

Curriculum Vitae

DAWN PENN BREWER, PhD, RD, LD

Professional Address: University of Kentucky
College of Agriculture, Food, and Environment
School of Human Environmental Sciences
Department of Dietetics & Human Nutrition

Address: 209 C Funkhouser Building, Lexington, KY, 40506
Phone (office) 859-257-1661
Email: dawn.brewer@uky.edu

CURRENT POSITION

University of Kentucky, Lexington, KY

Assistant Professor & Didactic Program in Dietetics (DPD) Director January 2014 – Present

- **DPD Director**

Duties include evaluation of DPD program, survey development, data collection, analysis and reporting. Responsibilities also include, advise, mentor, and assist student in dietetic education, internship applications, research projects, and student organization activities.

- **Teaching.** Manage all aspects of courses including the development of the syllabus, course materials, and assignment of grades. Courses include:

“Chronic Disease Management and Process” DHN 608 Fall 2015

This course focuses on the etiology and pathophysiology of nutrition-related chronic disease and conditions including obesity, dyslipidemia, heart disease, diabetes and cancer. Emphasis is placed on the biochemical and physiological mechanisms involved by which nutrients impact the prevention and progression of chronic diseases and conditions.

“Nutritional Biochemistry” DHN 311 Fall 2013 - present

The course is the introductory study of the biochemical basis of nutrition-the physiochemical properties of nutrients and other essential biochemical and their role in physiological and metabolic processes.

“Nutritional Biochemistry Workshop” HES 300 Fall 2014 - present

The course reinforces the material learned in DHN 311 by giving the students the opportunity to ask questions.

“Dietetics Practice”, DHN 301 Fall 2012, 2013, 2014

The course provides an overview of dietetic practice including professional ethics, standards of practice, scope of practice, educational pathways, credential attainment and maintenance, competencies required for entry level practice, responsibilities as a professional, and exploration of dietetics practice in medical nutrition therapy, food service management and delivery of nutrition services.

“Research in Nutrition: Application”, DHN 475 Spring 2014

The course allows students to design a research study, write a grant, prepare a comprehensive literature review, design a survey, conduct statistical analyses on collected data, and prepare a professional article and poster to present at University and regional events.

“Food Service Sanitation”, DHN 241 Summer and Fall 2013, Spring 2014

The course covers the principles of food microbiology, important food borne diseases, standards that are enforced by regulatory agencies, and applied measures for the prevention of food borne diseases and other microbiological problems. It leads to certification from the National Restaurant Association.

“Dietetics Pre-Professional Practice”, DHN 480 Spring and Summer 2013, 2014
The course provides the opportunity for students to gain pre-professional experiences that are designed to allow students to apply knowledge and skills assessing, planning, implementing, and evaluating nutrition care delivery systems.

ACADEMIC HISTORY

University of Georgia, Athens, GA

Ph.D in Foods and Nutrition

August 2009

Dissertation “Obesity-related comorbidities, disability, physical inactivity, and food insecurity in Georgia senior centers”

Research focus:

Community research:

- Characterized the relationship between obesity and related comorbidities, physical activity, poor physical function and food insecurity among older Georgians participating in congregate meal site programs throughout Georgia.

Basic science research:

- Earlier research experience focused on studying the effect of serum from leptin-treated animals fed diets differing in macronutrient content, in various stages of leptin resistance on fat cell metabolism in vitro. Also, investigated the relationship among leptin, the sympathetic nervous system and changes in adipose tissue within rat models.

University of Georgia, Athens, GA

M.S. in Foods and Nutrition

August 2003

Thesis: “Effects of the phytochemicals quercetin and genistein on phase I and phase II enzyme activities”

Iowa State University, Ames, IA

Dietetic Internship

June 2001

Completed the Commission on Accreditation for Dietetics Education (CADE)

The Pennsylvania State University, University Park, PA

B.S. Nutrition Science and Applied Dietetics

December 2000

Areas of Concentration: community, clinical, food service, and basic science aspects of nutrition

RELATED WORK EXPERIENCE

The Centers for Disease Control and Prevention (CDC), Atlanta, GA

CDC Public Health Prevention Service (PHPS) Fellow October 2009 – July 2012

Assigned to West Virginia State Health Department October 2010 – July 2012

PHPS Field Assignment Projects with West Virginia State Health Department:

Evaluation of The Coordinated Chronic Disease Program Integration:

- Designed a process evaluation plan, using the CDC’s Evaluation Framework, to assess the transition of six chronic disease programs into a coordinated chronic disease prevention and health promotion program.

