

2022-2023 PUBLICATIONS AND PRODUCTS FOR NE1939 PROJECT

Published Journal Articles (26 TOTAL, 4 JOINT)

1. Conrad Z, Drewnowski A, Belury MA, Love DC. Greenhouse gas emissions, cost, and diet quality of specific diet patterns in the United States. *Am J Clin Nutr.* 2023; 17:S0002-9165(23)46847-5. doi: 10.1016/j.ajcnut.2023.04.018.
2. Dustin D, Kowalski C, Salesses M, McDowell A, Kris-Etherton PM, Belury MA, Johnson LK, Conrad Z. Carbohydrate intakes below recommendations with a high intake of fat are associated with higher prevalence of metabolic syndrome. *J Acad Nutr Diet.* 2023; 23:S2212-2672(23)00098-9.
3. Eubank, J.M., Oberlin, D., Alto, A., Sahyoun, N., Asongwed, E., Monroe-Lord, L., & Harrison, E. (2022). Effects of lifestyle factors on cognition in Minority population of older adults: A review. *Frontiers in Nutrition.* 2022; 9. <https://doi.org/10.3389/fnut.2022.841070>. **(JOINT PUBLICATION)**
4. Gumper-Fedus K, Crowe O, Hart PA, Pita-Grisanti V, Velez-Bonet E, Belury MA, Ramsey M, Cole RM, Badi N, Culp S, Hinton A, Lara L, Krishna SG, Conwell DL, Cruz-Monserrate Z. Changes in plasma fatty acid abundance related to chronic pancreatitis: A pilot study. *bioRxiv.* 2023; 9:2023.01.05.522899.
5. Hawley AL and Baum JI*. Nutrition as the foundation for successful aging: a focus on dietary protein and omega-3 polyunsaturated fatty acids. *Nutrition Reviews,* 2023. <https://doi.org/10.1093/nutrit/nuad061>
6. Houfek A, Garden-Robinson J, Hilliard E, Rhee Y, Stastny S, Belury MA, Cawthon PM, McGrath R. Older American women may especially benefit from distributing and consuming protein for decreasing odds of functional limitations. *J Nutr Health Aging* 2022;26(11):1025-32
7. Huang, YC, Combs, GF, Jr, Wu, TL, Zeng, HE, and Cheng, W-H. Selenium Status and Type 2 Diabetes Risk. *Arch Biochem Biophys,* 2022; 730:109400. doi: 10.1016/j.abb.2022.109400.
8. Kendall, C., Francis, S.L., Shelley, M., Ventura-Marra, M., Sahyoun, N.R., Monroe-Lord, L., Xu, F., Weidauer, L., & Arthur, A. Middle age and older adults: Their nutrition and physical activity needs and how best to address them. *Journal of Nutrition in Gerontology and Geriatrics.* 2023; 42(2), 59-71. doi:10.1080/21551197.2023.2192186 **(JOINT PUBLICATION)**
9. Kristie Conde, Danielle Kulyk, Allison Vanschaik, Sierra Daisey, Catherine Rojas, Kimberly Weirsielis, Ali Yasrebi, Thomas J Degroat, Yuxiang Sun, Troy Adam Roepke. Deletion of growth hormone secretagogue receptor in kisspeptin neurons in female mice blocks diet-induced obesity. 2022; *Biomolecules* 12, 1370
10. Monroe-Lord L, Harrison E, Ardakani A, Duan X, Spechler L, Jeffery TD, Jackson P. Changes in Food Consumption Trends among American Adults since the COVID-19 Pandemic. *Nutrients.* 2023; 15(7):1769. <https://doi.org/10.3390/nu15071769>
11. Monroe-Lord, L., Harrison, E., Ardakani, A., Francis, S.L., Xu, F., Ventura-Marra, M., Weidauer, L., Arthur, A.E., Sahyoun, N.R. Aging anxiety and physical activity outcomes among middle and older age African American. *Physical Activity and Health Journal.* 2023; 7(1), 281-292. doi: [org/10.5334/paah.287](https://doi.org/10.5334/paah.287) **(JOINT PUBLICATION)**
12. Mullens DA, Ivanov I, Hullar MAJ, Randolph TW, Lampe JW, Chapkin RS. Personalized Nutrition Using Microbial Metabolite Phenotype to Stratify Participants and Non-Invasive Host Exfoliomics Reveal the Effects of Flaxseed Lignan Supplementation in a Placebo-Controlled Crossover Trial. *Nutrients.* 2022 Jun 8;14(12):2377. doi: 10.3390/nu14122377
13. Palsgaard, P., Maino Vieytes, C.A., Peterson, N., Francis, S.L., Monroe-Lord, L., Sahyoun, N., Ventura-Marra, M., Weidauer, L., Xu, F., Arthur, A.E. Healthcare professionals' views and perspectives

