

**Andrew Kunihiro, MS, RD**

**EDUCATION**

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- 2019, PhD      Nutritional Sciences, University of Arizona  
(expected)      Advisor: Janet L Funk, MD  
Dissertation: Curcuminoids in bone-metastatic breast cancer osteolysis and influence of the bone microenvironment on curcuminoid metabolism
- 2014, MS      Nutritional Science, California State University, Long Beach  
Advisor: Wendy Reiboldt, PhD  
Thesis: The relationship between dietary omega-3 and omega-6 fatty acid intake and colorectal cancer
- 2010, BS      Bioengineering, University of California, Los Angeles
- 2007      Pre-Nutrition, Orange Coast College

**RESEARCH EXPERIENCE**

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- 10/14 – Present      Graduate Research Associate, University of Arizona  
Dissertation: Curcuminoids in bone-metastatic breast cancer osteolysis and influence of the bone microenvironment on curcuminoid metabolism  
Mentor: Janet Funk, MD
- 07/14 – 10/14      Graduate Research Associate, University of Arizona  
Lab Rotation: Vitamin D and prostate cancer risk  
Mentor: Elizabeth Jacobs, PhD
- 09/13 – 05/14      Graduate Researcher, California State University, Long Beach  
MS Thesis: The relationship between dietary omega-3 and omega-6 fatty acid intake and colorectal cancer  
Mentor: Wendy Reiboldt, PhD
- 01/14 – 05/14      Graduate Researcher, California State University, Long Beach  
Department of Nutritional Sciences  
Topics: Congenital aglossia, Wernicke's aphasia from HSV1 encephalitis  
Co-Mentors: Long Wang, MD, PhD, RDN, Betty McMicken, PhD
- 09/09 – 03/10      Undergraduate Researcher, University of California, Los Angeles  
Department of Bioengineering  
Topics: Microfluidic synthesis of  $^{18}\text{F}$  radionuclide  
Mentor: R. Michael van Dam, PhD

## PEER REVIEWED PUBLICATIONS

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**Kunihiro A**, Brickey JA, Frye JB, Luis PB, Schneider C, Funk JL (2018). *Curcumin is deconjugated in bone by hematopoietic  $\beta$ -glucuronidase to inhibit breast cancer TGF $\beta$  signaling*. In Preparation.

**Kunihiro A**, Brickey JA, Frye JB, Luis PB, Schneider C, Funk JL (2018). *Curcumin, but not curcumin-glucuronide, inhibits Smad-signaling in TGF $\beta$ -dependent bone metastatic breast cancer cells and is locally enriched in bone*. In Review.

McMicken BL, **Kunihiro A**, Wang L, Rogers K (2014). Language remediation in a case of Wernicke's aphasia post herpes simplex virus type 1 viral encephalitis. *J Clin Case Rep.* 4:11.

McMicken BL, **Kunihiro A**, Wang L (2014). Do you know of cases of Wernicke's Aphasia Post Herpes Simplex Viral Encephalitis? *Commun Disord Deaf Stud Hearing Aids.* 3:1.

McMicken BL, **Kunihiro A**, Wang L, Von Berg S, Rogers K (2014). Electropalatography in a case of congenital aglossia. *Commun Disord Deaf Stud Hearing Aids.*

McMicken BL, **Kunihiro A**, Wang L, Salles F, Costa PB, Rogers K (2014). Randomized testing of taste discrimination in a case of congenital aglossia. *Journal of Oral Biology and Craniofacial Research.*

## REVIEWS

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Jacobs ET, Kohler LN, **Kunihiro AG**, Jurutka, PW (2016). Vitamin D and Colorectal, Breast, and Prostate Cancers: A Review of the Epidemiological Evidence. *J Cancer.* 7:3.

## CONFERENCES & SYMPOSIA

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**Kunihiro A**, Brickey JA, Frye JB, Luis PB, Schneider C, Funk JL (2018). *Bone-specific activation of a dietary polyphenol inhibiting TGF $\beta$ -dependent breast cancer bone metastases*. Cancer and Bone Society, Oxford, UK

**Kunihiro A**, Brickey JA, Frye JB, Funk JL (2018). *Targeting TGF $\beta$  signaling pathways in bone metastatic breast cancer cells to limit metastatic progression using curcuminoids, a turmeric-derived natural product*. American Association for Cancer Research (AACR) Annual Conference, Chicago, IL

**Kunihiro A**, Frye JB, Luis PB, Schneider C, Funk JL (2017). *Role of hematopoietic  $\beta$ -glucuronidase in bone-specific activation of osteoprotective turmeric-derived dietary polyphenols*. American Society for Bone and Mineral Research (ASBMR), Denver, CO

**Kunihiro A**, Frye JB, Luis PB, Schneider C, Funk JL (2016). *Site-specific activation of curcuminoids in the breast cancer bone metastases microenvironment*. San Antonio Breast Cancer Symposium; San Antonio, TX

**Kunihiro A**, Frye JB, Luis PB, Schneider C, Funk JL (2016). *Tissue-specific curcuminoid deglucuronidation for the treatment of metastatic breast cancer bone lesions*. Arizona Physiological Society (APS) Annual Meeting; Tucson, AZ