DAWN PENN BREWER, PhD, RD, LD

- The programs include Cardiovascular Health, Comprehensive Cancer, Diabetes Prevention, Asthma Prevention, Osteoporosis and Arthritis Prevention, and the Healthy Lifestyles Program.

Community Health Needs Assessment and Health Action Plan:

- Managed efforts to conduct a community health needs assessment, using the CHANGE tool, in a city with a population of 4,300 people.

Osteoporosis and Arthritis Program Management

- Developed staffing, budget, and work plans to allocate the \$250,000 budget to support osteoporosis and arthritis prevention and management policy, systems, and environmental change strategies in West Virginia.

West Virginia WISEWOMAN Program Evaluation and Other Activities:

- Developed and implemented data collection instruments to evaluate the use and effectiveness of the cardiovascular-focused lifestyle intervention, Cookin' Up Health, used by the West Virginia Well Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) program. The surveys were designed to collect information from current participants, WISEWOMAN healthcare providers, and WISEWOMAN-eligible participants.

CDC PHPS Training Rotation

April 2010 – September 2010

National Center for Environmental Health, Division of Emergency and Environmental Health Services, Healthy Community Design Initiative, Atlanta, GA:

- Proposed and drafted descriptions of evidence-based built environment indicators to include on the National Environmental Public Health Tracking Network. The indicators focused on nutrition, physical activity, housing age, crime, air pollution and injury.

CDC PHPS Training Rotation

October 2009 - April 2010

National Center for Chronic Disease Prevention and Health Promotion, Division for Heart Disease and Stroke Prevention, Atlanta, GA:

- Proposed and designed a project to analyze the differences in macronutrient content of low-sodium processed foods versus their regular counterpart using the USDA nutrient database.
- Designed an evaluation plan using the CDC's Evaluation Framework to evaluate the use and effectiveness of the Community Health Worker's Sourcebook, a Training Guide for Heart Disease and Stroke Prevention. Developed appropriate indicators, data collection instruments, and data analysis methods to accurately assess the evaluation questions.

TEACHING EXPERIENCE

University of Kentucky, Lexington, KY

Lecturer & Didactic Program in Dietetics (DPD) Director July 2012 – December 2013

- Manage all aspects of Didactic Program in Dietetics including the development of the 10-year re-accreditation report and overseeing and organizing the onsite evaluation. Duties also include evaluation of DPD program, survey development, data collection, analysis and reporting. Assist students in completing DICAS application process.
- Manage all aspects of courses including the development of the syllabus, course materials, and assignment of grades. Courses include:

"Nutritional Biochemistry" DHN 311 Fall 2013

"Food Service Sanitation", DHN 241 Summer and Fall 2013

"Introductory Nutrition", DHN 212 Spring 2013

"Human Nutrition & Wellness", DHN 101 Spring 2013

"Dietetics Pre-Professional Practice, DHN 480 Spring and Summer 2013

"Dietetics Practice", DHN 301 Fall 2012, 2013

"Nutrition and Wellness in the Life Cycle", DHN 312 Fall 2012

University of Georgia, Athens, GA

Instructor

June 2008 – July 2008

"Human Nutrition and Food for Health Professionals", FDNS 3000

- Managed all aspects of the nutrition course by developing the syllabus, all course materials and assigned grades for a short summer session class.

University of Georgia, Athens, GA

Instructor

July 2005 – August 2005

"Human Nutrition and Food", FDNS 2100

- Managed all aspects of the nutrition course by developing the syllabus, all course materials and assigned all grades for a short summer session class.