- towards aging. *International Journal of Environmental Research and Public Health*. 2022; 19(23), 15870. doi: 10.3390/ijerph192315870 **(JOINT PUBLICATION)**
14. Pan Q, Gao M, Kim D, Ai W, Yang W, Jiang W, Brashear W, Dai Y, Li S, Sun Y, Qi Y, Guo S. Hepatocyte FoxO1 Deficiency Protects From Liver Fibrosis via Reducing Inflammation and TGF- β 1-mediated HSC Activation. *Cell Mol Gastroenterol Hepatol*. 2023; S2352-345X(23)00161-3. doi: 10.1016/j.jcmgh.2023.08.013.
 15. Poudel, S., Li, T., Chen, S., Zhang, X., Cheng, W.-H., Sukumaran, A.T., Kiess, A., and Zhang, L. Prevalence, antimicrobial resistance, and molecular characterization of *Campylobacter* isolated from broilers and broiler meat raised without antibiotics. *Microbiology Spectrum*, 2022 10(3), e00251-22. <https://doi.org/10.1128/spectrum.00251-22>
 16. Reeder, N., Tolar-Peterson, T., Bailey, R. H., Cheng, W.-H., Evans, M.W. Jr. Food Insecurity and Depression among US Adults: NHANES 2005-2016. *Nutrients*. 2022; 14, 3081. <https://doi.org/10.3390/nu14153081>
 17. Rowe S, Tukun AB*, Johnson LK, Love DC, Belury MA, Conrad Z. Consumption of key food groups by individuals consuming popular diet patterns: mixed effects of replacing foods high in added sugar, sodium, saturated fat, and refined grains. *Nutrients*. 2022;14(24):5226. doi: 10.3390/nu14245226
 18. Sassine AJ, Rabbitt MP, Coleman-Jensen A, Moshfegh AJ, Sahyoun NR. Development and Validation of a Physical Food Security Tool for Older Adults. *J Nutr*. 2023;153(4):1273-1282. doi: 10.1016/j.tjnnt.2023.02.034.
 19. Shoemaker ME, Gillen ZM, Fukuda DH, and Cramer JT. Metabolic flexibility and inflexibility: Pathology underlying metabolism dysfunction. *JCM*. 2023; 12(13): 4453. Doi:10.3389
 20. Snoke DB*, Mahler CA*, Angelotti A*, Cole RM, Sparagna GC, Baskin KK, Belury MA. Linoleic acid-enriched diet increases mitochondrial tetralinoleoyl cardiolipin, OXPHOS protein levels, and uncoupling in interscapular brown adipose tissue during diet-induced weight gain. *Biology (Basel)*. 2022;12(1):9. doi: 10.3390/biology12010009
 21. Vaudin A, * Dean W, Chen J, Sahyoun NR. *** Service Awareness Among Older Adults Experiencing Barriers to Food and Eating. *J Nutr Educ Behav* 2023; S1499-4046(23)00094-5. doi: 10.1016/j.jneb.2023.04.005.
 22. Xu, F., Earp, J.E., Adami, A., Lofgren, I.E., Delmonico, M.J., Greene, G.W. & Riebe, D. The sex and racial/ethnic group specific relationships of body mass index, waist circumference to abdominal adiposity in US adults. *International Journal of Environmental Research and Public Health*. 2022; 19(23), 15521. doi:10.3390/ijerph192315521.
 23. Yang W, Kim DM, Jiang W, Ai W, Pan Q, Rahman S, Cai JJ, Brashear WA, Sun Y, Guo S. Suppression of FOXO1 attenuates inflamm-aging and improves liver function during aging. *Aging Cell*. 2023; 22(10):e13968. doi: 10.1111/accel.13968.
 24. Ye X, Liu Z, Han HW, Noh JY, Shen Z, Kim DM, Wang H, Guo H, Ballard J, Golovko A, Morpurgo B, Sun Y. Nutrient-Sensing Ghrelin Receptor in Macrophages Modulates Bisphenol A-Induced Intestinal Inflammation in Mice. *Genes (Basel)*. 2023 Jul 16;14(7):1455. doi: 10.3390/genes14071455.
 25. Zeng, H., Safratowich, B.D., Cheng, W.-H., Bukowski, M.R. Identification of oncogenic signatures in the inflammatory colon of C57BL/6 mice fed a high-fat diet. *J Nutr Biochem*, 2023; 111:109188 doi: 10.1016/j.jnutbio.2022.109188
 26. Zeng, H., Safratowich, B.D., Cheng, W.-H., Magnuson, A.D., Picklo, M.J. Changes of the Fecal Metabolome Accompany an Increase in Aberrant Crypt Foci in the Colon of C57BL/6 Mice Fed a High-Fat Diet. *Biomedicines*, 2022 10(11):2891. doi: 10.3390/biomedicines10112891.

