

Curriculum Vitae

NAME: Maria De Luca
Associate Professor

HOME ADDRESS: 178 Thoroughbred Ln
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PLACE OF BIRTH: Cosenza, Italy

PERSONAL HISTORY: Married, one child

CITIZENSHIP: Italian

PERMANENT RESIDENCY: United States since 2006

EDUCATIONAL BACKGROUND:

11/87 – 01/92 Degree in Biological Sciences with honors, University of Calabria, Arcavacata di Rende, Cosenza, Italy

11/92 – 07/97 Ph. D. Student in Biochemistry & Molecular Biology, Dept.of Cell Biology, University of Calabria, Arcavacata di Rende, Cosenza, Italy
Mentor: Giovanna De Benedictis, PhD.

PROFESSIONAL TRAINING:

09/97 – 09/98 **Post-doctoral Research Fellow**, Italian National Center on Ageing, Ancona, Italy
Mentor: Claudio Franceschi, MD.

09/98 – 09/99 **Post-doctoral Research Fellow**, Department of Cell Biology, University of Calabria, Italy
Mentor: Giovanna De Benedictis, PhD.

10/97 – 10/98 **Temporary Instructor of Human Genetics**, Department of Cell Biology, University of Calabria, Italy

11/99 – 10/00 **Post-doctoral Research Fellow**, Department of Statistics and Genetics, NCSU, Raleigh, North Carolina, USA
Mentors: Trudy FC Mackay, PhD. and Bruce S Weir, PhD.

ACCADEMIC APPOINTMENTS:

11/00 – 04/02 **Assistant Professor**, Department of Cell Biology, University of Calabria, Arcavacata di Rende, Cosenza, Italy

04/02 – 10/02 **Researcher**, Department of Genetics, North Carolina State University, Raleigh, North Carolina, USA

11/02 – 05/03 **Research Instructor**, Department of Environmental Health Sciences, University of Alabama at Birmingham, Birmingham, Alabama, USA

06/03 – 06/05 **Research Assistant Professor**, Department of Environmental Health Sciences, University of Alabama at Birmingham, Birmingham, Alabama, USA

07/05 – 09/11 **Assistant Professor**, Department of Nutrition Sciences, University of Alabama at Birmingham, Birmingham, Alabama, USA

10/11 – present **Associate Professor (with tenure)**, Department of Nutrition Sciences, University of Alabama at Birmingham, Birmingham, Alabama, USA

HONORS AND AWARDS:

04/94 – 06/96 EU Mobility Program Research Fellowship, Tissue Antigen Laboratory, Imperial Cancer Research Fund, London, UK
Mentor: Julia Bodmer, MD.

1995 Travel Award, Euroconference "Human Genome Variation in Europe: DNA Markers", University of Barcelona, Barcelona, Spain

04/09 – present Member, Golden Key International Honor Society

2010 Excellence in Scholarship Award, School of Health Professions, University of Alabama at Birmingham, Birmingham, Alabama, USA

SCHOLARLY ACTIVITIES

GRANTS FUNDED

ACTIVE GRANTS

<i>Principal Investigator</i>	<i>Role</i>	<i>Title</i>	<i>Funding Agency</i>	<i>Identifying Number</i>	<i>Project Period</i>	<i>Total Period of Support</i>
De Luca	PI	A role for Sdc4 in cellular senescence in adipose tissue	UAB/DRTC	Pilot/Feasibility	01/04/2015 31/03/2016	No salary support requested
Bailey	Co-I	Systems Genetics Approach in Understanding NAFLD	UAB/DRTC	Pilot/Feasibility	01/04/2015 31/03/2016	01/04/2015 31/03/2016

De Luca	PI	Genetic control of quantitative traits associated with the metabolic syndrome	NIH/NIDDK	R01 DK084219	05/01/2010 04/30/2014 [No cost extension through 04/30/2016]	05/01/2010 04/31/2014
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COMPLETED GRANTS

<i>Principal Investigator</i>	<i>Role</i>	<i>Title</i>	<i>Funding Agency</i>	<i>Identifying Number</i>	<i>Project Period</i>	<i>Total Period of Support</i>
De Luca	PI	Syndecan regulation of Drosophila metabolism and behavior	Roland L. Weinsier Endowed Support Fund		04/30/2013 03/31/2015	No salary support requested
Yi	Co-I	Bayesian Methods for Genome-Wide Interacting QTL Mapping	NIH/NIGMS	R01 GM069430	06/01/2010 05/30/2014	06/01/2010 05/30/2014
Moellering	Co-I	Calmodulin-binding transcription factors affecting mitochondrial uncoupling and energy metabolism	UAB/DRTC	Pilot/Feasibility	07/01/2011 06/30/2012	07/01/2011 06/30/2012
Allison	Co-I	UAB Nutrition and Obesity Research Center	NIH/NIDDK	P30 DK56336	06/01/2000 05/31/2012	11/01/2006 12/31/2011
De Luca	PI	QTL Mapping Age-Related Changes in Lipid Storage	NIH/NHLBI	R01 HL80812	09/27/2004 08/31/2008 [No cost extension through 08/31/2009]	09/27/2004 04/30/2006 05/01/2006 08/31/2008
Ruden	Co-I	Epigenetics of Dietary and Body Fat in Drosophila	NIH/ NCI	R01 CA105349	05/01/2004 04/30/2007	05/01/2004 04/30/2006
Ruden	Co-I	QTL and Microarray Mapping Lead Sensitivity Genes	NIH/ NIEHS	R01 ES012933	09/01/2004 08/31/2009	09/01/2004 08/31/2006

