

# HALEY OVERBY, Ph.D.

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## PERSONAL STATEMENT AND QUALIFICATIONS

Scientific researcher possesses considerably developed analytical, research, reporting, professional, and administrative skills. Seeking full time scientific-based writing and illustration career opportunities with an innovative, challenging, and responsible company.

- A proactive and hardworking team player able to work on own initiative with proven ability to manage multiple projects in a fast-paced work environment.
  - Skilled communicator with professional and organized obtaining and reporting skills able to make well thought out decisions and suggest ideas.
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## RESEARCH AND PROFESSIONAL EXPERIENCE

### **Graduate Research Assistant, Department of Nutrition, University of Tennessee 2015-2019**

- Enhanced and honed in research, problem-solving, and time management skills through leadership of multiple laboratory bench studies.
- Performed and learned wet lab (cell culture) and molecular biological experimentation.
- Trained faculty and students in laboratory safety, molecular biology experimentation, equipment use, and study design.
- Managed inventory use and reordering.
- Implemented Bio-Safety and IACUC protocols to maintain compliance.
- Presented original cell biology research at international conference (Experimental Biology).

### **Graduate Teaching Assistant, Department of Nutrition, University of Tennessee 2016-2019**

- Conceived and developed nutrition analysis software program and related assignments.
- Designed and generated diagrams, figures, & instructional technology for online nutrition textbook.
- Taught introductory nutrition and metabolism in class and online.
- Taught application-based lessons designed to improve student skill set and metacognition.

*Previous experience in management and as a dietary technician. Enquire for Resume for more details.*

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## EDUCATION

### **Cellular and Molecular Nutrition, Ph.D., University of Tennessee at Knoxville**

Graduation Date: **December 2019**

GPA: 3.84 / 4.0

- *Honors & Scholarships:* Chancellor's Fellowship (4-Year Prestigious Scholarship August 2016-2019), and Shipley-Swann Graduate Fellowship (Fall 2018 – Spring 2019)
- Graduate Nutrition Student Association President 2015-2016

### **Nutrition and Food Sciences – Dietetics, B.S., Middle Tennessee State University**

Graduation Date: **May 2015**

GPA: 3.79 / 4.0

- *Honors:* Magna Cum Laude
  - *Scholarships:* Rita Davenport, Diversity & Enrichment, Academic Service, & HOPE recipient
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## PROFESSIONAL PRESENTATIONS & PUBLICATIONS

<b>Experimental Biology Presentations:</b>
<b>Overby H</b> , Zu Y, Wang S, Zhao L. Nanoparticles encapsulated with resveratrol induce browning of white adipocytes. <i>FASEB J.</i> April 2017. 31: 44.3. [Oral Presentation]
<b>Overby H</b> , Kearns J, Hildreth, et al. Pharmacological inhibition of soluble epoxide hydrolase promotes brown adipogenesis. <i>FASEB J.</i> April 2018. 32: 560.4. [Poster Presentation]
<b>Overby H</b> , Wang S, Zhao L. Indomethacin induces browning and brown adipogenesis in murine 3T3-L1 white adipocytes and human brown fat cells. <i>FASEB J.</i> April 2018. 32: 571.2. [Poster Presentation]
<b>American Society of Nutrition Presentation:</b>
Hildreth K, <b>Overby H</b> , Kodani S, Morisseau C, Hammock B, Bettaieb A, Zhao L. Soluble epoxide hydrolase inhibitor t-AUCB promotes murine brown adipogenesis: Role of PPAR gamma and PPAR alpha (P21-069-19). <i>Curr Dev Nutr.</i> June 2019;3(Suppl 1). [Poster Presentation]
<b>Publications:</b>
Kodani SD, <b>Overby HB</b> , Morisseau C, Chen J, Zhao L, Hammock BD. Parabens inhibit fatty acid amide hydrolase: A potential role in paraben-enhanced 3T3-L1 adipocyte differentiation. <i>Toxicol Lett.</i> 2016. 262: 92-99.
Hu P, <b>Overby H</b> , Heal E, Wang S, Chen J, Shen CL, Zhao L. Methylparaben and butylparaben alter multipotent mesenchymal stem cell fates towards adipocyte lineage. <i>Toxicol Appl Pharmacol.</i> 2017. 329: 48-57.
Zu Y*, <b>Overby H*</b> , Ren G, Fan Z, Zhao L, Wang S. Resveratrol liposomes and lipid nanocarriers: comparison of characteristics and inducing browning of white adipocytes. <i>Colloids Surf B Biointerfaces.</i> 2018. 164: 414-423.
*indicates both authors contributed equally to this work and <u>share the first authorship</u> .
<b>Manuscripts Submitted for Review:</b>
Overby H, Kearns J, Hildreth K, et al. sEH expression is upregulated in the brown adipose tissue in obesity and pharmacological inhibition of sEH promotes brown adipogenesis. Submitted August 2018.
Overby H, Wang S, Zhao L. Indomethacin promotes browning and brown adipogenesis in both murine and human fat cells. Submitted September 2019.

