

# YOO KIM, Ph.D.

*Obesity and Diabetes, Aging, Glucose Metabolism / Insulin Signaling Pathway, Nutritional Biochemistry*

## Education and Training

- 2017 – 2020      **Postdoctoral Research Fellow, National Institute of Health (NIH)**  
National Institute on Aging (NIA)  
Laboratory of Clinical Investigation, Diabetes Section  
Research Advisor: Josephine M. Egan, M.D.  
Research Topic: *Characterization of the Role of Endocannabinoid Receptor Type I (CB1R) in the Insulin Signaling Pathway*
- 2015 – 2017      **Postdoctoral Fellow, Harvard Medical School**  
Boston Children's Hospital  
Division of Endocrinology, Obesity and Diabetes Section  
Research Advisor: Sang Won Park, Ph.D.  
Research Topic: *Characterization of the Role of Bromodomain-containing protein 7 (BRD7) in the Insulin Signaling Pathway*
- 2011 – 2015      **Ph.D., University of Massachusetts Amherst**  
Department of Food Science  
Research Advisor: Yeonhwa Park, Ph.D.  
Research Topic: *Investigated Role of Conjugated Linoleic Acid (CLA) on Skeletal Muscle Metabolism*
- 2001 – 2003      **M.S., Korea University**  
Department of Biotechnology (Emphasis on Food Science)  
Research Advisor: Cherl-ho Lee, Ph.D.  
Research Topic: *Studies on the Pilot Scale Production of Neutral Proteases by Bacillus Amyloliquefaciens FSE-68*
- 1995 – 1999      **B.S., Korea University**  
Department of Life Science (Emphasis on Food Science)

## Professional Career

- 2020 -            **Assistant Professor**, Oklahoma State University  
Department of Nutritional Sciences
- 2019 – 2020      **Lecturer**, Goucher College, MD  
Department of Biological Sciences

- 2010 – 2011      **Visiting Scholar**, University of Massachusetts Amherst  
 Department of Food Science  
 Research Advisor: Yeonhwa Park, Ph.D.  
 Role: *Investigated Role of Conjugated Linoleic Acid (CLA) on Prostate Cancer Cells*
- 2005 – 2010      **Senior Researcher**, AMOREPACIFIC R&D Center, South Korea  
 Food Research Center  
 Role: *Development of Dietary Supplements to Prevent Obesity and Type II Diabetes*
- 2003 – 2005      **Researcher**, AMOREPACIFIC R&D Center, South Korea  
 Pharmaceutical & Food Research Center  
 Role: *Development of Dietary Supplements to Prevent Obesity and Type II Diabetes*

## Professional Societies and Memberships

- American Society for Nutrition (ASN)
- American Oil Chemist's Society (AOCS)
- Korean-American Scientists and Engineers Association (KSEA)
- Korean American Food Technologists Association (KAFTA)
- Phi Tau Sigma (The Honor Society of Food Science and Technology)

## Industrial Experience (Developed Products)

- "S'lite Slimmer DX", awarded the "Individual Recognition on Body Fat Reduction" by the Korean Food and Drug Administration (**KFDA**) in recognition of its slimming function including abdominal fat and safety (May 2008)
- "S'lite Slim-tea" for facilitating bowel and improving detoxification (Feb. 2007)
- "COOLING FIBER" for alleviating constipation (May 2006)
- "Fresh Time" for detoxification (Mar. 2005)
- "Slimming Time" for anti-obesity (Mar. 2005)
- "HOMIAN" for improving Men's vitality (Feb. 2005)
- "S'lite Slimmer" for anti-obesity (Mar. 2004)

## Honors and Awards

- **Esther Winterfeldt Faculty Support Award**, Oklahoma State University (2020)
- NIH-KSA Excellence in Science Award, NIH Korean Scientist Association (2019)
- AOCS Health and Nutrition Division Poster Competition 1<sup>st</sup> place, American Oil Chemist's Society (2015)
- 1<sup>st</sup> place for Francis Scholarship Poster Competition, University of Massachusetts Amherst (2015)
- Finalist for ASN's Emerging Leaders in Nutrition Science, EB meeting (2015)
- **University of Massachusetts Amherst Graduate School Travel Grant** (2015)

