CURRICULUM VITAE (updated December 2024)

Min-Hyun Kim, PhD

Assistant Professor
College of Health Solutions | Arizona State University
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EDUCATION AND TRAINING

Post-doctoral Fellow	**University of Michigan Medical School**, Ann Arbor, MI · Department of Molecular & Integrative Physiology · Mentor: Liangyou Rui, PhD	Dec 2021
Ph.D.	**University of Florida**, Gainesville, FL · Major: Nutritional Sciences · Dissertation: Zinc metabolism in ER Stress · Mentor: Robert J. Cousins, PhD	Jul 2017
M.S.	**Yonsei University**, Seoul, South Korea · Major: Food and Nutrition · Thesis: Function of glutamine in ataxia telangiectasia	Jun 2014
B.S.	**Yonsei University**, Seoul, South Korea · Major: Food and Nutrition	Feb 2011

ACADEMIC APPOINTMENTS

Assistant Professor	**Arizona State University**, Phoenix, AZ · College of Health Solutions · Director: Nutrigenomics Laboratory	Jan 2022- Current
Lecturer (Limited-term)	**Yonsei University**, Seoul, South Korea · Food and Nutrition Department	Jun 2020 – Jul 2020

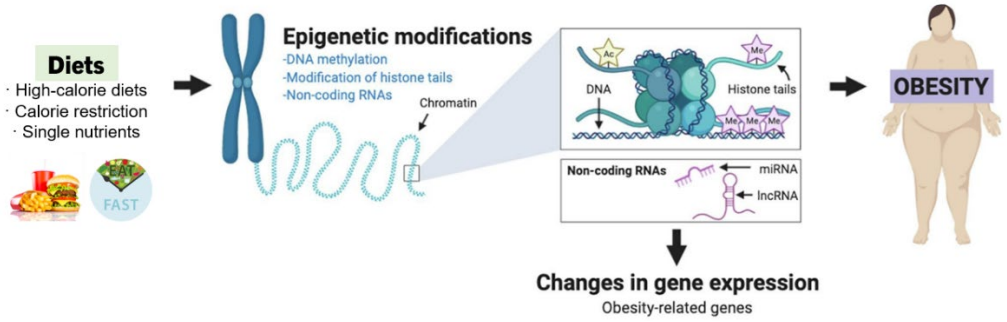
HONORS AND AWARDS (SELECTED)

Winner of the Early Career Research Award Competition – American Society for Nutrition, Boston, MA	2023
Award in Research Excellence for Early-stage Postdocs – University of Michigan Medical School	2019
Winner of Poster Competition – University of Michigan Diabetes Research Center Annual Symposium	2019

Winner of the Graduate Student Research Award Competition – American Society for Nutrition, Experimental Biology, San Diego, CA	2016
Alumni Graduate Fellowship – College of Agricultural and Life Sciences University of Florida	2013–2017
Travel Grant - American Society for Nutrition	2016
Outstanding Academic Achievement Award – University of Florida International Center	2014
Best Academic Achievement Award - College of Human Ecology, Yonsei University	2009

RESEARCH AND SCHOLARSHIP

My research focuses on elucidating the physiological and molecular mechanisms of obesity and diabetes. Using mouse and cell culture models, my lab investigates 1) how diets influence the epigenetic modifications of obesity-related genes that can lead to the development of metabolic syndrome; 2) how various diets (high-calorie diets, calorie restriction, and single nutrients) regulate signaling pathways of metabolic hormones that control body weight such as leptin, GLP-1, and insulin. By understanding the molecular basis of obesity, my goal is to develop nutritional and pharmaceutical strategies for the prevention and treatment of obesity and diabetes.