PUBLICATIONS**PEER REVIEWED ORIGINAL PAPERS**

Rose G, **De Luca M**, Leone O, Falcone E, Chimienti G, Pepe G, Giacchetto C, De Benedictis G (1993). The first genetic marker detected in the promoter region of the Thyroid

Peroxidase gene by single-strand conformational polymorphism analysis. *Human Mutation* 2: 418-419

Rose G, **De Luca M**, Falcone E, Giacchetto C, De Benedictis G (1993). Rapid identification of a population sample from South Italy. *Genomics* 17: 796-798

Falcone E, Spadafora P, **De Luca M**, Ruffolo R, Brancati C, De Benedictis G (1995). DYS19, D12S67 and D1S80 polymorphisms in population samples from Southern Italy and Greece. *Human Biology* 67: 689-701

Rose G, **De Luca M**, Falcone E, Spadafora P, Carrieri G, De Benedictis G (1996). Allele frequency distributions at seven DNA hypervariable loci in a population sample from Calabria (Southern Italy). *Gene Geography* 10: 135-145

De Benedictis G, Carotenuto L, Carrieri G, **De Luca M**, Falcone E, Rose G, Yashin AI, Bonafe' M, Franceschi C (1997). Trends of allele frequencies in ageing cohorts: the 3'APOB-VNTR locus. *Annals of Human Genetics* 62: 115-122

Modiano D, Luoni G, Petrarca V, **De Luca M**, Marsh SGE, Coluzzi M, Bodmer GJ, Modiano G (1997). HLA Class I alleles in three sympatric West African ethnic groups. In *Genetic Diversity of HLA: Functional and Medical implications* (Ed. Dominique Charron). EDK, Paris, France, p. 161-164

De Benedictis G, Carotenuto L, Carrieri G, **De Luca M**, Falcone E, Rose G, Cavalcanti S, Corsonello F, Feraco E, Baggio G, Bertolini S, Mari D, Mattace R, Yashin AI, Bonafe' M, Franceschi C (1998). Gene/Longevity association studies at four autosomal loci (REN, THO, PARP, SOD2). *European Journal of Human Genetics* 6: 534-541

Bonafe' M, Olivieri F, Mari D, Baggio G, Mattace R, Sansoni P, De Benedictis G, **De Luca M**, Bertolini S, Monti D, Franceschi C (1998). p53 variants predisposing to cancer are present in healthy centenarians. *American Journal of Human Genetics* 64: 292-294

Bonafe' M, Olivieri F, Mari D, Baggio G, Mattace R, Berardelli M, Sansoni P, De Benedictis G, **De Luca M**, Marchegiani F, Cavallone L, Cardelli M *et al.* (1999) p53 codon 72 polymorphism and longevity: additional data on centenarians from continental Italy and Sardinia. *American Journal of Human Genetics* 65:1782-1785

De Benedictis G, Rose G, Carrieri G, **De Luca M**, Falcone E, Passarino G, Bonafé M, Monti D, Baggio G, Bertolini E, Mari E, Mattace R, Franceschi C (1999). Mitochondrial DNA inherited variants are associated with successful aging and longevity in humans. *The FASEB Journal* 13:1532-1536

Yashin AI, De Benedictis G., Vaupel JW, Tan Q, Andreev KF, Iachine IA, Bonafe' M, **De Luca M**, Valensin S, Carotenuto L, Franceschi C (1999). Genes, Demography and life span: the contribution of demographic data in genetic studies of aging and longevity. *American Journal of Human Genetics* 65:1178-1193

Yashin AI, De Benedictis G, Vaupel JW, Tan Q, Andreev KF, Iachine IA, Bonafe' M, Valensin S, **De Luca M**, Carotenuto L, Franceschi C (2000). Genes and longevity: lessons from studies of centenarians. *J Gerontol A Biol Sci Med Sci* 55: B319-328

Franceschi C, Bonafe' M, Valensin S, Olivieri F, **De Luca M**, Ottaviani E, De Benedictis G (2000). Inflamm-aging. An evolutionary perspective on immunosenescence. *Ann N Y Acad Sci* 908: 244-254