- **The KSEA-KUSCO Scholarship**, Korean-American Scientists and Engineers Association (2014)
- **The Charm Scholarship** for 3 years research supporting scholarship, University of Massachusetts Amherst (2011-2014)
- **National Technology Award**, Jang Young Shil Award, **Minister of Science Technology** in Korea (2009)
- Grand Prize of Amorepacific Corporation (2009)
- First Technological Prize, Amorepacific Corporation (2009)
- Gold Prize of Marketing, Amorepacific Corporation (2009)
- Excellent Researcher Prize, Amorepacific Corporation (2009)
- Excellence Award of 6sigma competition, Amorepacific Corporation (2006)
- Excellence Award of 6sigma competition, Amorepacific Corporation (2005)
- First Technological Prize, Amorepacific Corporation (2004)
- **National Scholarships**, Brain Korea 21 (2003 & 2001)
- **Honors Scholarships** from Korea University (1998)

## Patents

1. Use for treating obesity and diabetes (United States, Patent No. US 2010/0056560 A1)
2. Method for accelerating expression of CPT-1 (United States, Patent No. US 2008/0181940 A1)
3. Compositions for the improvement of obesity (World Intellectual Property Organization, Application No.PCT/KR03/02202)
4. Compositions of slimming food containing dietary fiber for the treatment of obesity (Republic of Korea, Patent No.0921172)
5. Compositions for the improvement of fatty liver (Republic of Korea, Patent No. 1139070)
6. Compositions for the improvement of obesity (Japan, Patent No.4009642)
7. Food compositions for the improvement of obesity (Republic of Korea, Patent No.522253)
8. Composition for improving constipation comprising sugar and sugar alcohols (Republic of Korea, Patent No.749229)
9. Composition for improving constipation comprising sugar and sugar alcohols (World Intellectual Property Organization, Application No.PCT/KR05/03695)
10. FAS inhibitory compounds from *Dryopteris crassirhiza* and compositions for treatment and prevention of cancer and obesity containing the same as an active ingredient (Republic of Korea, Patent No. 1232993)
11. Coating Composition for Oral Administration (Republic of Korea, Patent No. 1272976)
12. Oral compositions for the improvement of obesity and diabetes (Republic of Korea, Patent No. 1069502)
13. Use for treating obesity and diabetes (World Intellectual Property Organization, Application No.PCT/KR07/04160)
14. Food composition for increasing the satiety and satiation (World Intellectual Property Organization, Application No.PCT/KR07/06026)

## **Journal Editorial Board Member**

- Associate Editor of Frontier in Nutrition from 2022
- Editor of Functional Food Science Journal from 2021
- Editor of Journal of Future Foods from 2021

## **Reviewer Experience**

- Reviewer of Molecular Nutrition and Food Research from 2018
- Reviewer of Journal of Agricultural and Food Chemistry from 2018
- Reviewer of European Journal of Lipid Science and Technology from 2018
- Reviewer of PLOS ONE from 2019
- Reviewer of Journal of Functional Foods from 2019
- Reviewer of Cell Biology and Toxicology from 2019
- Reviewer of Prostaglandins and Other Lipid Mediators from 2020
- Reviewer of ACS Omega from 2020
- Reviewer of Journal of Endocrinology from 2020
- Reviewer of BBA-Molecular and Cell Biology of Lipids from 2020
- Reviewer of Food Science and Biotechnology from 2021
- Reviewer of British Journal of Nutrition from 2021
- Reviewer of Frontiers in Nutrition from 2021
- Reviewer of Journal of Coastal Research from 2021
- Reviewer of Food Science and Human Wellness from 2021