**Kunihiro A**, Frye JB, Luis PB, Schneider C, Funk JL (2016). *Site-Specific Deglucuronidation of Turmeric-Derived Curcuminoids in Bone*. University of Arizona Cancer Center Scientific Retreat; Tucson, AZ

**Kunihiro A**, Frye JB, Luis PB, Schneider C, Funk JL (2016). *Site-Specific Deglucuronidation of Turmeric-Derived Curcuminoids in Bone*. Experimental Biology Conference; San Diego, CA

## SEMINARS & PRESENTATIONS

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| 11/2017 | Treating breast cancer bone metastases with curcuminoids: Mechanisms and active metabolites. Endocrinology Departmental Seminar                  |
| 11/2017 | Exploiting the bone microenvironment to activate curcuminoids for the treatment of breast cancer bone metastases. Nutritional Sciences Seminar   |
| 01/2017 | Site-specific metabolism of dietary polyphenols: the role of curcumin as a bone-targeted pro-drug. Endocrinology Departmental Seminar.           |
| 03/2016 | Career talk to Student Dietetic Association at California State University, Long Beach: <i>My Nutrition Journey: From RD to PhD</i>              |
| 03/2016 | Tissue Specific Curcumin Deglucuronidation for the Treatment of Metastatic Breast Cancer Bone Lesions. Nutritional Sciences Departmental Seminar |

## TEACHING EXPERIENCE

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| 07/15 – Present | Teaching Assistant, University of Arizona<br>Undergraduate Nutritional Science (various courses)                   |
| 09/13 – 05/14   | Teaching Assistant, California State University, Long Beach  |
| 09/11 – 12/11   | Supplemental Instruction Leader, California State University, Long Beach<br>Undergraduate General Chemistry Course |
| 07/08 – 12/08   | Tutor, University of California, Los Angeles<br>Undergraduate Bioengineering Circuit Design Course                 |

## MENTORING EXPERIENCE

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| 09/15 – 06/18 | Julia Brickey, Undergraduate Researcher (Funk Lab)<br>Currently a MD student at UNC Chapel Hill |
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## RELATED PROFESSIONAL EXPERIENCE

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| 06/09 – 09/09 | Bioengineer Intern, NanoIVD, Inc., Los Angeles, CA |
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## GRANTSMANSHIP

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Ruth L. Kirschstein Individual National Research Service Predoctoral Fellowship. “Bone-specific deglucuronidation of turmeric-derived curcuminoids for the treatment of osteolytic disease.” NCCIH (NIH), Bethesda, MD (\$37,644/yr x2 year). Awarded.

American Society of Nutrition Predoctoral Fellowship, “Bone-specific metabolism of curcumin, a plant-derived polyphenol.” ASN, Rockville, MD. Unfunded

## HONORS & AWARDS

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2018	W.T. McClelland Scholarship, University of Arizona
2017	Ruth Cowden Scholarship, University of Arizona
2017	Darrel E. Goll Graduate Scholarship, University of Arizona
2017	Endocrine Fellow (Forum on Metabolic Diseases), Endocrine Fellows Foundation
2017	DeBell Research Enhancement Award, University of Arizona
2015 – 2018	USDA National Needs Graduate Fellow, University of Arizona
2015	Joe K. Fannin Scholarship, University of Arizona
2014 – 2015	University Fellow, University of Arizona
2013 – 2014	Department Outstanding Thesis Award, CSU, Long Beach
2012 – 2013	Dietetic Intern of the Year, Alabama Dietetic Association
2012 – 2013	Dietetic Intern of the Year, North Alabama Dietetic Association

## CREDENTIALS

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08/13 – Present    Registered Dietitian

## PROFESSIONAL MEMBERSHIPS

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2016 – Present	American Association for Cancer Research (AACR)
2015 – 2016	American Society of Bone and Mineral Research (ASBMR)
2014 – Present	American Society of Nutrition (ASN)
2011 – 2014	Academy of Nutrition and Dietetics (AND)

## EXTRACURRICULAR ACTIVITIES

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03/17 – Present	Student Rep., Inclusive Excellence Committee, Department of NSc, UA
08/16 – 07/17	Student Rep., Graduate Committee, Department of NSc, UA
07/16 – 06/17	Student Rep., ASN Dietary Bioactive Components RIS
07/16 – 06/17	President, Nutritional Sciences Graduate Organization, University of Arizona
07/14 – Present	Member, Nutritional Sciences Graduate Organization, University of Arizona
04/11 – 12/12	Nutrition Volunteer, Cypress Senior Center

01/09 – 12/09      Publicity Chair, Pi Kappa Phi Fraternity, UCLA

## **SERVICE**

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2017 – Present      Science Fair Judge, Fruchthendler Elementary School, Tucson, Arizona  
2016 – Present      Travel Grant Judge, Graduate and Professional Student Council, UA

## **KEY STRENGTHS**

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**Molecular Biology:** qPCR, SDS-PAGE, Western blot, mammalian cell culture, mouse models of cancer, flow cytometry, immunohistochemistry, transient transfection

**Microscopy:** bright-field, fluorescence, phase contrast

**Computer:** Microsoft Office, ImageJ, GraphPad Prism, SAS, SPSS, Photoshop, Illustrator