Modiano D, Luoni G, Petrarca V, Sodiomon Sirima B, **De Luca M**, Simpore J, Coluzzi M, Bodmer GJ, Modiano G (2001). HLA Class I alleles in three West African ethnic groups: genetic distances from sub-Saharan and Caucasoid populations. *Tissue Antigens* 57: 128-137

Carrieri G, Bonafe' M, **De Luca M**, Rose G, Varcasia O, Bruni A, Maletta R, Nacmias B, Sorbi S, Corsonello F, Feraco E, Kirill A, Yashin AI, Franceschi C, De Benedictis G (2001)

Mitochondrial DNA haplogroups and APOE4 allele are non-independent variables in sporadic Alzheimer's disease. *Human Genetics* 108: 194-198

De Luca M, Rose G, Bonafe' M, Garasto S, Greco V, Weir BS, Franceschi C, De Benedictis G (2001) Sex-specific longevity associations defined by Tyrosine Hydroxylase-Insulin-Insulin-like growth factor 2 on the 11p15.5 chromosomal region. *Experimental Gerontology* 36: 1663-1671

Tan Q, De Benedictis G, Yashin, AI, Bonafe' M, **De Luca M**, Valensin S, Vaupel JW, Franceschi C (2001) Measuring the genetic influence in modulating the human life span: gene-environment interaction and the sex-specific genetic effect. *Biogerontology* 2: 141-153

De Luca M, Roshina NV, Geiger-Thornesberry GL, Lyman RF, Pasyukova EG, Mackay TFC (2003) Dopa decarboxylase affects variation in Drosophila longevity. *Nature Genetics* 34: 429-433

St-Onge M-P, Page GP, **De Luca M**, Zhang K, Kim K, Heymsfield SB, Allison DB (2004). Design and analysis of microarray studies in nutrition and obesity. In : *Genomics and Proteomics in Nutrition (Nutrition in Health and Disease)* (Eds. Moustaid-Moussa N, Berdanier CD). Marcel Dekker, New York, p. 145-204

Ruden DM, **De Luca M**, Garfinkel MD, Bynum K, Lu X (2005) *Drosophila* nutrigenomics can provide clues to human gene-nutrient interactions. *Annual Review of Nutrition* 25:499-522.

De Luca M, Yi N, Allison DB, Leips JW, Ruden DM (2005) Mapping quantitative trait loci affecting variation in Drosophila triacylglycerol storage. *Obesity Research* 13:1596-1605

Elamin S, Faith MS, **De Luca M**, Pietrobelli A, Matz PE, Zannolli R, Allison DB (2005). Genetic and environmental influences on obesity. In *Preventive Nutrition: The Comprehensive Guide for Health Professionals*. (3rd Edition THE -HUMANA PRESS). Tatawa, NJ, USA.

Carbone MA, Jordan KW, Lyman RF, Harbison ST, Leips JW, Morgan TJ, **De Luca M**, Awadalla P, Mackay TFC (2006) Phenotypic variation and natural selection at Catecholamines up (Catsup), a pleiotropic quantitative trait gene in Drosophila. *Current Biology* 16: 912-919

Munoz AJ, Lok KH, Gower BA, Fernandez JR, Hunter GR, Lara-Castro C, **De Luca M**, Garvey WT (2006) A Polymorphism in the Transcription Factor 7-like 2 (TCF7L2) Gene is Associated with Reduced Insulin Secretion in Non-diabetic Women. *Diabetes* 55:3630-3634

Keith SW, Redden DT, *et al.*, **De Luca M**, Westfall AO, Allison DB (2006) Putative Contributors to the Secular Increase in Obesity: Exploring the Roads Less Traveled. *International Journal of Obesity* 30:1585-94.

De Luca M and Leips J (2007) Mapping genetic polymorphisms affecting natural variation in Drosophila longevity. *Methods in Molecular Biology* 371:307-20.

Ye J, Cui X, Loraine A, Bynum K, Kim NC, White G, **De Luca M**, Garfinkel MD, Lu X, Ruden DM. (2007) Methods for nutrigenomics and longevity studies in Drosophila: effects of diets high in sucrose, palmitic acid, soy, or beef. *Methods in Molecular Biology* 371:111-41.

De Luca M, Chambers Moses M, Casazza K, Lok KH, Hunter GR, Gower BA, Fernandez JR (2008) Genetic variation in a member of the laminin gene family affects variation in body composition in Drosophila and humans. *BMC Genetics* 9:52. PMID: PMC2533007

Cho I, Horn L, Felix TM, Foster L, Gregory G, Starz-Gaiano M, Chambers Moses M, **De Luca M (co-senior author)**, Leips J (2010) Age- and diet- specific effects of variation at *S6kinase* on life history, metabolic and immune response traits in *Drosophila melanogaster*. *DNA and Cell Biology* 29:473-485. PMID: PMC2931542.

