bray MS**, Ballantyne CM, Bell DA, Heiss G, Li R. (2003) Glutathione-S-transferase genotypes, smoking, and their association with markers of inflammation, hemostasis, and endothelial function: the atherosclerosis risk in communities (ARIC) study. *Atherosclerosis.* 171:265-72.
24. **Bray MS**, Doris PA (2004) Genotyping by mass spectrometry. *Genet Eng* 25:1-14.
25. Heck AL, Barroso CS, Callie ME, **Bray MS** (2004) Gene-nutrition interaction in human performance and exercise response. *Nutrition.* 20:598-602.
26. Stavinoha MA, RaySpellicy JW, Hart-Sailors ML, Mersmann HJ, **Bray MS**, Young ME (2004) Diurnal Variations in the Responsiveness of Cardiac and Skeletal Muscle to Fatty Acids. *Am J Physiol Endocrinol Metab.* 287:E878-887.
27. Stavinoha MA, RaySpellicy JW, Essop MF, Graveleau C, Abel ED, Hart-Sailors ML, Mersmann HJ, **Bray MS**, Young ME (2004) Evidence for Mitochondrial Thioesterase 1 as a Peroxisome Proliferator-Activated Receptor- α Regulated Gene in Cardiac and Skeletal Muscle. *Am J Physiol Endocrinol Metab* 287:E888-895.

28. Blair CK, Folsom AR, Knopman DS, **Bray MS**, Mosley TH, Boerwinkle E, Atherosclerosis Risk in Communities (ARIC) Study Investigators. (2005) APOE genotype and cognitive decline in a middle-aged cohort. *Neurology* 64:268-276.
29. Heck AL, **Bray MS**, Scott A, Blanton SH, Hecht JT (2005) Variation in CASP10 gene is associated with ITEV. *J Ped Orthoped* 25:598-602.
30. Fornage M, Jacobs DR, Steffes MW, Gross MD, **Bray MS**, Schreiner PJ. (2005) Inverse effects of the PPARgamma2 Pro12Ala polymorphism on measures of adiposity over 15 years in African Americans and whites. The CARDIA study. *Metabolism*. 2005 Jul;54(7):910-7.
31. Hsu CC, Kao WH, Coresh J, Pankow JS, Marsh-Manzi J, Boerwinkle E, **Bray MS**. (2005) Apolipoprotein E and progression of chronic kidney disease. *JAMA*. 293:2892-9.
32. Fornage M, Lee CR, Doris PA, **Bray MS**, Heiss G, Zeldin DC, Boerwinkle E. (2005) The Soluble Epoxide Hydrolase Gene Harbors Sequence Variation Associated with Susceptibility to and Protection from Incident Ischemic Stroke. *Hum Mol Genet*. 14(19):2829-37
33. Sturgeon JD, Folsom AR, **Bray MS**, Boerwinkle E, Ballantyne CM; Atherosclerosis Risk in Communities Study Investigators. (2005) Apolipoprotein E genotype and incident ischemic stroke: the Atherosclerosis Risk in Communities Study. *Stroke*. 36:2484-2486.
34. Wolfarth B, **Bray MS**, Hagberg JM, Perusse L, Rauramaa R, Rivera MA, Roth SM, Rankinen T, Bouchard C. (2005) The human gene map for performance and health-related fitness phenotypes: the 2004 update. *Med Sci Sports Exerc*. 37:881-903.
35. Durgan DJ, Hotze MA, Tomlin TM, Egbejimi OA, Graveleau C, Abel ED, Shaw CA, **Bray MS**, Hardin PE, Young ME. (2005) The Intrinsic Circadian Clock With the Cardiomyocyte. *Am J Physiol Heart Circ Physiol*. 289(4):H1530-41
36. Wong TY, Shankar A, Klein R, **Bray MS**, Couper DJ, Klein BE, Sharrett AR, Folsom AR. (2006) Apolipoprotein E Gene and Early Age-Related Maculopathy The Atherosclerosis Risk in Communities Study. *Ophthalmology*. 113(2):255-9.
37. Hsu CC, **Bray MS**, Kao WH, Pankow JS, Boerwinkle E, Coresh J. (2006) Genetic Variation of the Renin-Angiotensin System and Chronic Kidney Disease Progression in Black Individuals in the Atherosclerosis Risk in Communities Study. *J Am Soc Nephrol*. 17:504-12
38. Zeng D, Lin DY, Avery CL, North KE, **Bray MS**. (2006) Efficient semiparametric estimation of haplotype-disease associations in case-cohort and nested case-control studies. *Biostatistics*. 7(3):486-502
39. Ioannidis JP, Gwinn M, Little J, Higgins JP, Bernstein JL, Boffetta P, Bondy M, **Bray MS**, et al. (2006) A road map for efficient and reliable human genome epidemiology. *Nat Genet*. 38:3-5.
40. Lee CR, North KE, **Bray MS**, Fornage M, Seubert JM, Newman JW, Hammock BD, Couper DJ, Heiss G, Zeldin DC. (2006) Genetic Variation in Soluble Epoxide Hydrolase (EPHX2) and Risk of Coronary Heart Disease: The Atherosclerosis Risk in Communities (ARIC) Study. *Hum Mol Genet*. 15(10):1640-9
41. Soliman PT, Wu D, Tortolero-Luna G, Schmeler KM, Slomovitz BM, **Bray MS**, Gershenson DM, Lu KH (2006) Association between adiponectin, insulin resistance, and endometrial cancer. *Cancer*. 106:2376-81.
42. Durgan DJ, Trexler NA, Egbejimi O, McElfresh TA, Suk HY, Petterson LE, Shaw CA, Hardin PE, **Bray MS**, Chandler MP, Chow CW, Young ME. (2006) The circadian clock