SPONSORED RESEARCH FUNDING

Ongoing Research Support

1 **Funding Source**: R01 NIH/NIDDK (R01DK139038) (NIH RePORTER)
Role: PI (Kim)
Total Costs: $1,895,852
Dates of Award: Jul 2024 – Mar 2029 (5 years)
Title: Roles of hypothalamic JMJD3 in the regulation of leptin sensitivity and energy homeostasis

Completed Research Support

1 **Funding Source**: F32 NIH/NIDDK National Research Service Awards (NRSA) fellowship (F32DK120111)
Role: PI (Kim)
Total Costs: $219,762
Dates of Award: Sep 2018 – Dec 2021 (3 years)
Title: Regulation of body weight, energy expenditure, and nutrient metabolism by hypothalamic Slug (Snai2) neural circuits

PUBLICATIONS

Full Bibliography

· Google Scholar: https://scholar.google.com/citations?user=GIJVksoAAAAJ&hl=en
· ORCID: https://orcid.org/0000-0001-5108-9816

Source	Citations	H-index	i-10 index
Google Scholar	817	13	15

· Manuscript order: the most recent publications under each sub-heading are listed first, then numbered in descending order.
· Shaded: student or mentee under full or partial supervision of Dr. Kim
· Journal metrics: Impact factor and percentiles (indexed by Clarivate, Scopus or JCR) in the published year are indicated.
· Role and contribution: the work I provided towards the publication are indicated.

PEER-REVIEWED ARTICLES

16 Li Y, **Kim MH**, Jiang L, Baron L, Faulkner LD, Olson DP, Li X, Gannot N, Li P, Rui L. SH2B1 Defends Against Energy Imbalance, Obesity, and Metabolic Disease via a Paraventricular Hypothalamus→Dorsal Raphe Nucleus Neurocircuit. ***Adv. Sci.*** 2024, 2400437. DOI: 10.1002/advs.202400437
· Journal metrics (2022): **IF: 15.1** (Q1 in Biochemistry and Molecular Biology)
· Role: **Co-author**
[X] Research Design [X] Data Collection and Analysis [X] Manuscript Writing

15 **Kim MH**, Li Y, Zheng Q, Jiang L, Myers MG, Wu WS, Rui L. LepRb+ cell-specific deletion of *Slug* mitigates obesity and NAFLD in mice. ***J Clin Invest.*** 2023;133(4):e156722. https://doi.org/10.1172/JCI156722
· Journal metrics (2022): **IF: 15.9** (95th percentile in Medicine; Q1)
· Role: **First author**
[X] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

14 Lee J, **Kim MH***, Kim H*. Anti-oxidant and anti-inflammatory effects of astaxanthin on gastrointestinal diseases. ***Int J Mol Sci.*** 2022, 23(24), 15471.
- Journal metrics (2021): **IF: 6.2** (Q1 in Biochemistry & Molecular Biology by JCR)
- Role: ***Co-corresponding author**
[-] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

13 **Kim MH**, Kim H. Role of leptin in the digestive system. ***Front. Pharmacol***. 12:660040. https://doi: 10.3389/fphar.2021.660040
- Journal metrics (2021): **IF: 4.4** (81th percentile in Pharmacology (Medical); Q1)
- Role: **First author**
[X] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

12 Jiang L, Su H, Wu X, Shen H, **Kim MH**, Li Y, Myers MG, Owyang C, Rui L. Leptin receptor-expressing neuron Sh2b1 supports sympathetic nervous system and protects against obesity and metabolic disease. ***Nat Commun.*** 2020 Oct 15;11(1):5310
- Journal metrics (2020): **IF: 14.9** (97th percentile in Molecular Biology; Q1)
- Role: **Co-author**
[-] Research Design [X] Data Collection [-] Drafted Manuscript [X] Revised Manuscript

11 Kim J, Aydemir TB, Jimenez-Rondan FR, Ruggiero CH, **Kim MH**, Cousins RJ. Deletion of metal transporter Zip14 (Slc39a14) produces skeletal muscle wasting, endotoxemia, Mef2c activation and induction of miR-675 and Hspb7.***Sci Rep.*** 2020 Mar 4;10(1):4050.
- Journal metrics (2020): **IF: 4.3** (93th percentile in Multidisciplinary; Q1)
- Role: **Co-author**
[-] Research Design [X] Data Collection [-] Drafted Manuscript [-] Revised Manuscript

10 Cho SO*, **Kim MH***, Kim H. β-Carotene inhibits activation of NF-κB, Activator Protein-1, and STAT3 and regulates abnormal expression of some adipokines in 3T3-L1 adipocytes. ***J Cancer Prev.*** 2018 Mar;23(1):37-43.
- Journal metrics: Not SCI indexed (378 citations for 25 articles in 2018)
- Role: ***Co-first author**
[-] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