Jumbo-Lucioni P, Ayroles JF, Chambers Moses M, Jordan KW, Leips J, Mackay TFC, **De Luca M** (2010) Systems Genetics Analysis of Body Composition and Energy Metabolism Traits in *Drosophila melanogaster*. *BMC Genomics* 11:297. PMID: PMC2880307.

De Luca M, Klimentidis YC, Casazza K, Moses Chambers M, Cho R, Harbison ST, Jumbo-Lucioni P, Zhang S, Leips J, Fernandez JR (2010) A conserved role for syndecan family members in the regulation of whole-body energy metabolism. *PLoS ONE*. 5: e11286. PMID: PMC2890571.

De Luca M, Crocco P, Wiener H, Tiwari KH, Passarino G, Rose G (2011) Association of a common *LAMA5* variant with anthropometric and metabolic traits in an Italian cohort of healthy elderly subjects. *Experimental Gerontology*, 46:60-64. PMID: PMC2998567.

Jumbo-Lucioni P, Bu S, Harbison ST, Slaughter JC, Mackay TFC, Moellering D, **De Luca M** (2012) Nuclear-encoded genomic control of naturally occurring variation in mitochondrial respiration and efficiency in *Drosophila melanogaster*. *BMC Genomics*, 13:659. PMID: PMC3526424.

De Luca M, Chandler-Laney PC, Wiener H, Fernandez RJ (2012) Common variants in the *LAMA5* gene associate with fasting plasma glucose and serum triglyceride levels in a cohort of pre-and early pubertal children. *Journal of Pediatric Genetics*, 1:4. PMID: PMC3527014.

Hodges T, Laskowski K, Squadrito G, **De Luca M**, Leips J (2013) Defense traits of larval *Drosophila melanogaster* exhibit genetically based tradeoffs against different species of parasitoids. *Evolution*, 67:749-760. PMID: PMC3590849.

Otali D, Novak RJ, Wan W, Bu S, Moellering DR, **De Luca M** (2014). Increased production of mitochondrial reactive oxygen species and reduced adult life span in an insecticide-resistant strain of *Anopheles gambiae*. *Bulletin of Entomological Research*, 104:323-333. PMID: PMC4008687.

Passarino G, Rose G, Bellizzi D, **De Luca M**, Gonos E (2014) Aging and Longevity between genetic background and lifestyle intervention. *BioMed Research International*, 2014:516402. PMID: PMC4058245

Rose G, Crocco P, De Rango F, Corsonello A, Lattanzio F, **De Luca M**, Passarino G (2015) Metabolism and successful aging: polymorphic variation of *syndecan-4* (*SDC4*) gene associate with longevity and lipid profile in healthy elderly Italian subjects. *Mechanisms of Ageing and Development* 150:27-33.

Pflugger PT, Kabra DG, García CV, Aichler M, Schriever SC, Pfuhlmann K, Lehti M, Weber J, Kutschke M, Elrod J, Hevener A, Feuchtinger A, Walch A, Rollmann MS, Aronow BJ, Müller TD, Perez-Tilve D, Jastroch M, **De Luca M**, Molkentin JD, Tschöp MH (2015) Protein phosphatase 3 links environmentally controlled mitochondrial fusion-fission dynamics with energy metabolism. *Cell Metabolism* In press

CONFERENCE ABSTRACTS

De Benedictis G, Rose G, **De Luca M**, Leone O, Falcone E (1992) A Mutant Haplotype of the hThyroid Peroxidase Gene Promoter Identified by PCR-SSCP Analysis. Human Genome '92: The Human Genome Project International Conference. The Acropolis, Nizza (Francia), October 14-17

Rose G, **De Luca M**, Spadafora P, Falcone E, Giacchetto C, Crinò A, Ciampalini P, De Benedictis G (1993) Haplotype analysis of the thyroid Peroxidase gene in families affected by congenital thyroid disease. *Atti Associazione Genetica Italiana* 39: 275-277

Rose G, **De Luca M**, Spadafora P, Falcone E, Giacchetto C, Crino' A, Ciampalini P, De Benedictis G (1993) Haplotype Analysis of the Thyroid Peroxidase Gene in Families Affected by Congenital Thyroid Diseases. *Abstracts A.G.I.*, 275-276, Senigallia (AN), Italy, September 29 - October 1.