Published Research Abstracts (21 TOTAL)

1. Barry AM, Brin HN, Dicks ND, Carper MJ, Shoemaker ME, DeShaw KJ. (July 12-15, 2023). A comparison of perceptions of exercise behaviors in two Midwest fire departments. Poster presentation at the 2023 National Strength and Conditioning Association (NSCA) Conference, Las Vegas, NV.
2. Bignell, W., Franck, K., Cobbles, A., Kelley, S., Johnson, K. (October 8-11, 2022). Results from a Mixed-Methods Survey and Focus Group to Assess social media and Technology Use by Older Adults in Northeast Tennessee to Inform Development of a Virtual Supper Club Nutrition Education Intervention. Poster presented at: Academy of Nutrition and Dietetics Food and Nutrition Expo Annual Conference; Orlando, FL.
3. Francis SL, Gollub, E. Stay Independent: Promoting Healthy Aging in Iowa and Louisiana. Poster presentation at the SENB Conference, Washington, DC. July 2023 (JOINT Poster presentation)
4. Han H, Noh JY, Ye X, Kim DM, Sun Y. (June 8-11, 2023). Intermittent fasting regulates myeloid cells in the circulation and peripheral tissues. Oklahoma City.
5. Hohman AM, and McNeill EM, "Evaluating the Role of Human Conserved microRNA-193 Drosophila Heart," Midwest Aging Consortium Meeting, 2023.
6. Jeffery, T. (July 23, 2023). Rewards and challenges of start-up projects promoting nutrition equity to mitigate health disparities of the Black community in D.C [Conference Presentation]. Society for Nutrition Education and Behavior Conference. Washington, DC, USA.
7. Johnson, K., Franck, K., Bignell, W. Socialization, social media, Technology, and Health Among Older Tennesseans. Poster Presented at: On Aging Conference; March 27-30, 2023; Atlanta, GA.
8. Liu Z, Wang H, Hanh H, Ye X, Kim DM, Zheng S, Noh JY, Landrock D, Sun Y. (June 8-11, 2023). Aging-mediated Programming of Innate Immune Cells in Mouse Hearts. Oklahoma City.
9. Liu Z, Ye X, Han HW, Noh JY, Zheng S, Kim DM, Golovko A, Morpurgo B, Sun Y. (July 16-19, 2023), Bisphenol A exacerbates intestinal inflammation in colitis by activating nutrient-sensing ghrelin receptor in macrophages. Kenneth Rainin Foundation - 2023 Innovations symposium. San Francisco.
10. Liu Z, Ye Z, Han HW, Noh JY, Zheng S, Kim DM, Golovko A, Morpurgo B, Sun Y. (July 17-18, 2023). Bisphenol A exacerbates intestinal inflammation in colitis by activating nutrient-sensing ghrelin receptor in macrophages. 2023 Kenneth Rainin Foundation Innovations Symposium, San Francisco.
11. Noh JY, Sun Y. (Ghrelin signaling regulates intestinal inflammation and modulates DSS-induced colitis. 2023 Kenneth Rainin Foundation Innovations Symposium. July 17-18, 2023, San Francisco.
12. Noh JY, Sun Y. (July 16-19, 2023). Ghrelin signaling regulates intestinal inflammation and modulates DSS-induced colitis. Kenneth Rainin Foundation - 2023 Innovations symposium. San Francisco.
13. Noh JY, Wang H, Farnell YZ, Tan X, Wright G, Hillhouse A, Sun Y. (Nov. 2-6, 2022). Inflamm-Aging is Associated with Pro-Inflammatory Programming of Innate Immune Cells in the Colon. Gerontological Society of America (GSA) annual meeting, Indianapolis (Travel award from OGAPS)
14. Noh JY, Wang H, Farnell YZ, Tan X, Wright G, Hillhouse A, Sun Y. (June 8-11, 2023). Inflamm-Aging is Associated with Pro-Inflammatory Programming of Innate Immune Cells in the Colon. Oklahoma City (Selected as Data Blitz Presentation).
15. Rudolph CS, Francis SL. Development and evaluation of the Instructional Campus on Aging Nutrition Online Course: A study protocol. Poster presentation at the American Society for Nutrition Annual Conference, Boston MA. July 2023