9 **Kim MH,** Aydemir TB, Kim J. Cousins RJ. Hepatic ZIP14-mediated zinc transport is required for adaptation to endoplasmic reticulum stress. ***Proc Natl Acad Sci U S A.*** 2017 Jul 18;114(29):E5805-E5814.
- Journal metrics (2017): **IF: 9.5** (97**th** percentile in Multidisciplinary; Q1)
- Role: **First author**
[X] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

8 Aydemir TB, **Kim MH**, Kim J, Colon-Perez LM, Banan G, Mareci TH, Febo M, Cousins RJ. Metal transporter Zip14 (Slc39a14) deletion in mice increases manganese deposition and produces neurotoxic signatures and diminished motor activity. ***J Neurosci.*** 2017 Jun 21;37(25):5996-6006.
- Journal metrics (2017): **IF: 5.9** (90th percentile in General Neuroscience; Q1)
- Role: **Co-author**
[-] Research Design [X] Data Collection [-] Drafted Manuscript [-] Revised Manuscript

7 **Kim MH**, Kim H. The roles of glutamine in the intestine and its implication in intestinal diseases. ***Int J Mol Sci*. 2017** May 12; 18(5):1051. https://doi.org/10.3390/ijms18051051
· Journal metrics (2017): **IF: 3.68** (Q2 in Biochemistry & Molecular Biology by JCR)
· Role: **First author**
[X] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

6 Li R, **Kim MH**, Sandhu AK, Gao C, Gu L. Muscadine grape (vitis rotundifolia) or wine phytochemicals reduce intestinal inflammation in mice with dextran sulfate sodium-induced colitis. ***J Agric Food Chem*. 2017** Feb 1;65(4):769-776
· Journal metrics (2017): **IF: 3.61** (93th percentile in Agricultural and Biological Sciences; Q1)
· Role: **Co-author**
[-] Research Design [X] Data Collection [-] Drafted Manuscript [-] Revised Manuscript

5 Aydemir TB, Troche C, Kim J, **Kim MH**, Teran OY, Leeuwenburgh C, Cousins RJ. Aging amplifies multiple phenotypic defects in mice with zinc transporter Zip14 (Slc39a14) deletion. ***Exp Gerontol*. 2016** Dec 1;85:88-94.
· Journal metrics (2016): **IF: 3.34** (80th percentile in Endocrinology; Q1)
· Role: **Co-author**
[-] Research Design [X] Data Collection [-] Drafted Manuscript [-] Revised Manuscript

4 Aydemir TB, Troche C, **Kim MH**, Cousins RJ. Hepatic ZIP14-mediated zinc transport contributes to endosomal insulin receptor trafficking and glucose metabolism. ***J Biol Chem*.** 2016 Nov 11;291(46):23939-23951.
· Journal metrics (2016): **IF: 4.1** (80th percentile in Molecular Biology; Q1)
· Role: **Co-author**
[-] Research Design [X] Data Collection [-] Drafted Manuscript [-] Revised Manuscript

3 **Kim MH**, Aydemir TB, Cousins RJ. Dietary zinc regulates apoptosis through the phosphorylated eukaryotic initiation factor 2α/activating transcription factor-4/C/EBP-homologous protein pathway during pharmacologically induced endoplasmic reticulum stress in livers of mice. ***J Nutr*** 2016 Nov;146(11):2180-2186.
· Journal metrics (2016): **IF: 4.3** (84th percentile in Nutrition and Dietetics; Q1)
· Role: **First author**
[X] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

2 **Kim MH,** Kim A, Yu JH, Lim JW, Kim H**.** Glutamine deprivation induces interleukin-8 expression in ataxia telangiectasia fibroblasts. ***Inflamm Res.*** 2014 May;63:347-356.
· Journal metrics (2014): **IF: 2.54** (62th percentile in Pharmacology; Q2)
· Role: **First author**
[X] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

1 **Kim MH**, Kim H. Oncogenes and tumor suppressors regulate glutamine metabolism in cancer cells. ***J Cancer Prev*,** 2013 Sep;18(3):221-226.
· Journal metrics: Not SCI indexed (new journal established in 2013)
· Role: ***First author**
[X] Research Design [X] Data Collection [X] Drafted Manuscript [X] Revised Manuscript

