

## **Kristi Crowe-White, PhD, RD**

University of Alabama

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### **Academic Preparation**

B.S.	Nutrition	Samford University, 2000
M.S.	Food Science & Nutrition	University of Maine, 2002
Ph.D.	Food Science & Nutrition	University of Maine, 2006
R.D.	Dietetic Internship	University of Alabama at Birmingham, 2009

National Science Foundation Fellowship University of Maine, 2003-2006

### **Scholarly Training and Appointments**

- Alabama Research Institute on Aging (ARIA), Faculty Associate 2016 – to present
- University of Alabama at Birmingham Geriatric Education Center's Faculty Scholars Program, 2015-2016
- Ultra-High Performance Liquid Chromatography (UPLC) Empower Training Course, Waters Corporation, MA, January 2015
- NIH Grant Writing Conference – National Institutes of Health, June 2013
- NIH Jr. Investigator's Program – University of Alabama, September 2011 – May 2012
- Nutrition Data System for Research (NDSR) Training – University of Minnesota, March 2011

### **Professional Work Experience**

- University of Alabama
  - Associate Professor of Nutrition August 2016 – to present
  - Assistant Professor of Nutrition August 2010 – August 2016
- Time, Inc. The Southern Progress Corporation 2007- 2009
  - Food Chemist

### **Research Focus**

As a food chemist and dietitian, my research focuses on evaluating bioactive food compounds to assess

- **Aim 1** - their ability to influence oxidative and inflammatory stress as underlying mechanisms of cardio-metabolic diseases and mitigating mechanisms in vascular health
- **Aim 2** - the impact of food production and processing on their retention and bioactivity

### **Funded Research - External**

- **Crowe-White KM**, Ellis A. (2016-2017). *Bioactive Compounds in Watermelon Juice Modulating Oxidative Stress and Inflammation in Elders: the MOXIE Study*. American Heart Association Mentored Clinical and Population Research Award - \$154,000.
- Allison D, **Crowe KM**. (2013-2014). *Functional Foods: Issues in Evaluating Bioactive Food Components in Obesity and Cancer Prevention*. NIH R13 National Cancer Institute, Office of Dietary Supplements – PA-10-071 - \$48,366.
- Allison DB, **Crowe KM**. (2012). *Scientific Approaches for Increasing Research Integrity in Nutrition and Energetics*. The Coca-Cola Company Conference Grant - \$150,000.

- **Crowe KM**, Lawrence J, Meyer MK. (2012-2013). *Improving Dietary Protein Intake among Residents of Long-Term Care Facilities through the Development and Sensory Testing of Protein-Enhanced Soups*. Nestlé USA - \$5,000.
- Bullard A, **Crowe KM**, Johnson C. (2011). *Biomarker Prospecting: DHOS hydrocarbon and dispersant discharge in the Gulf of Mexico using Gulf killifish as an aquatic model sentinel for aquatic and human physiological response to toxicants*. British Petroleum Co. Gulf of Mexico Research Initiative - \$153,976.

#### **Funded Research - Internal**

- Ellis A, **Crowe-White KM (Co-I)**, Locher J. (2014-2015). *Bioactive Compounds in Watermelon Modulating Oxidative Stress and Inflammation in Elders: The MOXIE Study*. University of Alabama System Collaborative Research Initiative Grant - \$2,500.
- **Crowe KM**. (2012-2014). *Mitigating Obesity-Related Sequelae: Does Dietary Antioxidant Intake Matter?* Research Grants Committee, University of Alabama - \$6,000.
- **Crowe KM**. (2012). *Phenolic Content and Antioxidant Density of Solid Fruit versus 100% Juice Servings*. Crenshaw Endowed Research Grant, University of Alabama - \$2,000.
- **Crowe KM**. (2011). *Impact Assessment of Flavonoids on Oxygen Radical Absorbance Capacity (ORAC) as a Biomarker of Oxidant Status*. Crenshaw Endowed Research Grant, University of Alabama - \$2,000.
- **Crowe KM**. (2010). Collaborative Learning Research Grant, University of Alabama - \$750.