## **Teaching courses**

- NSCI 6960-62727 – Seminar: Emerging Topics in Nutrition, Oklahoma State University (Fall, 2022)
- NSCI 5960-62003 – Master’s Seminar, Oklahoma State University (Fall, 2022)
- NSCI 6000-72416 – Doctoral Dissertation, Oklahoma State University (Fall, 2022)
- NSCI 5000-72415 – Master Thesis, Oklahoma State University (Fall, 2022)
- NSCI 3021-61972 - Nutrition & Evidence-based Practice II, Oklahoma State University (Fall, 2022)
- NSCI 3021-21718/21719 - Nutrition & Evidence-based Practice II, Oklahoma State University (Spring, 2022)
- NSCI 4900-32198 – Honors Thesis, Oklahoma State University (Spring, 2022)
- NSCI 6000-32091 – Doctoral Dissertation, Oklahoma State University (Spring, 2022)
- NSCI 3021-62223 – Nutrition & Evidence-based Practice II, Oklahoma State University (Fall, 2021)
- NSCI 6000-43746 – Doctoral Dissertation, Oklahoma State University (Summer, 2021)
- NSCI 3021-39741/21931/21932 – Nutrition & Evidence-based Practice II, Oklahoma State University (Spring, 2021)
- NSCI 3011-62452 – Nutrition & Evidence-based Practice I, Oklahoma State University (Fall, 2020)

- Bio 107/109 - Nutrition, Goucher College (2020) – Lecturer
- FSCI 203 - Food and Culture, Korea University (2002) – Teaching & Assistant

## Advising and Mentoring Experience

- Gopal Lamicchane, PhD student (2023- ) – Department of Nutritional Sciences, Oklahoma State University – Role: Committee Chair
- Yashu Tang, PhD student (2022- ) – Department of Nutritional Sciences, Oklahoma State University – Role: Committee Member
- Juliana Arndt, Undergraduate student (2022- ) – Honors Thesis, Wentz Scholar Program, Department of Nutrition Sciences, Oklahoma State University
- Cameron Cardora, PhD student (2022- ) – Department of Nutritional Sciences, Oklahoma State University – Role: Committee Member
- McKenzie Lynch, Undergraduate student (2021-2022) – Honors Thesis, Department of Nutrition Sciences, Oklahoma State University
- Irene (Da-Yeon) Lee, PhD student (2021- ) – Department of Nutritional Sciences, Oklahoma State University – Role: Committee Chair
- Crystal (Su-Jeong) Lee, MS student (2021-2022) – Department of Nutritional Sciences, Oklahoma State University – Role: Committee Chair
- Fan Du, 2<sup>nd</sup> year PhD student (2021- ) – *Harvard Medical School*
- Adriana Aguilar-Maldonado, 2<sup>nd</sup> year PhD student (2021- ) – *Harvard Medical School*
- Hee Jeong Kim, Postdoctoral fellow (2021- ) - *MIT*
- Isabelle Posey, Undergraduate student (2021) – Department of Nutritional Sciences, Oklahoma State University
- Youngah Han, Ph.D (2016-2017) – Research assistant in Endocrinology, Obesity and Diabetes Section, Boston Children’s Hospital, Harvard Medical School
- Lena Golick, B.S (2015-2016) – Research assistant in Endocrinology, Obesity and Diabetes Section, Boston Children’s Hospital, Harvard Medical School
- Amanda Rutherford, Undergraduate student (2014-2015) - Biology Department at University of Massachusetts Amherst  
- She was selected the 2014 *UMass Amherst Rising Researcher student achievement award* winner.
- Ellen Chow, Honors College undergraduate student (fall semester, 2013) - Undergraduate school at University of Massachusetts Amherst

## Peer-Reviewed Publications

Google Scholar: <https://scholar.google.com/citations?user=IXAUQBEAAAAJ&hl=en&oi=ao>

### Published manuscripts

1. S. Lee, D. Lee, J. F. O’Connell, J. M. Egan and **Y. Kim\*** (2022) Black ginseng ameliorates cellular senescence via p53/p21 pathway in aged mice, *MDPI-Biology*, 11, 1108
2. S. Lee, P. Chandrasekaran, C. H. Mazucanti, J. F. O’Connell, J. M. Egan and **Y. Kim\*** (2022), Dietary curcumin restores insulin homeostasis in diet-induced obese aged mice, *Aging*,