University of Georgia, Athens, GA

Teaching Assistant

August 2001 – July 2003

"Human Nutrition and Food", FDNS 2100

- Taught lectures in the absence of the instructor.
 - Created exams to assess students' understanding of lecture material.
 - Provided technical assistance to students by answering any class-related questions by email, phone or in person.
-

OTHER EXPERIENCE

Veterans Affairs Medical Center / Duke University, Durham, NC

Clinical Research Assistant/Dietitian

June 2004 – June 2005

- Investigated the safety, efficacy, and compliance of VA patients following a low-carbohydrate diet versus a low-fat diet plus the drug Orlistat.
- Screened and recruited patients for the study. The screening process involved explaining the purpose of the study, demonstrating how to fill out a 3-day food diary, and obtaining physical measurements such as weight, percent body fat, blood pressure, ketones, and waist circumference.
- Created low-carbohydrate lesson plan handouts to teach patients the principles of the low-carbohydrate diet.
- Taught veterans, in group sessions, how to follow the low-carbohydrate diet, explained the principles of the diet, and provided suggestions to overcome barriers to following the diet.
- Provided input about the experimental design.
- Collected and organized data.

University of Georgia, Athens, GA

Research Technician II

August 2003 – May 2004

- Investigated the relationship among leptin, the sympathetic nervous system, changes in adipose tissue and other biochemical markers within male Sprague-Dawley rats.
- Performed surgeries on rats, collected tissue samples, monitored their food intake and body weight.
- Conducted techniques such as RNA isolation, DNA extraction, Northern blots, various serum assays and radioimmunoassays.
- Assisted in the development of future experiments and interpreted data.
- Prepared manuscripts for publication.
- Trained graduate students and student workers in the use and operation of laboratory techniques and equipment.

The Pennsylvania State University, University Park, PA

Laboratory Assistant

June 1999 – December 2000

- Conducted research in the area of iron deficiency using male Sprague-Dawley rats.
 - Analyzed and processed data.
 - Trained students how to measure serum ferritin, transferrin, hemoglobin, and hematocrit levels, and tissue iron levels using a spectrophotometer.
 - Assisted in the collection of tissue samples and cared for animal models.
-

PUBLICATIONS

- **Brewer D** and Stephenson T. Innovative Approach to Higher-level Learning of Complex Concepts in a Rigorous Nutritional Biochemistry Course. Submitted July 2015 to the North American Colleges and Teachers of Agriculture (NACTA) Journal.
 - **Brewer DP**, Catlett CS, Porter KN, Lee JS, Hausman DB, Reddy S, Johnson MA (2010). Physical Limitations Contribute to Food Insecurity and the Food Insecurity-obesity Paradox in Older Adults at Senior Centers in Georgia. *Journal of Nutrition for the Elderly*; April: 29(2): 150 - 169.
 - **Penn DM**, Fischer JG, Lee JS, Hausman DB, and Johnson MA (2009). High BMI and Waist Circumference are Associated with a High Prevalence of Comorbidities in Older Americans Act Programs in Georgia Senior Centers. *The Journal of Nutrition, Health, and Aging*; 13:827 - 32.
 - Johnson MA, Park S, **Penn D**, McClelland JW, Brown K, and Adler A (2008). Nutrition Education Issues for Older Adults. *The Forum for Family and Consumer Issues*, ISSN 1540 5273; Vol 13 (3).
 - **Penn DM**, Jordan LC, Kelso EW, Davenport JE, and Harris RB (2006). The effects of central or peripheral leptin administration on norepinephrine turnover in defined fat depots. *American Journal of Physiology: Regulatory, Integrative, and Comparative Physiology*; 291(6): R1613-21.
 - **Penn DM**, Rooks CR, and Harris RBS. *Leptin: A metabolic perspective. Handbook of contemporary Neuropharmacology. John Wiley and Sons (2007).*
 - **Penn DM**, Rooks CR, Kelso EE, Bower RR, Bartness TJ, and Harris RB (2005), Sympathetic Denervation Does not Prevent a Reduction in Fat Pad Size of Rats or Mice Treated with Peripherally Administered Leptin. *American Journal of Physiology: Regulatory, Integrative, and Comparative Physiology* 289: R92-R102.
-