#### **Peer-Reviewed Publications** (\* denotes student-mentored research)

1. **Crowe-White KM**, Parrott S, Stote K, et al. Metabolic Impact of 100% Fruit Juice Consumption on Lipid Profiles and Antioxidant/Oxidant Status of Adults: an Evidence-based Review. *Critical Reviews in Food Science and Nutrition*. In press, July 2016.
2. **Crowe-White KM**, O'Neil C, Parrott JS, et al. Impact of 100% Fruit Juice Consumption on Diet and Weight Status of Children: an Evidence-based Review. *Critical Reviews in Food Science and Nutrition*. 2016;56:871-884.
3. \*Donahue E, **Crowe KM**, Lawrence J. Sensory Evaluation of Protein-Enhanced Soups among Residents of Long-Term Care Facilities. *International Journal of Food Sciences and Nutrition*. 2015;66(1):104-107.
4. **Crowe KM**, Allison DB. Evaluating Bioactive Food Components in Obesity and Cancer Prevention. *Critical Reviews in Food Science and Nutrition*. 2015;55:732-734.
5. \***Crowe KM**, Murray E. Evaluating the Phenolic Content of Solid versus Beverage Forms of Select Fruit. *Journal of Nutritional Ecology and Food Research*. 2014;2:49-53.
6. **Crowe KM**. Optimizing Protein Precipitation Efficiency for Assessing the Contribution of Low Molecular Weight Compounds to Serum Antioxidant Capacity. *Clinical Biochemistry*. 2014;47:116-118.
7. **Crowe KM**, Newton J, Kaltenboeck B, Johnson C. Oxidative Stress Responses of Gulf Killifish Exposed to Hydrocarbons from the Deepwater Horizon Oil Spill: Considering Potential Implications on Aquatic Food Resources. *Environmental Toxicology and Chemistry*. 2014;33:370-374.
8. **Crowe KM**. Designing Functional Foods with Bioactive Polyphenols: Highlighting Lessons Learned from Original Plant Matrices. *Journal of Human Nutrition and Food Science*. 2013;1:1018-1019.
9. **Crowe KM**, Francis C. The Academy of Nutrition and Dietetics Position Paper on Functional Foods. *Journal of the Academy of Nutrition and Dietetics*. 2013;113:1096-1103.

10. \***Crowe KM**, Murray E. Deconstructing a Fruit Serving: Comparing the Antioxidant Density of Whole Fruit versus 100% Fruit Juice. *Journal of the Academy of Nutrition and Dietetics*. 2013;113(10):1354-1358.
11. Ellis A, **Crowe KM**, Lawrence J. Obesity-related Inflammation: Implications for Older Adults. *Journal of Nutrition in Gerontology and Geriatrics*. 2013;32:263-290.
12. \*Breshears K, **Crowe KM**. Sensory and Textural Evaluation of Gluten-Free Bread Substituted with Amaranth and Montina™ Flour. *Journal of Food Research*. 2013;2(4):1-10.
13. Neggers YN, **Crowe KM**. Prenatal Care and other Risk Factors Associated with Low Birth Weight: A Comparative Assessment between Cuba and Alabama. *Journal of the American Board of Family Medicine*. 2013;26(2):187-195.
14. **Crowe KM**, Skonberg D, Bushway A, Bushway R. Application of ozone sprays as a strategy to improve the microbial safety and quality of salmon fillets. *Food Control*. 2012;25:464-468.
15. **Crowe KM**, Bushway A, Davis-Dentici K. Impact Of Postharvest Treatments, Chlorine And Ozone, Coupled With Low-Temperature Frozen Storage On The Antimicrobial Quality Of Lowbush Blueberries (*Vaccinium angustifolium*). *LWT – Food Science and Technology*. 2012;47:213-215.
16. **Crowe KM**, Bushway A, Bushway R, Hazen R. Evaluation of Chemical and Photochemical Oxidation Processes for Degradation of Phosmet on Lowbush Blueberries (*Vaccinium angustifolium*). *Journal of Agriculture & Food Chemistry*. 2006;54:9608-9613.
17. **Crowe KM**, Bushway A, Bushway R, Davis-Dentici K. Microbial Degradation of Phosmet on Blueberry Fruit and in Aqueous Systems by Indigenous Bacterial Flora on Lowbush Blueberries (*Vaccinium angustifolium*). *Journal of Food Science*. 2007;72:293-299.
18. **Crowe KM**, Bushway A, Bushway R, Davis-Dentici K. Comparison of Single Oxidants versus Advanced Oxidation Processes as Chlorine-Alternatives for Wild Blueberry Processing. *International Journal of Food Microbiology*. 2007;116:25-31.
19. **Crowe KM**, Bushway A, Bushway R. Effects of Alternative Postharvest Treatments on the Microbiological Quality of Lowbush Blueberries. *International Journal of Fruit Science*. 2005; 4:29-39.