De Benedictis G, Rose G, Falcone E, Semino O, **De Luca M**, Spadafora P, Brancati C, Carotenuto L, Santachiara-Benerecetti AS (1993) Population Genetics of VNTR Markers

(TPO and 3'APOB) Loci in the Mediterranean Area (Albania, Greece and Italy). Abstracts 15th International Congress I.S.F.H., 167, Lido di Venezia (VE), Italy, October 13-15

Moses JH, **De Luca M**, Sadler AM, Petronzelli F, Browning MJ, Marsh SGE, Bodmer JG (1995). Modification and improvement of an HLA-B locus SSP ARMS-PCR typing system. *European Journal of Immunogenetics* 22: 97

De Luca M, Moses JH, Marsh SGE, Heyes JM, Sadler AM, Tonks S, Bodmer JG (1995). HLA Class I and II study in an Orcadian population. *European Journal of Immunogenetics* 22: 127

Tonks S, **De Luca M**, Krausa P, Marsh SGE, Bodmer JG (1996). HLA-A*02 subtyping using ARMS-PCR. *Human Immunology* 47: 45

De Luca M, Moses JH, Marsh SGE, Bodmer JG (1996). Identification of HLA-B*44 and HLA-B*45 alleles using a nested ARMS-PCR method. *Human Immunology* 47: 9

Luoni G, **De Luca M**, Modiano D, Coluzzi M, Marsh SGE, Bodmer JG (1996). HLA Class I and Class II in three sympatric West African ethnic groups. *Human Immunology* 47: 50

Franceschi C, Bonafe' M, **De Luca M**, De Benedictis G (1997). Centenarians: the genetic basis of successful aging. Abstracts 16th Congress of the International Association of Gerontology. Adelaide, Sud Australia, August 19-23

Olivieri F, Bonafe' M, **De Luca M**, De Benedictis G, Baggio G, Bertolini S *et al.* (1997). p53 polymorphisms and haplotypes in human longevity. 4th BioMed Conference on Molecular Gerontology. Parigi, Francia, November 22-25

Franceschi C, *et al.* **De Luca M**, Bertolini S, Monti D (1999) p53 variants predisposing to cancer are present in healthy centenarians. Keyston Symposia on Molecular and Cellular Biology. Aging: Genetic & Environmental Influences on Life Span. Tamarron Hilton, Durango, Colorado, February 2-7

De Luca M, Geiger-Thornsberry GL, Lyman RF, Mackay TFC (2002) Catecholamines and aging: a linkage disequilibrium mapping study in *D. melanogaster*. 43rd Annual *Drosophila* Research Conference. San Diego, California, April 10-14

Ruden DM, **De Luca M**, Garfinkel MD (2003) QTL mapping Obesity Genes in *Drosophila*. NAASO's Annual Scientific Meeting. Ft. Lauderdale, Florida, October 11-15.

Kapil R, Foster L, Felix T, Leips J, **De Luca M** (2006) Sex, Age and Diet-Specific Effects of *S6 Kinase* Gene on Energy Metabolism and Innate Immune Response in *Drosophila Melanogaster*. 35th Annual Meeting of the American Aging Association. Boston, Massachusetts, June 3-5.

Nagy TR, Jones AS, **De Luca M** (2006) *In vivo* measurement of body composition of fruit flies. NAASO's Annual Scientific Meeting. Boston, Massachusetts, October 20-24.

Shriner D, **De Luca M**, Allison DB, Ruden DM, Yi N (2006) Bayesian Mapping of Obesity-related Quantitative Trait Loci in *Drosophila melanogaster*. NAASO's Annual Scientific Meeting. Boston, Massachusetts, October 20-24.

Jones J, Moses M, Coulibaly I, **De Luca M** (2006) *Syndecan*: a candidate quantitative trait gene for *Drosophila* energy storage. Annual Biomedical Research Conference for Minority Students. Anaheim, California, November 8-11.

Kaminski MF, Moses M, **De Luca M**, Leips J (2007) Genetic Variation in the Plastic Response of Life History Traits, Energy Storage, and Age-Specific Immunity to Different Diets. 47th Annual *Drosophila* Research Conference. Houston, Texas, March 7-11.

Jumbo-Lucioni P, Moses M, Moellering D, Garvey TW, **De Luca M** (2007) Natural Variation in Mitochondrial Bioenergetic Traits in *Drosophila melanogaster*. NAASO's Annual Scientific Meeting. New Orleans, Louisiana, October 20-24.

Fernandez JR, Lok KH, **De Luca M** (2008) *Syndecan 4 (SDC4)* gene is associated with HDL in children of multiethnic background. NAASO's Annual Scientific Meeting. Phoenix, Arizona, October 3-7.

Willig AL, **De Luca M**, Hunter GR, Beasley TM, Fernandez JR (2010) Polymorphisms in the NPPA and NPR1 genes are associated with fasting nonesterified fatty acid levels in a pediatric population. The Obesity Society Annual Scientific Meeting. San Diego, California, October 8-12.

De Luca M & Fernandez JR (2011) Association of *LAMA5* missense polymorphisms with fasting levels of serum triglycerides and insulin and total body fat mass in a cohort of early pubertal children. The Obesity Society Annual Scientific Meeting. Orlando, Florida, October 1-5.