within the cardiomyocyte is essential for responsiveness of the heart to fatty acids. *J Biol Chem.* 281(34):24254-69.

43. Rankinen T, **Bray MS**, Hagberg JM, Pérusse L, Rauramaa R, Rivera MA, Roth SM, Wolfarth B, Bouchard C. (2007) The Human Gene Map For Performance and Health-Related Fitness Phenotypes: the 2005 Update. *Obes Res.* 38(11):1863-88
44. **Bray MS** and Young ME (2007) Circadian Rhythms in the Development of Obesity: Potential Role for the Circadian Clock within the Adipocyte. *Obes Rev.* 8(2):169-81.
45. Grove ML, Morrison A, Folsom AR, Boerwinkle E, Hoelscher DM, **Bray MS.** (2007) Gene-environment interaction and the GNB3 gene in the Atherosclerosis Risk in Communities Study. *Int J Obes* 31(6):919-26.
46. Ferdinands JM, Mannino DM, Gwinn ML, **Bray MS.** (2007) ADRB2 Arg16Gly Polymorphism, Lung Function, and Mortality: Results from the Atherosclerosis Risk in Communities Study. *PLoS ONE.* 2007 2:e289 .
47. Lee CR, North KE, **Bray MS**, Couper DJ, Heiss G, Zeldin DC. (2007) CYP2J2 and CYP2C8 polymorphisms and coronary heart disease risk: the Atherosclerosis Risk in Communities (ARIC) study. *Pharmacogenet Genomics.* 17:349-358. PMID: PMC1947003
48. Young ME, **Bray MS.** (2007) Potential role for peripheral circadian clock dyssynchrony in the pathogenesis of cardiovascular dysfunction. *Sleep Med.* 8:656-67. PMID: PMC2020822
49. Lee CR, North KE, **Bray MS**, Couper DJ, Heiss G, Zeldin DC. (2007) Cyclooxygenase Polymorphisms and Risk of Cardiovascular Events: The Atherosclerosis Risk in Communities (ARIC) Study. *Clin Pharmacol Ther.* PMID: PMC2244790
50. Liew G, Shankar A, Wang JJ, Klein R, **Bray MS**, Couper DJ, Sharrett AR, Wong TY. (2007) Apolipoprotein E gene polymorphisms and retinal vascular signs: the atherosclerosis risk in communities (ARIC) study. *Arch Ophthalmol.* 125:813-8.
51. Sailors MLH, Folsom AR, Ballantyne CM, Hoelscher DM, Jackson AS, Kao WHL, Pankow JS, **Bray MS.** (2007) Genetic Variation and Decreased Risk for Obesity in the Atherosclerosis Risk in Communities Study. *Diab Obes Metab* 9:548-557.
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Jeffreys RM, **Bray MS**, Jenkins T, Oruc V, Douglas A, Inge TH (2012) Physical Activity Monitoring in Morbidly Obese Adolescents from the Teen LABS Study. *Obesity.*