16. Schultz S., Francis SL. Ageism: Aging Knowledge and Perspectives of the Aging Nutrition Network. Poster presentation accepted for presentation at the Gerontological Society of America Annual Conference, Indianapolis, IN. November 2022
17. Schultz SR, Vincent AD, Francis SL, Hyde C, Bauman A. Elevating historically marginalized voices in a National Aging Network needs assessment. Poster presentation at the SENB Conference, Washington, DC. July 2023
18. Wang H, Mathew T, Khadivi J, Zheng H, Sun Y. (June 8-11, 2023). Ghrelin receptor-mediated neuroinflammation in Alzheimer's disease. AGE American Aging Association. Oklahoma City (Selected as Poster Pitch)
19. Wang H, Zheng H, Sun Y. (May 15 - 19, 2023). Nutrient-sensing ghrelin signaling modulates neuroinflammation in Alzheimer's disease. Keystone Symposium on "Neuroimmune Interactions: From Basic Mechanisms to Novel Therapeutic Directions". Whistler conference center, British Columbia, Canada
20. Wang, H, Noh JY, Han HW, Kim DM, Sun Y. (May 2, 2022). Uncover the Profile of Neuroinflammation in Aged Mice. TAMIN graduate symposium, TAMU.
21. Zeng H, Safratowich BD, Cheng WH, Briske-Anderson M. (July 2023). Ursodeoxycholic acid induces cell cycle arrest and apoptosis in cancerous HCT116 colon cells but to a lesser extent in noncancerous NCM460 colon cells. Poster presentation. American Society for Nutrition annual meeting, Boston, MA.

Invited Talks (18 TOTAL)

1. Han H, Noh JY, Ye X, Kim D, Wang H, Sun Y. (Nov. 17, 2022) Middle-age onset intermittent fasting regulates myeloid cell population in circulation and tissues. Nutritional Science Graduate association (NSGA), 15-min thesis competition, Department of Nutrition, Texas A&M University.
2. Jackson, P. & Jeffery, T. Engagement and Programming with Diverse Communities [Training]. Iowa State University Extension and Outreach. Feb. 2, 2023.
3. Noh JY, Wang H, Farnell YZ, Tan X, Wright G, Hillhouse A, Sun Y. Inflamm-aging is associated with pro-inflammatory programming of innate immune cells in the colon. Nutritional Science Graduate association (NSGA), 15-min thesis competition, Department of Nutrition, Texas A&M University, Nov. 17, 2022 (Presentation winner – 1st place)
4. Shoemaker ME. Nutrition for Law Enforcement. Sioux Falls Police Department. Sioux Falls, SD. June 21, 2023.
5. Wang, H, Kim, DM, Shen, Z, Sun, Y (September 19, 2022). Neuroinflammation of Aged Mouse brain. Texas A&M University 6th Annual Postdoctoral Research Symposium
6. Liu Z, & Sun Y. (2022). GHS-R Deficiency in Macrophages Alleviates Fructose-induced Inflammation. Nutritional Science Graduate association (NSGA), 15-min thesis competition, Department of Nutrition, Texas A&M University, Nov. 17, 2022 (Presentation winner – 3rd place)
7. Sun Y. (2023). Invited speaker, 4th International Conference on Precision Nutrition and Metabolism in Public Health and Medicine, Ioannina, Greece Title: Nutrient-sensing ghrelin signaling in inflamm-aging and healthspan June 25-29, 2023
8. Sun Y. Oct. 31, 2022 Invited talk, Department of Nutrition, University of North Carolina at Greensboro Title: Nutrient-sensing ghrelin signaling in health and disease: trick or treat?