Lue C-H, **De Luca M**, and Leips J (2012) Pleiotropic effects of *Syndecan* on innate immune responses and life span of *Drosophila melanogaster*. 53rd Annual Drosophila Research Conference. Chicago, Illinois, March 7-11

Su B, Slaughter J, and **De Luca M** (2102) The *Drosophila* Titin is a potential regulator of mitochondrial proton leak and fat storage. The Obesity Society Annual Scientific Meeting. San Antonio, Texas, September 20-24.

Pierce L, Hall M, **De Luca M**, O'Donnell JM (2013) Neurochemical Analysis of *Drosophila Syndecan* Mutants. 54th Annual Drosophila Research Conference. Washington, DC, April 3-7.

Evelan M, Leuch H, **De Luca M** (2014) Naturally Occurring Variations in Food Intake in *Drosophila melanogaster*. 55th Annual Drosophila Research Conference. San Diego, CA, March 26-30.

Tran TG, **De Luca M**, Leips J (2014) Dietary Restriction and the effects of the *Syndecan* gene on life span in *Drosophila*. 55th Annual Drosophila Research Conference. San Diego, CA, March 26-30.

Warren LJ, **De Luca M** (2014) *Syndecan* knockdown in the insulin producing cells of *Drosophila melanogaster* leads to increased carbohydrate levels and decreased tolerance to a glucose meal. 74th American Diabetes Association Scientific Sessions. San Francisco, CA, June 13-17.

INVITED PRESENTATIONS

"Orkney Islands: An Anthropological Study", EU Network Meeting, Torino, Italy, November 1994

"Stress response and longevity: the *Drosophila melanogaster* model", ARLES Meeting Caposuveto, Italy, October 2001

"The genetic architecture of *Drosophila* lipid storage", Clinical Nutrition Research Center, University of Alabama at Birmingham, December 2003

"Biogenic amines and aging", Center for Aging, University of Alabama at Birmingham, December 2003

"HLA Class I and II study in an Orcadian population". Presentation by **De Luca M**, Moses JH, Marsh SGE, Heyes JM, Sadler AM, Tonks S, Bodmer JG. 12th International Histocompatibility Conference, Paris, France, June 3-6, 1996

"Immune function, energy metabolism and aging in *Drosophila*". **Invited Speaker** in the Session: *Genetic Mechanisms*. 34th Annual Meeting of the American Aging Association., Oakland, California, June 2005

“Mapping Quantitative Trait Genes Affecting Variation in *Drosophila* Triacylglycerol Storage”. Presentation by **De Luca M** and Levy S. NAASO’s Annual Scientific Meeting. Vancouver, British Columbia, October 15-19, 2005

“*Drosophila melanogaster* as a genetic model for age-related metabolic disorders”, Department of Environmental Health Sciences, University of Alabama at Birmingham, January 2005

“*Drosophila melanogaster* as a genetic model for age-related metabolic disorders”, Department of Biological Sciences, University of Alabama, February 2005

“*Drosophila* as a model system for obesity and obesity-related phenotypes”, Department of Biological Sciences, University of Maryland at Baltimore County, November 2006

“Fat fruit flies shed light on the genetics of human obesity”, Department of Genetics Annual Retreat, UAB, September 2008

“Fat fruit flies shed light on the genetics of human obesity” Department of Biological Sciences, Alabama State University, November 2008

“A role for the *Drosophila syndecan* gene in regulation of energy homeostasis and survival”, Center for Aging, University of Alabama at Birmingham, February 2009

“Genetics of body fat and energy metabolism: lessons from the fruitfly genome”. **Invited Speaker** in the Session: *The Influence of Genetic Disposition*. 2009 FASEB Summer Research Conferences. Snowmass Village, Colorado, August 2009

“A Conserved Role for Syndecan Family Members in the Regulation of Whole-Body Energy Metabolism”, W. M. Keck Center for Behavioral Biology, North Carolina State University, December 2010

“*Syndecan* knockdown in the fat body of *Drosophila melanogaster* leads to increased fat storage and reduced innate immune response”. Presentation by **De Luca M**, Chambers M, Lue C-H, Bu S, Leips J. The Obesity Society Annual Scientific Meeting. Orlando, Florida, October 1-5, 2011.