14(1):225-239

3. **Y. Kim**, S. Gautam, K. R. Aseer, J. Kim, P. Chandrasekaran, C. H. Mazucanti, P. Ghosh, J. F. O'Connell, M. E. Doyle, A. Appleton, E. Lehrmann, Q. Liu, and J. M. Egan (2020), Hepatocyte cannabinoid 1 receptor nullification alleviates toxin-induced liver damage via NF- $\kappa$ B signaling, ***Cell Death & Disease***, 11(12):1044
4. **Y. Kim**, M. Rouse, I. González-Mariscal, J. M. Egan and J. F. O'Connell (2019), Dietary Curcumin Modulates Insulin Homeostasis in Diet-Induced Obese Mice via Regulation of Hepatic PI3K-AKT axis and IDE, and Preservation of Islet Integrity, ***Nutrition and Metabolism***, 16:48
5. J. Lee, **Y. Kim**, M. A. Salazar, Y. Han, R. Liu and S. W. Park (2019), BRD7 deficiency leads to the development of obesity and hyperglycemia, ***Scientific Reports***, 9:5327
6. S. Ghosh, J. F. O'Connell, O. D. Carlson, I. González-Mariscal, **Y. Kim**, R. Moaddel, P. Ghosh and J. M. Egan (2019), Linoleic acid in diets of mice increases total endocannabinoid levels in gut and liver: Modification by dietary glucose, ***Obesity Science and Practice***, 5(3): 383-394
7. I. González-Mariscal, R. A. Montoro, J. F. O'Connell, **Y. Kim**, M. Gonzalez-Freire, Q. Liu, I. Alfaras, O. D. Carlson, E. Lehrmann, Y. Zhang, K. G. Becker, P. Ghosh and J. M. Egan (2019), Muscle Cannabinoid 1 Receptor Regulates Il-6 and Myostatin Expression, Governing Physical Performance and Whole-Body Metabolism, ***The FASEB Journal***, 33(5): 5850-5863
8. M. Bodogai, J. O'Connell, K. Kim, **Y. Kim**, K. Moritoh, C. Chen, F. Gusev, K. Vaughan, N. Shulzhenko, J. Mattison, C. Lee-Chang, W. Chen, O. Carlson, K. Becker, M. Gurung, A. Morgun, J. White, T. Meade, K. Perdue, M. Mack, L. Ferrucci, G. Trinchieri, E. Rogaev, R. Cabo, J. Egan, J. Wu and A. Biragyn (2018), Commensal bacteria cause insulin resistance in aging by activating innate B1a cells, ***Science Translational Medicine***, 10, eaat4271
9. L. Golick, Y. Han, **Y. Kim** and S. W. Park (2018), BRD7 regulates the insulin signaling pathway by increasing phosphorylation of GSK3 $\beta$ , ***Cellular and Molecular Life Sciences***, 75(10): 1857-1869
10. X. Xiao, Q. Sun, **Y. Kim**, S. Yang, W. Qi, D. Kim, K. S. Yoon, J. Clark and Y. Park (2018), Exposure to permethrin promotes high fat diet-induced weight gain and insulin resistance in male C57BL/6J mice, ***Food and Chemical Toxicology***, 111: 405-416
11. X. Xiao, **Y. Kim**, D. Kim, K. S. Yoon, J. Clark and Y. Park (2017), Permethrin alters glucose metabolism in conjugation with high fat diet by potentiating insulin resistance and decreases voluntary activities in female C57bl/6J mice, ***Food and Chemical Toxicology***, 108: 161-170
12. Q. Sun, Y. Peng, W. Qi, **Y. Kim**, J. Clark, D. Kim and Y. Park (2017), Permethrin decreased insulin stimulated AKT phosphorylation dependent on extracellular signal-regulated kinase-1 (ERK), but not AMP-activated protein kinase  $\alpha$  (AMPK $\alpha$ ), in C2C12 myotubes, ***Food and Chemical Toxicology***, 109: 95-101
13. J. G. Kim, M. Y. Park, **Y. Kim**, K. S. Yoon, J. Clark, Y. Park and K. Y. Whang (2017), 4,4'-Dichlorodiphenyltrichloroethane (DDT) and 4,4'-dichlorodiphenyldichloroethylene (DDE) inhibit myogenesis in C2C12 myoblasts: DDT and DDE inhibit myogenesis, ***Journal of the Science of Food and Agriculture***, 97(15): 5176-5185
14. **Y. Kim**, M. A. Salazar, H. Herrema, T. Delibasi and S. W. Park (2016), The role of BRD7 in embryo development and glucose metabolism, ***Journal of Cellular and Molecular Medicine***, 20(8): 1561-1570