#### **Invited Peer-Reviewed Book Chapters and Position Papers**

- **Crowe-White KM**, Francis C. Functional Foods in Diet Therapy. In: Mullin G, Marian M. *Integrative Nutrition Therapy*. New York, NY: Taylor and Francis-CRC Press; 2016.
- **Crowe KM**, Francis C. The Academy of Nutrition and Dietetics Position Paper on Functional Foods. *Journal of the Academy of Nutrition and Dietetics*. 2013;113:1096-1103.
- **Crowe KM**. White Paper on Umami in Foods. *Academy of Nutrition and Dietetics Evidence Analysis Library*. 2013. <http://www.adaevidencelibrary.com/default.cfm?library=EAL&home=1>

#### **Web-based Peer-Reviewed Publications**

- **Crowe-White KM**, Hold J, Washington L. “Exercising Autonomy in Geriatric Palliative Care.” The Deep South CME Network, UAB Division of CME, Geriatric-Focused CME Courses. <http://www.alabamacme.uab.edu/geriatrics.aspx> July 2016.

### **Peer-Reviewed Oral Presentations** (\* denotes student-mentored research)

1. \***Crowe KM**, Murray E. *Provision of Phenolic Phytochemicals by 100% Fruit Juice*. Accepted for presentation at the Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo, October 2014.
2. \*Donahue E, **Crowe KM**, Lawrence J. *Increasing Dietary Protein Provision among Older Adults using Protein-Enhanced Soups*. Accepted for presentation at the Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo, October 2014.
3. **Crowe KM**, Johnson C, Newton J, Bullard A. *Hydrocarbon-induced Biomarker Responses in Gulf Killifish, *Fundulus grandis*, as an Aquatic Gulf of Mexico Sentinel*. Gulf of Mexico Oil Spill and Ecosystem Science Conference, January 2013.
4. Glagola-Dunn C., Knol L., Robb C. A., **Crowe, K.** *The Monetary Impact of Grocery Tax in Alabama on Fruit and Vegetable Purchases in a Variety of Demographics*. American Council on Consumer Interests National Conference, April 2012.
5. **Crowe KM**, Knol L. *Influence of Meal Location and Family Meals on Carotenoid Intake among U.S. Children*. Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo, September 2011.
6. **Crowe KM**, Bushway A, Bushway R. *Evaluation of Ozone as a Single and Synergistic Oxidant for Improvement of Chemical and Microbial Safety of Lowbush Blueberries (*Vaccinium angustifolium*)*. International Ozone Association Sustainable Agriculture Conference, October 2007.
7. **Crowe KM**, Bushway A, Bushway R, Dentici K. *Degradation of Phosmet and Improvement of Microbial Quality through Postharvest Application of Ozone, Hydrogen Peroxide, and UV*. Institute of Food Technologists Annual Meeting, June 2006.

### **Peer-Reviewed Poster Presentations** (\* denotes student-mentored research)

1. Crowe-White KM, Ellis A, Locher J, et al. *Relationship between Cardiometabolic Disease Risk Staging and Serum Antioxidant Capacity in Obese Older Adults*. Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo, October 2016.
2. \*Gibson M, **Crowe-White KM**. *Effects of Processing on the Phytochemical Profile and Antioxidant Capacity of Four Honey Varietals*. Institute of Food Technologists Annual Meeting, July 2015.
3. Ellis A, **Crowe-White KM**. *Dietary Acidity/Alkalinity and its Relationship with Bone Health among Older Adults*. Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo, October 2015.
4. \*Foster A, **Crowe-White KM**, Knol L, Singh R. *Expanding Dietary Offerings for Individuals with Phenylketonuria through Sensory Evaluation of Low-Protein Foods with Glycomacropeptide-based Medical Formula*. Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo, October 2015.
5. Skonberg D, **Crowe KM**, Bushway A, Baxter S. *Efficacy of Ozone Against *Listeria innocua* on Raw Salmon Fillets*. Institute of Food Technologists Annual Meeting, July 2007.
6. **Crowe KM**, Bushway A, Bushway R, Dentici K, Perkins B. *Degradation of Phosmet through Microbial Mineralization and Postharvest Application of Hydrogen Peroxide and UV*. Pacifichem International Chemical Congress, December 2005.
7. **Crowe KM**, Bushway A, Bushway R. *Effects of Chemical and Photochemical Oxidation Processes on the Microbial Population and Pesticide Residues of Lowbush Blueberries*. Institute of Food Technologists Annual Meeting, July 2005.