Books and book chapters

Bray MS, Allison DB (2002) "Obesity Syndromes." In Animal Models of Eating Behavior and Body Composition Disorders, JB Owens, JL Treasure, and DA Collier, eds. Kluwer Academic Publishers, Dordrecht, The Netherlands.

Bray MS. (2003) "Genetic and Environmental Factors in Cardiovascular Disease" in Human Genome Epidemiology, MJ Khoury, J Little, and W Burke, eds. Oxford University Press, New York, New York.

Sailors MH & **Bray MS** (2011) "The Interaction between Genetic Variation and Exercise/Physical Activity in the Determination of Body Composition and Obesity Status" In Molecular and Translational Medicine Series Exercise Genomics, LS Pescatello & SM Roth, eds. Humana Press, New York, NY.

Bray MS, Fulton JE, Kalupahana NS & Lightfoot TJ (2011) "Genetic Epidemiology, Physical Activity and Inactivity" In Genetic and Molecular Aspects of Sports Performance, Bouchard C and Hoffman E, eds. Wiley-Blackwell, Oxford, UK.

Kalupahana NS, Moustaid-Moussa N., Kim JH, Voy BH, Bassett D, **Bray MS** and Lightfoot JT (2011) "The Regulation of Physical Activity by Genetic Mechanisms: Is there a Drive to be Active?" In Genetic and Molecular Aspects of Sports Performance, Bouchard C and Hoffman E, eds. Wiley-Blackwell, Oxford, UK.

Teaching Information

Didactic course work

KIN 4310 – Measurement and Evaluation of Human Performance – 3 hours

KINE 319 – Applied Measurement and Evaluation – 3 hours

PEB 1251 – Exercise for Health and Fitness – 2 hours

PH 3312 – Molecular and Genetic Basis of Obesity – 3 hours

EPI 632/732 – Molecular and Genetic Basis of Obesity – 3 hours

HE 222/EPI 222 – Concepts of Health and Fitness – 3 hours

GBS 756 – Cardiovascular and Metabolic Diseases Journal Club – 1 hour

Non-didactic teaching

Resident training

None

Clinical fellow training

Mark McOmber, MD Research Fellow, July 2006 - 2007

Research fellow training

Daniel Kainer, PhD, Postdoctoral Fellow, Sept 2000-January 2002

Melissa Zanquetta, PhD, Postdoctoral Fellow, Feb 2007-Feb 2008

Mary Sailors, PhD, Postdoctoral Fellow, Jan 2010 – May 2011

Matt Herring, PhD, Postdoctoral Fellow, July 2011 – present

Graduate student training

Mitzi Laughlin, PhD, September 2000 – May 2001 – NASA/JSC

Ron McNeel, PhD, June 2001 – May 2003 – Baylor College of Medicine

Darin Tessier, MS, Sept 2001 – May 2003 – Univ of Texas Medical School, San Antonio

Aime Serna, MD, MPH, Sept 2002 – Dec 2003, Univ of Texas Medical School El Paso

Cristina Barroso, PhD, August 2000 – May 2004 – U.T. Health Science Center

Christina Lee, MPH, January 2003 – May 2004 – U.T. Medical School, San Antonio

Amy Heck, MS, Sept 2002 – Aug 2005 – Sleep Research Center, Virginia

Margaret Callie, MPH, May 2003 – May 2005 – University of Houston

Alex Emery, MPH, Sept 2002 – Aug 2006

Megan Grove, MS, Sept 2005 – May 2007

Fred Miller, PhD candidate, August 2003 – Aug 2008

Cassie Robinson - MPH student, August 2006 - Aug 2008

Ian Turpin, PhD candidate, August 2005 – present

Mary Hart Sailors, PhD, August 2006 – December 2010

Danielle Hessong, MPH, August 2012 – present

Jennifer Williams, MPH, August 2012 – present

Course Lectures

Continuing Education Genetics Series for Science Educators in South Texas
"How do Genes Make People Ill?"