15. **Y. Kim**, D. Kim and Y. Park (2016), Conjugated linoleic acid (CLA) promotes endurance capacity via peroxisome proliferator-activated receptor (PPAR)  $\delta$ -mediated metabolism in mice, *Journal of Nutritional Biochemistry*, 38: 125-133
16. Q. Sun, X. Xiao, **Y. Kim**, D. Kim, K. S. Yoon, J. Clark and Y. Park (2016), Imidacloprid promotes high fat diet-induced adiposity and insulin resistance in male C57BL/6J mice, *Journal of Agricultural and Food Chemistry*, 64(49): 9293-9306
17. **Y. Kim**, D. J. Good and Y. Park (2016), Conjugated linoleic acid (CLA) improves muscle metabolism via stimulating mitochondrial biogenesis signaling in genetically induced inactive adult-onset obese mice, *European Journal of Lipid Science and Technology*, 118: 1305-1316
18. **Y. Kim**, J. G. Kim, K. Y. Whang and Y. Park (2016), Impact of conjugated linoleic acid (CLA) on skeletal muscle metabolism, *Lipids*, 51: 159-178
19. J. H. Kim, **Y. Kim**, Y. J. Kim and Y. Park (2016), Conjugated linoleic acid: Potential health benefits as a functional food ingredient, *Annual Review of Food Science and Technology*, 7: 221-244
20. **Y. Kim**, D. Kim, D. J. Good and Y. Park (2015), Effects of post-weaning administration of conjugated linoleic acid on development of obesity in nescient basic helix-loop-helix 2 knockout mice, *Journal of Agricultural and Food Chemistry*, 63(21): 5212-5223
21. J. Wong, **Y. Kim**, Y. Park, S. Lee, S. Baek and Y. Park (2015), Isomer specificity of conjugated linoleic acid on suppression of osteosarcomas via phosphoinositide 3-kinase pathway, *Journal of Nature and Science*, 1(4):e67
22. **Y. Kim** and Y. Park (2015), Conjugated linoleic acid (CLA) stimulates mitochondrial biogenesis signaling by the upregulation of PPAR $\gamma$  coactivator 1 $\alpha$  (PGC-1 $\alpha$ ) in C2C12 cells, *Lipids*, 50(4): 329-338
23. J. H. Bae, S. M. Choi, **Y. Kim**, M. G. Lee and H. Park (2009), Effects of supplementation of soybean extract and exercise training on body composition and blood lipid profiles, *The Korean Journal of Physical Education*, 48: 657-668.
24. J. H. Gwak, J. H. Lee, S. J. Lee, H. W. Park, **Y. Kim** and Y. J. Hyun (2007), The effect of L-carnitine and isoflavone supplementation on weight reduction and visceral fat accumulation in overweight women, *The Korean Journal of Nutrition*, 40: 630-638.
25. H. Park, M. Yang, J. Lee, E. Shin, **Y. Kim**, J. Chun, T. Lee and S. Lee (2006), Long term feeding with soy isoflavone and L-carnitine synergistically suppresses body weight gain and adiposity in high-fat diet induced obese mice, *Nutritional Sciences*, 9: 179-189.

### **Manuscripts Under Revision or In Preparation**

1. **Y. Kim**, J. Lee, Y. Han, R. Tao, M. F. White, R. Liu, S.W. Park (2023), BRD7 interacts with IR and improves glucose homeostasis independent of IRS1 and IRS2, ***The Proceedings of the National Academy of Sciences (PNAS)*** (under review)
2. **Y. Kim\***, D. Lee, I. González-Mariscal, J. F. O'Connell, S. Gautam, O. D. Carlson, Q. Liu and J. M. Egan\* (2023), Deficiency of hepatic cannabinoid 1 receptor (CB1R) ameliorates fatty liver and improves glucose homeostasis via regulation of PI3K-mTORC1 axis. (in preparation)
3. D. Lee, S. Lee, P. Chandrasekaran, J. F. O'Connell, J. M. Egan and **Y. Kim\*** (2023), Dietary curcumin regulates hepatic cellular senescence via p38 and p65 pathway in aged mice. (in preparation)