“*Drosophila melanogaster* as a model for age-related metabolic disorders” Aging Symposium, Department of Biology, University of Alabama at Birmingham, September 2014

“The cell surface heparan sulfate proteoglycan syndecans may serve as a possible molecular link between obesity and cancer risk”. **Invited Speaker** in the Session: *Biomarker Discovery and Validation Strategies*. 19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine. Athens, Greece, October 9-11, 2014

TEACHING ACTIVITIES

GRADUATE COURSES

- | | |
|---------|---|
| 05/2005 | Lecture (2 contact hours) in MGE 702, Advanced Human Genetics (Course Master Dr. Daniel Bullard). The topic of the lecture was on “Statistical Approaches to genetic Crosses”. |
| 05/2006 | Lecture (2 contact hours) in IBS 702, Principles of Genetics/Genetic Basis of Disease (Course Master Dr. Dale A. Dickinson). The topic of the lecture was on “Diabetes and Obesity Models”. |

- 2005 - present Three lectures (each 2.5 contact hours) in NTR 747, Molecular Biology and Nutrition Sciences (Course Master Dr. Pi-Ling Chang). The topics of these lectures are on “DNA replication/recombination, molecular cloning”, “Genetic Polymorphisms and Variations” and “Transgenic and knockout *Drosophila*”.
- 2006 - 2009 Lecture (2 contact hours) in NTR 601, Advanced Medical Nutrition (Course Master Dr. Marian A. Brown). The topic of the lecture is on “Genetics of Obesity”.
- 2008 - 2009 Lecture (2 contact hours) in TOX 712, Actions and Assessments of Toxicants (Course Master Dr. Coral Lamartinieri). The topic of the lecture is on “Gene-by-Environment Interactions”.
- 2009 - 2010 Lecture (2 contact hours) in MGE 709, Human Genetics (Course Master Dr. Ada Elgavish). The topic of the lecture is on “*Drosophila melanogaster* as a model system to study the genetic basis of human complex diseases”.
- 2010 - 2014 **Course Master** for NTR 636/736 (3 credit hours), “Scientific Methods”.
- 2011 - 2013 Two lectures (each 2 contact hours) in GBS 723, Animal Models in Genetic Analysis (Course Master Dr. Kai Jiao). The topic of the lectures is on “*Drosophila melanogaster* as a model system to study the genetic basis of human complex diseases”.
- 2015 Course Master for NTR 420 (3 credit hours), “Nutritional Genetics”.

MENTORING

1. High school students:

Grace Cunningham, UAB Summer Science Institute Research Internships for High School Students, 6/10 – 7/10

Miracle Harvell, UAB Summer Science Institute Research Internships for High School Students, 6/11 – 7/11

2. Undergraduate students:

Ania Victoria Czachowski, Research Experience for Undergraduates, School of Engineering, 5/04 – 7/04

Karleta Colvin, MacNair Scholars program, Alabama State University, 5/04 – 7/04

Jacqueline Jones, MacNair Scholars program, Alabama State University, 5/06 – 7/06

Jeremy Tobias, Cornell University, 4/06 – 8/06

Jonathon Weber, University of Cincinnati, 07/09 – 08/09

Juanita C. Slaughter, University of Alabama at Birmingham, 5/11 – 08/11

Grace Cunningham, University of Alabama, 5/12 – 7/12

LaPortia Pierce, Stillman College, 5/12 – 5/13

Hayley Leuch, Nursing School, University of Alabama at Birmingham, 09/12 – present

Raymond Kroma, University of North Carolina, Chapel Hill, 5/13 – 07/13

Joana Hubickey, University of Alabama, 5/12 – 07/13

3. Master's students:

Nevena Stefanov, Department of Nutrition Sciences, School of Health Professions, University of Alabama at Birmingham, Research Training 5/11 – 12/11

Ashley Carter, Department of Nutrition Sciences, School of Health Professions, University of Alabama at Birmingham, Research Training 5/11 – 2/12

Committee Chair. (Mentor) *Jonathan Warren*, Department of Nutrition Sciences, School of Health Professions, University of Alabama at Birmingham.

Title of thesis: *Syndecan* knockdown in the insulin producing cells of *Drosophila melanogaster* affects energy metabolism and life span

Graduated July 2014, went on to be a PhD candidate in the Department of Nutrition Sciences, University of Alabama at Birmingham

4. PhD students:

Committee Chair. (Mentor) *Patricia Jumbo-Lucioni*, Department of Nutrition Sciences, School of Health Professions, University of Alabama at Birmingham.

Title of dissertation: "A system genetics analysis of energy metabolism traits in *Drosophila melanogaster*".

Graduated December 2009, went on to be a post-doctoral fellow in the Department of Human Genetics at Emory University.

Committee Member. *Amanda Willig*, Department of Nutrition Sciences, School of Health Professions, University of Alabama at Birmingham.

Title of dissertation: "Contributions of the Atrial Natriuretic Peptide gene system to the relationship between pediatric body fat, fatty acids, and blood pressure".

Graduated December 2010. Assistant Professor, Division of Infectious Diseases, UAB

Committee Member. *Suguna Badiga*, Department of Nutrition Sciences, School of Health Professions, University of Alabama at Birmingham,

Title of dissertation: "Genetic polymorphisms in the DHFR gene and risk of cervical cancer".