PRESENTATIONS

- **Brewer D** and Stephenson T. Innovative Approach to Higher-level Learning of Complex Concepts in a Rigorous Nutritional Biochemistry Course. Poster presentation, North American Colleges and Teachers of Agriculture (NACTA) Conference, June 2015.
- **Penn DM**, Lee JS, Hausman DB, Fischer JG, Reddy S, and Johnson MA. Obesity and poor physical function contribute to food insecurity in older adults in Georgia senior centers. Oral presentation, *Experimental Biology* 2009.
- **Penn DM**, and Harris RBS. The effect of leptin on adipocyte metabolism in leptin-responsive, partially leptin-resistant, and leptin-resistant animals. Abstract #71, *Society for the Study of Ingestive Behavior* 2007.
- **Penn DM**, White J, Kelso EW, Harris RBS. Sympathetic denervation of specific white fat depots modifies size and norepinephrine content of distant intact depots. Abstract #78, *Society for the Study of Ingestive Behavior*. 2006
- **Penn DM** and Harris RBS. Central leptin and food restriction induced fat loss in certain fat pads without the sympathetic nervous system. Abstract #129.5, *Experimental Biology* 2006.

- **Penn DM**, Rooks CR, Kelso EE, Bower RR, Bartness TJ, and Harris RB. Denervation of one epididymal pad decreases leptin sensitivity of other fat pads in rats. Abstract #1282, Experimental Biology 2004.

- Governo AC, **Penn DM**, Power JD, and Fischer JG. Genistein supplementation increases liver glutathione peroxidase activity in Sprague-Dawley rats. Abstract #3814, Experimental Biology, April 2004.
- Penn DM, Power JD, and Fischer JG. Effects of the Phytochemicals, Quercetin and Genistein, on Phase I and Phase II Enzyme Activities.
 - Poster Presentation Abstract #693.4, Experimental Biology, April 2003.
 - Oral and Poster Presentation, Georgia Nutrition Council, March 2003.
 - Poster Presentation, Georgia Cancer Coalition, June 2002.

INVITED PRESENTATIONS

- **Brewer DP**. A Perspective on Aging: Inflamm-aging and Chronic Disease. Oral presentation, Bluegrass Academy of Nutrition and Dietetics regional meeting, January 2014.
- **Brewer DP**. Knowing Just Enough To Be Healthy. Oral presentation, West Virginia Women's Health Conference, May 2011.

GRANTS

4/01/2015 – 03/31/2016 National Institute of Environmental Sciences: Superfund Hazardous Substance Research and Training Program – Core D2 Expansion Core, 5 P42 ES007380-16 (Core Leader 5%), total \$30,500, **awarded** April 2015

3/31/14 – 3/31/2019 National Institute of Environmental Sciences: Superfund Hazardous Substance Research and Training Program – Core D Community Engagement Core, 5 P42 ES007380-16 (Co-Core Leader 16.5%), total \$500,000, **awarded** April 2014

9/30/2014- 9/30/2017 Programs to Reduce Obesity in High Obesity Areas (Co-PI, 5%), CDC, total indirect \$429782, total direct \$1,364,385 **awarded** September 2014

10/1/2014 – 9/30/2016 Supplemental Nutrition Assistance Program and Expanded Food and Nutrition Education Program: Regional Nutrition Education and Obesity Prevention Centers of Excellence (Co-PI 2%), USDA, total indirect \$15,908 Total direct \$159,089, **awarded** September 2014

HONORS and AWARDS

- Recipient of BGAND's Outstanding Dietetic Educator Award, 2015
- Recipient of the Teachers Who Make a Difference Award, 2014, 2015 (2 nominations)

CERTIFICATIONS and SKILLS

- Registered Dietitian, September 2001 – present
- Licensed Dietitian, August 2008 – present
- Computer Skills: Proficient in MS Word, Power point, Excel and Epi Info. Working knowledge of Statistical Analysis Software (SAS), Statistica Software and MS Access

PROFESSIONAL ORGANIZATIONS

- Academy of Nutrition and Dietetics, June 2012 – present
- Kentucky Academy of Nutrition and Dietetics, June 2012 – present
- Bluegrass District Dietetic Association, July 2012 - present