4. D. Lee, M. Lynch, N. Hooten, J. F. O'Connell, B. Lee and **Y. Kim\*** (2023), The role of ginseng and its bioactive compounds in aging. *Annual Review of Food Science and Technology* (under review)

## Poster Presentations

1. S. Lee and **Y. Kim\*** (2022) Dietary fermented red ginseng promotes healthy aging by modulating gut microbiota composition in aged mice, American Society for Nutrition (ASN) Annual Meeting, Current Developments in Nutrition, 6(Suppl 1):1018
2. D. Lee, S. Lee, J. F. O'Connell, J. M. Egan and **Y. Kim\*** (2022) Black ginseng ameliorates cellular senescence via p53/p21 pathway, Experimental Biology 2022, American Physiological Society, The Role of Bioactive Compounds in Health and Chronic Disease Session, doi.org/10.1096/fasebj.2022.36.S1.R5925
3. S. Lee, P. Chandrasekaran, F. O'Connell, J. M. Egan and **Y. Kim\*** (2022) Dietary curcumin regulates hepatic cellular senescence in aged mice via p38-MAPK activation pathway, Experimental Biology 2022, American Physiological Society, Hot Topics in Nutrition Physiology Session, doi.org/10.1096/fasebj.2022.36.S1.R5518
4. **Y. Kim\***, C. H. Mazucanti, J. F. O'Connell and J. M. Egan\* (2021) Dietary Curcumin Systemically Maintains Insulin Homeostasis in Diet-Induced Aged Obese Mice via Liver-Pancreas-Brain Axis, American Society for Nutrition (ASN) Annual Meeting, Current Developments in Nutrition, 5(Suppl 2):29
5. **Y. Kim** and J. M. Egan (2020) Nullification of Hepatic Cannabinoid 1 Receptor (CB1R) Ameliorates Fatty Liver and Improves Glucose Homeostasis via Regulation of PI3K mTORC1 axis, American Society for Nutrition (ASN) Annual Meeting, Current Developments in Nutrition, 4(2): 1260
6. **Y. Kim**, I. González-Mariscal, K. Fishbein, J. F. O'Connell and J. M. Egan (2019) The Role of Endocannabinoid Receptor 1 (CB1R) in the Insulin Signaling Pathway, American Diabetes Association (ADA) Annual Meeting, 1895-P
7. **Y. Kim**, I. González-Mariscal, K. Fishbein, J. F. O'Connell and J. M. Egan (2019) Deletion of hepatic cannabinoid 1 receptor (CB1R) prevents fatty liver and glucose homeostasis via mTORC1, *National Institute on Aging Annual Retreat, National Institute of Health (NIH)*
8. M. Bodogai, J. O'Connell, **Y. Kim**, J. Egan, and A. Biragyn (2019) Age associated insulin resistance is controlled by microbiota through a monocyte-B1a cell pathway, *American Association of Immunologists Conference*
9. **Y. Kim**, I. González-Mariscal, S. Gautam and J. M. Egan (2018) The role of hepatic cannabinoid 1 receptor (CB1R) in the insulin signaling pathway, *National Institute on Aging Annual Retreat, National Institute of Health (NIH)*
10. Q. Sun, X. Xiao, **Y. Kim**, D. Kim, K. S. Yoon, J. M. Clark, and Y. Park (2016) Exposure to Imidacloprid Promotes Obesity and Type 2 Diabetes in C57BL/6J Mice, *In: The Toxicologist: Supplement to Toxicological Sciences*, **150** (1), Society of Toxicology, Abstract no. 2588.
11. X. Xiao, Q. Sun, **Y. Kim**, D. Kim, K. S. Yoon, J. M. Clark, and Y. Park (2016) Exposure to Permethrin Increases Body Fat Mass and Alters Glucose Metabolism in Response to High Fat Diet in Male C57BL/6J Mice, *In: The Toxicologist: Supplement to Toxicological Sciences*, 150 (1), Society of Toxicology, Abstract no. 2889.