Graduated December 2011, went on to be a post-doctoral fellow in the Department of Nutrition Sciences at UAB

Committee Co-Chair. (Co-Mentor) *Dennis Otali*, Department of Biology, College of Arts and Sciences, University of Alabama at Birmingham,

Title of dissertation: "Environmental specific effects on life history and energy metabolism traits in a permethrin resistant strain of *Anopheles gambiae*".

Graduated December 2013, went on to be a post-doctoral fellow in the Department of Pathology at UAB

Committee Member. *Mariann Gabrawy*, Department of Biological Sciences, University of Maryland at Baltimore County.

Title of dissertation: "Identification of genetic variants influencing efficacy of Lisinopril treatment on age-specific climbing ability: a genome-wide analysis in *Drosophila melanogaster*."

Committee Member. *Yishu Ding*, Department of Nutrition Sciences, School of Health Professions, University of Alabama at Birmingham,

Title of dissertation: "The role of PPARdelta in determining cardiomyocyte proliferation and angiogenesis in the adult heart".

Committee Member: *Louis Watanabe*, Department of Biology, College of Arts and Sciences, University of Alabama at Birmingham,

Title of dissertation: TBA

SERVICE ACTIVITIES

UAB ACTIVITIES

05/03 – <i>present</i>	Scientist, The Comprehensive Center for Healthy Aging (CCHA)
03/05	Graduate Student Research Day 2005, Life Sciences, Judge
03/05	Postdoctoral Research Day 2005, Judge
01/06	Review for CCHA P&F program
03/06	Member of DNS Retreat Committee
10/06 – 09/12	Member of Honors and Recognition Committee, School of Health Professions
10/06 – 10/07	Mitochondrial Research Interest Group, Participant
10/06 – 09/12	Member of Academic Affairs Committee, School of Health Professions
11/06 – 12/11	Associate Director, Enrichment Program, Nutrition and Obesity Research Center
06/07 – 07/07	Member of Research Task Force, School of Health Professions
08/07	Member of DNS Education Committee
08/07 – <i>present</i>	Associate Scientist, Nutrition and Obesity Research Center
07/08, 09/10, 09/12	CCHA Annual meeting, Abstracts Reviewer
06/08 – <i>present</i>	Senior Scientist, Diabetes Research and Training Center
03/09	Graduate Student Research Day 2009, Life Sciences, Judge
11/10– <i>present</i>	Scientists, Center for Cardiovascular Biology
05/11- 09/11	Member of the SHP Strategic Planning Committee
10/13– <i>present</i>	Member of Faculty Academic Affair, School of Health Professions
10/13– <i>present</i>	Member of DNS P&T Review Committee

EXTRAMURAL ACTIVITIES

06/2005	Chair, Short Papers Session, 34 th Annual Meeting of the American Aging Association, Oakland, California
03/2008	<i>Ad hoc</i> Reviewer NIH Review Panel, NRSA training fellowships
08/2010	<i>Ad hoc</i> Review of Global Research Network Program 2010 application for the National Research Foundation of Korea
2011-2014	Reviewer, NHLBI Special Emphasis Panel ZRG1 VH-D55 "Systems Biology"
08/2011	<i>Ad hoc</i> Reviewer for the Czech Science Foundation
10/2011	Co-moderator, Symposium on "Interindividual variation in weight loss and gain", The Obesity Society Annual Meeting, Orlando, Florida

- 10/2011 *Ad hoc* Reviewer NIH Review Panel, ZRG1 F08-K (20) Fellowship: Genes, Genomes, and Genetics Special Emphasis Panel.
- 04/2012 *Ad hoc* Reviewer for Italian Ministry for Education, University, and Research (MIUR)
- 2014/2015 Reviewer NIH Special Emphasis Panel ZRG1 EMNR-Q “Nutrigenetics and Nutrigenomics Approaches for Nutrition Research”
- 10/2014 Co-Chair, Workshop “Biomarker Discovery and Validation Strategies”. 19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine. Athens, Greece

MANUSCRIPTS REVIEWED FOR THE FOLLOWING JOURNALS

Cardiology; Comparative Biochemistry and Physiology; Diabetes; Free Radical Biology & Medicine; Genetica; Genetics; Genetics Research; Methods in Molecular Biology; Molecular Ecology; Molecular Metabolism; PLoS ONE; Obesity Reviews; The Journal of Clinical Endocrinology & Metabolism

EDITORIAL WORK

- 2013-14 Co-Guest Editor of Special issue of Biomed Research International on “Aging and Longevity between Genetic Background and Lifestyle Intervention”

PROFESSIONAL MEMBERSHIPS

- 01/03 – present Genetics Society of America
- 08/03 – present The Obesity Society
- 06/05 – present American Aging Association