8. **Crowe KM**, Bushway A, Leathem W. *Incorporation of Food Chemistry into the Secondary Educational System through the NSF GK-12 Program at the University of Maine*. Institute of Food Technologists Annual Meeting, July 2005.
9. **Crowe KM**, Bushway A, Bushway R. *Postharvest Hydrogen Peroxide Applications for Lowbush Blueberries (Vaccinium angustifolium)*. Institute of Food Technologists Annual Meeting, July 2004.
10. **Crowe KM**, Morcom M, Bushway A. *Enhancing Food Science Education through the National Science Foundation at the University of Maine*. Institute of Food Technologists Annual Meeting, July 2004.
11. **Crowe KM**, Bushway A, Bushway R, Perkins B. *Microbial Quality and Safety of Lowbush Blueberries (Vaccinium angustifolium) as Influenced by Traditional and Emerging Disinfectant Technology*. Institute of Food Technologists Annual Meeting, July 2003.
12. **Crowe KM**, Bushway A, Bushway R. *Effects of Postharvest Treatments on the Microbiological Quality and Pesticide Residues of Lowbush Blueberries*. Institute of Food Technologists Annual Meeting, June 2002.
13. Camire M, **Crowe KM**, Ghazanfar S, Dougherty M. *Daily Raisin Consumption Improves Serum Lipids*. Annual Conference of Experimental Biology, April 2002.

### **Invited Oral Presentations**

#### **International**

- Neggers Y, **Crowe KM**. *Nutrition in Pregnancy: Comparative Assessment of Emerging and Established Risk Factors including Dietary Antioxidant Intake and their Association with Low Birth Weight in Cuba and Alabama*. University of Havana and the College of San Geronimo, University of Alabama-Cuba Initiative, February 2012.

#### **National**

- **Crowe-White KM**. *Trans Fat in Foods Update*. Military Families Learning Network. <https://learn.extension.org/events/2356> February 2016.

#### **State**

- **Crowe, KM**. *The Adiposity Trap: Impact of Obesity on Circulating Levels of Antioxidants*. Alabama Dietetic Association Annual Meeting, March 2014.
- **Crowe KM**. *Functional Foods: Why Prescriptive Eating Matters*. Alabama Dietetic Association Annual Meeting, March 2012.

### **Thesis Committees**

1. Amelia Foster. *Sensory Comparison of Low-Protein Recipes with Glycomacropeptide-Containing BetterMilk™ among Adults with PKU*. Committee Chair (2013 – 2014)
2. Elizabeth Donahue. *Improving Dietary Protein Intake among Residents of Long-Term Care Facilities through the Development and Sensory Testing of Protein-Enhanced Soups*. Committee Co-Chair (2012 – 2013)
3. Caroline Glagola-Dunn. *Financial Impact of Grocery Tax on Fruit and Vegetable Purchases in Alabama*. Committee Member (2011 – 2012)

### **Mentored Graduate Student Research**

1. Hannah Haas Barnett – M.S. Nutrition. *Intake of omega-6:omega-3 PUFA and its Relationship with Cardiometabolic Risk Factors in a Racially Diverse Sample of Children.* Advisor for NHM 598 Independent Research Study, 2015 – 2016.
2. Karen Breshears – M.S. Nutrition. *Acceptability of Gluten-Free Bread Products Made with Nutritious Alternative Grains.* Advisor for NHM 598 Independent Research Study, (2011 – 2012).
  - o *Journal of Food Research.* 2013;2(4):1-10

### **Mentored Undergraduate Student Research**

1. Anna Bragg – Nutrition Major. *Cardiometabolic Disease Staging and Inflammatory Status in Obese Older Adults.* Advisor for Undergraduate Research Mentorship 2016.
  - o Poster presentation at the University of Alabama Undergraduate Research and Creative Activity Conference 2016.
2. Rainey Gerald – Nutrition Major. *Accuracy of Dietary Recalls and Food Frequency Questionnaires in Determining Nutrient Intake.*
  - o Poster presentation at the University of Alabama Undergraduate Research and Creative Activity Conference 2016.
3. Reagan Hattaway – Nutrition Major. *Phenolic and Flavonoid Content of Phyllostachys aurea.* Advisor for the University of Alabama’s Emerging Scholar Program 2015-2016.
  - o Poster presentation at the University of Alabama Undergraduate Research and Creative Activity Conference 2016.
4. Mary Clay Kline – Journalism Major. *Phenolic and Flavonoid Content of Phyllostachys aurea.* Advisor for the University of Alabama’s Emerging Scholar Program 2015-2016.
  - o Poster presentation at the University of Alabama Undergraduate Research and Creative Activity Conference 2016.
5. Madeline Gibson – Chemical Engineering Major. *Characterizing the Phenolic Profile of Raw and Pasteurized Honey.* Advisor for the University of Alabama’s Emerging Scholar Program 2014-2015.
  - o Peer-reviewed poster presentation at the Institute of Food Technologists Annual Meeting 2015 in the Food Chemistry Division
  - o Poster presentation at the University of Alabama Undergraduate Research and Creative Activity Conference 2015
6. Mary Muffly – Chemistry Major. *The Acid-Base Hypothesis: Dietary Protein and Bone Health among Older Adults.* Advisor for the University of Alabama’s Emerging Scholar Program 2014-2015.
  - o Poster presentation at the University of Alabama Undergraduate Research and Creative Activity Conference 2015
7. Elizabeth Murray – Nutrition Major. *Phenolic Content and Antioxidant Density of Solid Fruit versus 100% Fruit Juice.* Advisor for NHM 491 – Directed Independent Study (May - August 2012).
  - o *Journal of the Academy of Nutrition and Dietetics* 2013;113:1354-1358
  - o *Journal of Nutritional Ecology and Food Research* 2014;2:49-53
  - o Poster presentation at the University of Alabama Undergraduate Research and Creative Activity Conference 2013