BOOK CHAPTERS

1 **Kim MH**, Kim H. Chapter 22: Ginseng and gastrointestinal protection. Gastrointestinal tissue: Oxidative Stress and Dietary Antioxidants, Ed: Gracia-Sancho J, Salvado MJ, Academic Press, 2017 May 10

ORAL PRESENTATIONS (SELECTED)

7 Hypothalamic JMJD3 regulates leptin signaling via epigenetic mechanisms. 2023
Nutrition 2023 organized by American Society for Nutrition, Boston, MA

6 Hypothalamic Slug promotes leptin resistance via an epigenetic mechanism. *3rd* 2022
Symposium in Stem Cell Biology and Regenerative Medicine, Scottsdale, AZ

5 Hypothalamic Slug promotes leptin resistance and obesity. *American Diabetes* 2020
Association 80th Scientific Sessions Virtual Meeting

4 Hypothalamic Slug promotes leptin resistance and obesity. *UC San Francisco* 2019
Diabetes, Metabolism & Obesity retreat, Santa Cruz, CA

3 ZIP14 (SLC39A14) is required for suppression of apoptosis and hepatic 2017
steatosis induced by ER stress in mouse liver. *Experimental Biology, Chicago, IL*

2 Zinc and ZIP14 (Slc39a14) are required for adaptation to ER stress in mouse 2016
liver. *American Society for Nutrition Graduate Research Award Oral Competition, Experimental Biology*, *San Diego, CA*

1 Glutamine supplementation inhibits IL-8 expression in Ataxia Telangiectasia 2011
fibroblasts**,** *Korean Nutrition Society*, *Seoul, South Korea*

POSTER PRESENTATIONS (SELECTED)

8 **Kim MH**, Li Y, Zheng Q, Jiang L, Myers MG, Rui L. Hypothalamic Slug promotes 2022
leptin resistance and obesity. *College of Health Solutions Research Day, Phoenix, AZ*

7 **Kim MH**, Jiang L, Myers MG, Rui L. Slug in hypothalamic LepR neurons 2018
promotes obesity by decreasing energy expenditure. *Michigan Diabetes Research Center Annual Symposium, Ann Arbor, MI*

6 **Kim MH,** Aydemir TB, Cousins RJ. Zinc and ZIP14 (Slc39a14) are required for 2016
adaptation to ER stress in mouse liver. *Experimental Biology*, *San Diego, CA*

5 **Kim MH,** Aydemir TB, Cousins RJ. ZIP6 is induced by pro-inflammatory stimuli 2015
but not dietary zinc stimuli. *Trace element in man and animals, Orlando, FL*

4 **Kim MH**, Lim JW, Kim H. Glutamine supplementation inhibits IL-8 expression in 2012
Ataxia Telangiectasia fibroblasts*, Korean Society of Cancer Prevention, Seoul, South Korea*

3 **Kim MH**, Lim JW, Kim H. Glutamine supplementation inhibits IL-8 expression in Ataxia Telangiectasia fibroblasts, *Redox and Inflammation Signaling, Luxembourg* 2012

2 **Kim MH**, Cho SO, Kim H. Antioxidant nutrition in obesity-related inflammation: Effect on oxidative stress-induced expression of cytokines and adiponectin in 3T3-L1 adipocytes, *Asian Congress of Nutrition, Singapore* 2011

1 **Kim MH**, Cho SO, Kim H. Antioxidant nutrition in obesity-related inflammation: Effect on oxidative stress-induced expression of cytokines and adiponectin in 3T3-L1 adipocytes, *Korean Society for Molecular and Cellular Biology*, *Seoul, South Korea* 2011

TEACHING & MENTORING

TEACHING – Instructor of Record at ASU

Courses	Semester and Enrollment	Evaluation Score and Response Rate (5: most positive – 0: most negative)
NTR 290: Introduction to Evidence-Based Research (Online course)	Fall A 2024 (46)	4.3 (61%)
	Spring B 2024 (44)	3.8 (20%)
	Fall A 2023 (45)	4.1 (19%)
	Spring A 2023 (31)	4.3 (20%)
	Fall A 2022 (49)	4.2 (17%)