12. X. Xiao, **Y. Kim**, D. Kim, K. S. Yoon, J. M. Clark, and Y. Park (2015) Exposure to permethrin alters glucose metabolism in response to high fat diet in female C57BL/6J mice, *In: The Toxicologist: Supplement to Toxicological Sciences*, 144 (1), Society of Toxicology, Abstract no. 2154.
13. Y. Park and **Y. Kim** (2015), Conjugated linoleic acid and muscle metabolism, *13<sup>th</sup> European Federation for the Science and Technology of Lipids*
14. **Y. Kim**, D. J. Good and Y. Park (2015), Conjugated linoleic acid increases voluntary activity and muscle mass via mitochondrial biogenesis in adult onset inactivity-induced obese mice, *106<sup>th</sup> American Oil Chemists' Society (AOCS) Annual Meeting*
15. **Y. Kim**, D. J. Good and Y. Park (2015), Effects of early administration of conjugated linoleic acid on development of obesity in nescient basic helix-loop-helix 2 knockout mice, *FASEB JOURNAL*, 29: 608.19
16. A. Rutherford, **Y. Kim**, F. Beppu and Y. Park (2015), Effects of imidacloprid on myogenesis in C2C12 myoblasts, *FASEB JOURNAL*, 29: 612.5
17. X. Xiao, **Y. Kim**, D. Kim, K. Yoon, J. M. Clark and Y. Park (2015), A pyrethroid pesticide, permethrin, alters lipid metabolism and voluntary activities in mice, *FASEB JOURNAL*, 29: 776.2
18. **Y. Kim**, D. J. Good, C. S. Park and Y. Park (2014), Effects of conjugated linoleic acid (CLA) on voluntary physical activity and muscle metabolism in adult-onset inactivity induced obese mice, *US-Korea Conference*
19. **Y. Kim**, D. J. Good, C. S. Park and Y. Park (2014), Molecular mechanisms of conjugated linoleic acid (CLA) on muscle metabolism in adult onset inactivity-induced obese mice, *FASEB JOURNAL*, 28, 1045.27
20. J. Kim, **Y. Kim**, A. Rutherford, K. S. Yoon, J. M. Clark and Y. Park (2014), Effects of dichlorodiphenyltrichloroethane (DDT) on myogenesis in C2C12 cells, *FASEB JOURNAL*, 28, 1142.14
21. **Y. Kim** and Y. Park (2013), Conjugated linoleic acid (CLA) activates PGC-1alpha via AMPK and SIRT1 in C2C12 myotubes, *FASEB JOURNAL*, 27, 637.25

## Invited Presentations

1. Food bioactive compounds, diabetes and aging, Osher Lifelong Learning Institute at Oklahoma State University, September 2022.
2. Food bioactive compounds in aging, 35th US-Korea Conference 2022 on Science, Technology, and Entrepreneurship (UKC 2022), August 2022.
3. Food bioactive compounds, diabetes & aging, The North Central District Dietetic Association (NCDDA) Meeting, April 2022.
4. Effects of cannabinoid 1 receptor (CB1R) on obesity, diabetes and aging, International seminar for recent advances in food safety & materials, January 2022.
5. Effect of cannabinoid 1 receptor (CB1R) on aging-associated diseases, 34th US-Korea Conference 2021 on Science, Technology, and Entrepreneurship (UKC 2021), December 2021.
6. Deletion of hepatic cannabinoid 1 receptor (CB1R) prevents fatty liver and glucose homeostasis via mTORC1, Harold Hamm Diabetes Center (HHDC) Research Symposium, November 2020.
7. Food bioactive compounds, diabetes and aging, 2020 Korean Society of Food Science and

Nutrition (KFN) international academic conference, October 2020.

8. Deficiency of hepatic cannabinoid 1 receptor (CB1R) ameliorates fatty liver and improves glucose homeostasis via regulation of PI3K-mTORC1 axis, Annual Bioscience and Engineering Symposium (ABES), November 2019.
9. Deletion of hepatic cannabinoid 1 receptor (CB1R) prevents fatty liver and glucose homeostasis via mTORC1, National Institute on Aging Annual Retreat, National Institute of Health (NIH), March 2019.
10. The role of hepatic cannabinoid receptor 1 (CB1R) in insulin signaling pathway, US-Korea Conference 2018, Health and Medical (Food, Animal and Nutrition) Symposium, Advanced Nutrition and Food Science Session, August 2018.
11. The role of BRD7 in embryo development and glucose metabolism, US-Korea Conference 2017, Health and Medical (Food, Animal and Nutrition) Symposium, Current Research and Issues in Nutritional Science Session, August 2017.
12. Conjugated linoleic acid promotes endurance capacity via SIRT1 and AMPK mediated mechanisms, Experimental Biology Meeting, American Society for Nutrition, Obesity Session, April 2014.