SPH Research Day, May 2003
"Genetics of Response to Obesity Interventions"

PH 3720 – Social and Economic Determinants of Health, 2001-2005 annually
"Implications of Genetic on Population Health"

PH3340 – Genetic Epidemiology of Chronic Disease, 2001-2006 annually
"Genetics of Obesity"

PH 3315 – Molecular and Cellular Approaches to Human Genetics, 2002-2005 annually
"Linkage Mapping and Strategies for Finding Disease Genes"

PH 1235 – Social and Behavioral Aspects of Physical Activity and Public Health, 2004-2006 annually, "The Genetics of Obesity and Exercise"

Digestive Diseases Research Seminar, BCM, January 2005
"The Role of Genetic Variation in Obesity and Response to Treatment "

University of Houston Research Seminar Series, February 2005
"To Carb or Not to Carb"

University of Houston Research Seminar Series, April 2005
"Obesity and Exercise: All in the Genes or Jeans?"

University of Texas Medical Student Research Seminar, June 2005
 "Mining the Human Genome for Obesity Genes"

Pediatric GI Workshop Lecture Series, September 2005
 "Exploring New Pathways that Lead to Obesity"

U.T. Cardiology Research Seminar, October 2005
 "A Multi-level Approach for the Study of Obesity"

U.T. Department of Integrative Biology, March 2006
 "Obesity: Nature or Nurture?"

U.T./MD Anderson Genetic Epidemiology, March 2006
 "Genetic Basis of Obesity"

Baylor College of Medicine Alumni Symposium, May 2007
 "Gene-Environment Interactions in Obesity"

U.T./MD Anderson Genetic Epidemiology, June 2007
 "Genetics of Obesity and Response to Treatment"

Digestive Diseases Center Seminar Series, Baylor College of Medicine, November 2007
 "Genetics of Obesity and Response to Treatment"

U.T./MD Anderson Genetic Epidemiology, March 2008
 "Genetics of Obesity and Response to Treatment"

Faculty Seminar, USDA/ARS Children's Nutrition Research Center, May 2008
 "Circadian Rhythms and Obesity: Is there an Optimal Time to Eat?"

Cardiovascular Basic Science Seminar, Baylor College of Medicine, June 2008
 "New Approaches to Gene Discovery in Obesity"

Molecular and Human Genetics Seminar, University of Texas HSC-Houston, Jan 2009
 "Linking Circadian Rhythms to Obesity"

Animals Models Seminar Series, University of Texas HSC-Houston, Jan 2009
 "Statistical Analysis of Animal Phenotypes"

Human Genetic Epidemiology Seminar, University of Texas HSC-Houston, Feb 2009
 "Current Advances in Obesity Genetics"

Genetics and Genomics Seminar Series, Univ of Alabama at Birmingham, Feb 2010
 "Circadian Rhythms, Genes and the Underpinnings of Obesity"

Nutritional Sciences 500 Seminar, Univ of Illinois at Urbana-Champaign, Mar 2010
 "Circadian Rhythms, Genes and the Underpinnings of Obesity"

GBS704 Introduction to Experimental Medicine, December 2011
 "Microarrays, Bioinformatics Data Mining, and Network analyses"

UAB Psychology Department Seminar Series, February 2012
 "Exercise Adherence: How Genomics Can Reveal New Insight into Behavior"

UAB Center for Aging, March 2012
 "Genomics Resources for Aging Research"

UAB Department of Microbiology, March 2012
 "Genomics Resources for Gene Discovery in Microbiology"

UAB Epigenetics Retreat, July 2012
 "Aerobic Exercise Induces Changes in Global Methylation in Young Adults"

UAB Center for Exercise Medicine Distinguished Scientist Lecture, November 2012

“Genes, Environments, and their Interactions in Predicting Exercise Response and Adherence”