TEACHING – Other Institutions

Courses	Semester	Enrollment & Student evaluation (5: most positive – 0: most negative)
FNS6542: Special Topics in Micronutrients - Yonsei University, Seoul, South Korea	Summer 2020	5 (4.8)
PHY415: Laboratory Techniques in Biomedical Research – University of Michigan	Winter 2021	9 (4.66)

GUEST LECTURES (all at ASU, unless otherwise specified)

Courses	Semester

EXW/NTR 691: Physical Activity and Nutrition Graduate Seminar Fall 2022

STUDENT RESEARCH MENTORING/SUPERVISION

Graduate students

Busayo Oladun (PhD in Exercise & Nutrition Sciences, College of Health Solutions) 2023 – Present
Smita Mall (PhD in Exercise & Nutrition Sciences, College of Health Solutions) 2024 - Present
Melissa Buder (MS in Nutrition Science (Dietetics), College of Health Solutions) 2024 - Present
Joshua Altmann (MS in Nutrition Science (Dietetics), College of Health Solutions) 2024 - Present

Postdoctoral Researchers & Visiting Students

Jisu Lee (Visiting PhD student in Food & Nutrition, Dankook University, South Korea) 2024 – Present

Undergraduate & lab volunteer students

Justin Dao (B.S. in Nutritional Science) 2022 – 2023
Baochan Fan (Hamilton High School, AZ) 2022 - 2024

Committee Member

Fang Zhou (PhD in Exercise & Nutrition Sciences, College of Health Solutions) 2022 - Present
· Title: TBD
· Committee Chair: Dr. Shu Wang

Dominic Saiz (PhD in Molecular & Cellular Biology, School of Life Sciences) 2022 - Present
· Title: TBD
· Committee Chair: Dr. Miyeko Mana

Jingyu Ling (MS+DI in Nutritional Sciences) 2023 - 2024
· Title: Effects of a novel fiber-rich complex on biomarkers in male Sprague-Dawley
· Committee Chair: Dr. Karen Sweazea

David Shull (B.S. Barrett Honors College) 2023 – 2024
· Title: Induce fractures and effects on hypothalamic structure in mice
· Committee Chair: Dr. Joseph Roberts

Gracie Swensen (B.S. Barrett Honors College) 2023 – 2024
· Title: Transdermal delivery via direct subcutaneous injections using microneedle patches containing browning agents to target white adipose tissue for the treatment of obesity
· Committee Chair: Dr. Shu Wang

Merina Dahal (MS in Nutritional Sciences, College of Health Solutions) 2023 – 2024
· Title: TBD
· Committee Chair: Dr. Shu Wang (* served as a co-chair)

Kyle McFarlane (B.S. Barrett Honors College) 2024 - Present
· Title: TBD
· Committee Chair: Dr. Joseph Roberts

Alec Bonaguidi (MS in Nutritional Sciences, College of Health Solutions) 2023 - Present
· Title: TBD
· Committee Chair: Dr. Shu Wang

Gourab Lahiri (PhD in Molecular & Cellular Biology, School of Life Sciences) 2024 - Present
· Title: TBD
· Committee Chair: Dr. Miyeko Mana

SERVICE ACTIVITIES

PROFESSIONAL MEMERSHIP

American Society for Nutrition	2015 - Present
American Diabetes Association	2022 - Present
American Society for Biochemistry and Molecular Biology	2023 - Present
Licensed Dietitian – Ministry of Health and Welfare, South Korea	2012 – Present

ARIZONA STATE UNIVERSITY

Ph.D. Exercise and Nutritional Science Admissions Committee	2023 - Present
M.S. Nutritional Science Admissions Committee	2022 - Present

PROFESSIONAL SERVICE

Journal Editorial Board

Nutrition Reviews	2023 – Present
Journal of Nutritional Biochemistry	2023 – Present

Ad-hoc Journal Reviewer
· Nutrition Reviews, Journal of Nutritional Biochemistry, International Journal of Molecular Sciences, Nutrients, Frontiers in Immunology, etc.

External Reviewer / Evaluator

Departmental Academic Achievement – Food and Nutrition Department, Yonsei University, South Korea	2022
Quacquarelli Symonds (QS) World University Evaluation	2022, 2023
Times Higher Education World University Evaluation	2024

COMMUNITY SERVICE

Bioscience High School (Phoenix, AZ) Summer Camp – Research Showcase (ISTB8, ASU)	May/June 2022