## PRACTICAL LABORATORY EXPERTISE

<b>Basic Lab Skills:</b>	<b>Cell Culture Expertise:</b>
Preparation and proper handling of reagents, buffers, and chemicals. Pipetting, precise weighing, pH titration, centrifugation, and use of commercially available kits.	Basic cell maintenance and differentiation of various cell lines and types using sterile techniques as well as genetic manipulation. (3T3-L1, C3H10T1/2, C2C12, Murine & Human Brown Adipocytes Cell-Line, Murine & Human Primary Subcutaneous Adipocytes)
<b>Genetic Manipulation Techniques:</b>	<b>Microbial Techniques:</b>
Adenoviral and lentiviral mediated gene specific RNA interference. Liposome mediated transfection of eukaryotic DNA plasmids into immortalized cells.	Preparation of bacterial growth media with antibiotic selection, streaking, selecting for single clone colonies. Transduce DNA plasmids into chemically competent E.Coli. Mini- and Maxi-preparation of bacterial DNA.
<b>Immunological Techniques:</b>	<b>Biological Micro-Technique Expertise:</b>
Western, Northern, and Southern Blotting.	RNA and DNA isolating and analyzing via QT-PCR.
<b>Cell Functionality Assay Experience:</b>	<b>Rodent Handling and Surgical Experience:</b>
Cytotoxicity (MTT), Oil-Red-O lipid staining, glucose uptake assay, and determining OCR via mitochondrial stress test using XF Analyzer (Seahorse).	Breeding, tail genotyping, ear tagging, and sterile surgical implantation of localized medicine delivery "mini-pump" device. Surgical removal of tissues for gene analysis and isolation of stromal cells.
<b>Advanced Microscopy and Imaging:</b>	<b>Protein and Nucleotide Concentration Analysis:</b>
Phase-contrast & Leica white-light laser confocal microscopy, 3D imaging & video	BCA protein quantitation assay & RNA and DNA concentration quantification using Nanodrop1000.
<b>Management:</b>	
Responsible for monthly radiation lab surveys, organization, and monitoring and evaluating when inventory requires reordering. Training new students on basic lab skills and other techniques listed.	

## COMPUTER SKILLS

<b>Proficient in:</b>	Microsoft Word, Power Point, Excel, Adobe Photoshop, EndNote citing manager, SigmaPlot and SAS statistics software (experience with programming and coding in SAS), navigating various Learning Management System platforms, as well as navigating and utilizing NCBI's various research tools and databases.
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## MEMBERSHIPS & CERTIFICATIONS

<b>American Society for Pharmacology and Experimental Therapeutics</b>	Spring 2018-2019
<b>American Society of Nutrition</b>	Spring 2017-2019
<b>Academy of Nutrition and Dietetics</b>	2014-2016
<b>Biosafety, Radiation, IACUC Trained / OLAC Approved</b>	Fall 2015-2019
<b>Serve Safe Certified</b>	Summer 2014

## INTERESTS

Biochemistry	Nutrition	Research	Literature	Scientific Writing
Hiking	Volleyball	Woodworking		