## Advising Students' Oral Presentations

1. Su-Jeong (Crystal) Lee (MS student), Dietary curcumin regulates hepatic cellular senescence in aged mice via p38-MAPK activation pathway, Experimental Biology 2022, Featured Topic – Hot Topics in Nutrition Physiology, awarded the *Best Abstract Award*
2. Su-Jeong (Crystal) Lee (MS student), Dietary curcumin ameliorates perturbed insulin homeostasis in the diet-induced obese aged mice, 34th US-Korea Conference 2021 on Science, Technology, and Entrepreneurship (UKC 2021), December 2021 – *Su-Jeong (Crystal) Lee awarded UKC 2021 Best Presentation Award*

## Funded Grants

- **Oklahoma Center for the Advancement of Science & Technology (OCAST) Grant (\$135,000)**, U.S., Title: Effects of Cannabinoid 1 Receptor on NAFLD

Mar. 2023-Feb. 2026

Role: **Principle Investigator (PI)**

The goal of this project is to investigate roles of cannabinoid 1 receptor (CB1R) in the development of non-alcoholic fatty liver disease (NAFLD)

- **The Ottogi Ham Taiho Foundation Fund (\$266,226)**, South Korea, Title: Effects of Curcumin on Type 3 Diabetes (Brain Insulin Resistance) by Aging – In vitro, preclinical and human intervention studies

Feb. 2021-Jan. 2024

Role: **Principal Investigator (PI)**

The goal of this project is to investigate roles of curcumin in type 3 diabetes by combination of type 2 diabetes and aging

- Oklahoma State University Research Fund (\$100,000)**, U.S., Title: Nutrient-gene Interaction in obesity/diabetes & aging research  
 Sep. 2020-Aug. 2022  
 Role: **Principal Investigator (PI)**  
 The goal of this project is to investigate roles of food bioactive compounds as senolytics and/or exercise-mimetics
- BTC Corporation Research Fund (\$53,395)**, South Korea, Title: Effect of Fermented Red Ginseng (FRG) on Anti-aging  
 June 2021-Dec. 2023  
 Role: **Principal Investigator (PI)**  
 The goal of this project is to investigate roles of fermented red ginseng as senolytics
- BTC Corporation Research Fund (\$69,636)**, South Korea, Title: Effect of Fermented Red Ginseng (FRG) on Anti-aging  
 Oct. 2022-Dec. 2023  
 Role: **Principal Investigator (PI)**  
 The goal of this project is to investigate roles of fermented red ginseng as senolytics
- CEHS Laboratory and Research Program funding (\$368,080)**, U.S., Title: Aspect Imaging M3™ Compact High-Performance MRI System: Assessing Impact of Food Bioactive Compounds and Whole Foods on Preclinical and Molecular Research  
 Jan. 2022-Dec. 2022  
 Role: **PI**

## Pending Grants

- National Institute of Health (NIH) Grant (R15, \$445,058)**, U.S., Title: Effects of Cannabinoid 1 Receptor (CB1R) on Age-associated nonalcoholic fatty liver disease (NAFLD)  
 July 2023-June 2026  
 Role: **Principle Investigator (PI)**
- Congressionally Directed Medical Research Programs (CDMRP) Grant (\$641,782)**, U.S., Title: Molecular mechanisms contributing to Gulf War Illness (GWI) associated liver dysfunction in the context of aging  
 Sep. 2023-Aug. 2026  
 Role: **Principle Investigator (PI)**

- **National Institute of Health (NIH) Grant (R15, \$446,310)**, U.S., Title: The Role of Mouse Zinc Transporter ZIP12 in Brain Development

July 2023-June 2026

Role: **Co-I**

- **USDA AFRI Grant (A1343, \$800,000)**, U.S., Title: Role of Cranberry and Probiotics in Healthy Aging

Apr. 2023-Mar. 2027

Role: **Co-PD**