## **Teaching Experience and Course Development**

- NHM 253 Food Science
- NHM 395 Research Methods in Food and Nutrition
- NHM 454 Experimental and Functional Foods
- NHM 491 Directed Independent Study
- NHM 499 Undergraduate Research
- NHM 558 Nutrition in the Prevention and Treatment of Chronic Disease

## **Course Development for Online Delivery**

- NHM 253 Food Science and Lab
- NHM 454 Experimental and Functional Foods
- NHM 558 Nutrition in the Prevention and Treatment of Chronic Disease

## **Professional Service Positions**

- **Academy of Nutrition and Dietetics** (*all appointed positions*)
  - Council on Research, 2016-2017
  - Evidence-Based Practice Committee, 2015-2018
    - Committee Chair, 2016-2017
    - Workgroup Selection Sub-Committee, 2015-2018
  - Evidence Analysis Library – Chair, Dietary and Metabolic Impact of Fruit Juice Consumption, 2013-2014
  - Evidence Analysis Library - Chair, Umami in Healthy Eating, 2012-2014
  - Evidence Analysis Library - Member, Umami in Foods, 2011-2013
  - Co-author of the Academy position paper on functional foods. *J Acad Nutr Diet.* 2013;113:1096-1103.
- **Editorial Board Appointments**
  - *Journal of Human Nutrition and Food Science*, June 2013 – present
- **Invited Reviewer**
  - *Journal of the Academy of Nutrition and Dietetics*
  - *Journal of Ozone Science and Engineering*
  - USDA SBIR Phase I Food Science and Nutrition Program Grants
- **Institute of Food Technologists**
  - Food Science Ambassador, 2007 – present
  - Food Science Media Team, 2012 – present
  - Outstanding Section Volunteer, 2010
  - Nutrition Division Research Reviewer, 2008-2012
  - Southeast Section Chair, 2009-2010
- **University of Alabama**
  - Institutional Biological Safety Committee Chair, 2012 – present
  - Food Science Club Chair, 2014 – present

- **Advisory Boards**
  - Alabama Obesity Initiative Conference Committee Chair, 2010 – present
  - Samford University Department of Nutrition Advisory Board, 2007 – present

### **Professional Memberships**

- Academy of Nutrition and Dietetics, 2009 - present
- Alabama Obesity Initiative, 2010 - present
- American Chemical Society, 2006 - present
- Institute of Food Technologists, 2001- present
- Kappa Omicron Nu Honor Society, 1999 - present
- Phi Kappa Phi Honor Society, 2003 - present
- Phi Tau Sigma Honor Society, 2001 - present

### **Honors and Awards**

- University of Alabama President's Faculty Research Award, March 2016
- University of Alabama College of Human Environmental Sciences Leadership Board Excellence in Scholarly Research Award, October 2015
- Academy of Nutrition and Dietetics Foundation Margaret D. Simko Memorial Award for Excellence in Clinical Poster Session, 1<sup>st</sup> runner up, October 2015
- University of Alabama at Birmingham Outstanding Alumni in Nutrition Spotlight, 2012
- University of Maine Dow, Griffee, & Clements Outstanding Graduate Research Award, 2005
- Institute of Food Technologists Food Product Development Competition
  - First Place, University of Maine YoBon Berry Bites, 2006
- Northeast Region Institute of Food Technologists Graduate Scholarship (4), 2003-2006
- Phi Mu Women in Science Graduate Research Scholarship (2), 2004-2006
- Proctor & Gamble Co. Graduate Research Fellowship, 2005-2006
- University of Maine Department of Food Science & Human Nutrition Graduate Research Scholarship, 2002 & 2004