

# Ayse G. Zengul

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## RESEARCH INTEREST

Technology use in health coaching for the treatment and management of chronic diseases, developing personalized nutrition recommendation systems for vulnerable populations. Themes and trends in cancer research and nutrition sciences.

## EDUCATION

Ph.D., Nutrition Sciences The University of Alabama at Birmingham	2019 - Present
Masters of Science, Nutrition Sciences, The University of Alabama at Birmingham	2017 - 2019
Bachelors of Science, International Studies The University of Alabama at Birmingham • Second Major: English with Literature Concentration	2008 - 2013

## HONORS AND AWARDS

Howerde E. Sauberlich Endowed Award for excellent in nutrition science research	2019
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## RESEARCH EXPERIENCE

<b>Developing a Personalized Nutrition Recommendation System</b> <i>UAB Department of Nutrition Sciences</i> Lead a project to develop a personalized nutrition recommendation system for people with disabilities by aiming to determine user preferences, evaluate usability and preliminary efficacy of the system.	2020-Present
<b>Technology Use in Health Coaching for Diabetes</b> <i>UAB Department of Nutrition Sciences</i> Conduct a scoping review to address the literature on technology use in health coaching for diabetes and to map out the breadth of evidence for future implementations.	2019-Present
<b>Artificial Intelligence Supported Health Coaching Platform for Glycemic Control</b> <i>UAB Department of Health Informatics</i> Coordinate and assist in content development of a telehealth intervention for diabetic patients with disabilities. Contributed to drafting the related grant proposal.	2019-Present
<b>Themes and Trends in Top Cancer Journals: A Latent Semantic Analysis</b> <i>UAB Department of Nutrition Sciences</i> Incorporated the natural language processing and text mining approach in cancer research. Performed latent semantic analysis by analyzing the abstracts from the top-20 cancer journals over ten years.	2019-Present
<b>Prevention through Intervention Program for Hypoglycemia</b> <i>UAB Department of Health Informatics</i>	2019-2020

Assisted drafting a manuscript which aimed to standardize the intervention protocol (using evidence based content) for the Prevention through intervention program with a specific focus on hypoglycemia by using telehealth to facilitate tailoring of the intervention to meet the precise educational needs of the participants.

### **Associations Between Gut Hormones and Insulin Secretion**

2018-Present

*UAB Department of Nutrition Sciences*

Lead a project that investigates associations between gut hormones and insulin secretion in prepubescent offspring who were exposed to gestational diabetes.

### **Social Media for Health Behavior Change**

2018-2019

*UAB Department of Health Informatics*

Assisted in organizing and drafting a scoping review which examined the role of social media in health behavior change.

### **Cardiometabolic Disease Staging System**

2018 – 2019

*UAB Department of Health Service Administration*

Assisted drafting a grant proposal entitled, “Cardiometabolic Disease Staging System to Improve Medical Management of Obesity and Diabetes in Primary Care Settings: A Pilot Pragmatic” for the first level of review for the UAB Diabetes Pilot & Feasibility Program for funding.

### **Associations Between Dietary Fiber, Fecal Microbiota and Estrogen Metabolism**

2017 – 2019

*UAB Department of Nutrition Sciences*

Explored the associations between dietary fiber, the fecal microbiota and estrogen metabolism in postmenopausal women with breast cancer. Conducted the statistical analysis and drafted the manuscript.

### **Energy Balance and Body Weight Regulation**

2016 – 2017

*UAB Department of Medicine, Division of Endocrinology, Diabetes & Metabolism*

Gained hands-on experience in genotyping, western blotting, cell culture, and animal care as an undergraduate volunteer at the laboratory. Assisted in sorting and selecting high quality images for studies and proposals.

## **PUBLICATIONS**

### **Under review**

**Zengul, A.** Demark-Wahnefried, W., Barnes, S., Morrow, C., Bertrand, B., Berryhill, T., Fruge, A. 2018, Associations between Dietary Fiber, the Fecal Microbiota and Estrogen Metabolism in Postmenopausal Women with Breast Cancer, *Nutrition and Cancer Journal*

### **In Progress**

Zengul, A, Tucker, A., Chandler-Laney, C., 2020 Intrauterine Exposure to Gestational Diabetes: Associations Between GLP-1, Ghrelin and Insulin Secretion in Prepubescent Offspring

Zengul, A. Zengul, F., 2020 The Themes and Trends in Top Cancer Journals: A Latent Semantic Analysis

Thirumalai, M., Zengul, A., 2020 Social Media for Health Behavior Change: A Scoping Review

Thirumalai, M., Zengul, A., 2020 A Review of Technology Use in Health Coaching for Diabetes

## **PRESENTATIONS**

**Zengul, A.**, Tucker, A., Chandler-Laney, C., Dysregulation among GLP-1, Ghrelin and C-Peptide among Children Exposed to Gestational Diabetes in Utero. Oral presentation, Annual UAB Diabetes Research Day, Birmingham, AL, May 7, 2019.

## **INTERNSHIPS**

### **Cancer Research Experiences for Students (CaRES)**

Summer 2018

*University of Alabama at Birmingham*

Attended seminars and other educational activities. Developed and presented a research poster in the 2018 CaRES Poster Session. Prepared a manuscript titled: Associations between Dietary Fiber, the Fecal Microbiota and Estrogen Metabolism in Postmenopausal Women with Breast Cancer.

## **LANGUAGES**

- Turkish: Fluent
- Arabic: Good