9. Sun Y. (2023). (Chapkin) Presented an invited talk “Precision exfoliomics: non-invasive host-microbiome multi-omic data integration to predict infant health outcomes” at the Microbiome Movement, Maternal & Infant Health Summit, Boston, MA, March 28, 2023.
10. Sun Y. (2023). (Chapkin) Presented an invited talk “Precision nutrition using non-invasive exfoliomics and microbial metabolite phenotype to stratify subjects”, Carolyn Clifford Distinguished Lecture seminar series, Department of Nutrition, UC Davis, April 17, 2023.
11. Sun Y. (2023). Keynote address, 2022-2023 NE1939 Research Excellence Award recipient, USDA multi-state NE1939 annual meeting, June 5-7, 2023, Newport, RI Title: Nutrient-sensing ghrelin signaling in inflammaging and healthspan. June 6, 2023
12. Sun Y. (2023). Talk, Department of Chemistry, Cleveland State University Title: Hunger hormone ghrelin signaling metabolically programs innate immunity in obesity and aging. Sept. 1, 2023
13. Cheng W. (2023). Dietary Selenium Deficiency Promotes Age-related Gut Dysbiosis and Glycemia. 7th International Conference of Se in Environment and Human Health. Bangkok, Thailand, September 2023.
14. Cheng W. (2023). Dietary Selenium Deficiency Promotes Age-related Gut Dysbiosis and Type 2 Diabetes-like Symptoms. 9th International Se Conference. Daejeon, South Korea. June 2023.
15. Cheng W. (2023). Precision selenium intake, gut microbiota, and diabetes. The 4th Asia-pacific Nutrigenomics Nutrigenetics Organization Conference. New Taipei City, Taiwan, December 2022.
16. Sahyoun NR (2023) “Nutrition and Food security screener” Innovations in Nutrition Programs and Services (INNU) Meeting (zoom). February 27, 2023
17. Sahyoun NR (2023) “The Development and Testing of a Physical Food Security Tool” USDA-ERS- Yeutter Institute Food Security Modeling Research Symposium Program, Kansas City, MO September 15, 2023.
18. Taylor A, and McNeill EM. (2023). Drosophila as a model to study the effect of saturated dietary fat on neuronal health, Midwest Aging Consortium Meeting, 2023.

Theses or Dissertations (5 in TOTAL)

1. Chih Cheng Lu. Impact of Nutrition Education in the Commodity and Supplemental Food Program, M.S. thesis, Iowa State University, advisor: Dr. Sarah L. Francis, Summer 2023
2. Izabelle Mendez: Thesis: Validating the Expanded Food Security Screener and home-delivered meal prioritization tool for eligible individuals. University of Maryland, advisor: Dr. Nadine Sahyoun.
3. JohnEric Smith, Impact of Daily Sweet Potato Ingestion on Alterations to the Gut Microbiome, Cholesterol, and Exercise Performance, Master Thesis, Mississippi State University, advisor: Dr. Wen Hsing Cheng, Spring 2023
4. Komp J. Inhibition of Drosophila microRNA-6 increases lipid droplet accumulation in cardiomyocytes but mitigates age-related cardiac arrhythmia and extends lifespan, 2023.
5. Mohammad Shushari, Adherence to a Gluten-free Diet and Depression, and Nutrients’ Distribution in Participants with Celiac Disease, Ph.D Dissertation, Mississippi State University, advisor: Dr. Wen Hsing Cheng Summer 2023

Educational AIDS were completed (1 TOTAL)

Johnson, K. Socially Nutritious. University of Tennessee Extension nutrition education curriculum, 2022

Grants and Contracts (19 TOTAL, \$9,174,975 total awarded)

1. Jamie I. Baum, PI. Printing, Protein, and Personalized Nutrition (PPP Study) Funder: Arkansas Biosciences Institute. Funding Period: June 1, 2023-May 31, 2024. Grant Amount: \$50,000.
2. Jamie I. Baum, PI. An integrated, multimedia approach to Delivering Food, Exercise, and Nutrition education for prevention of chronic Disease (DFEND). Funding Period: April 1, 2023 - March 31, 2027. Funder: USDA Grant Amount: \$970,146
3. Lee Weidauer, Co-I. Mental Health Support. Funding Period: October 1, 2022 – September 30, 2023. Funder: USDA-NIFA grant. Grant Amount: \$159, 100.
4. Lee Weidauer, Co-I. Nutrition Intervention – Clinical Trial. Funding Period: October 1, 2022 – September 30, 2023. Funder: National Pork Board. Grant Amount: \$250, 000.
5. Lee Weidauer, Co-I. Nutrition Intervention -Clinical Trial. Funding Period: October 1, 2022 – September 30, 2023. Funder: USDA-ARS. Grant Amount: \$604,076
6. Martha Belury, Co-I. Uncovering the Feedback Loop Between the Central Nervous System and Adipose Tissue. Funding Period: January 2023 – December 2026. Funder: W.M. Keck Foundation. Grant Amount: \$1, 400, 000.
7. Martha Belury, MPI. Improving Sarcopenia by Targeting Mitochondria. Funding Period: September 2023 – September 2028. Funder: NIA/NIH R01. Grant Amount: \$3, 100, 000.
8. Martha Belury, PD. National Needs Fellowship: Multidisciplinary Training of Fellows in Food & Nutrition for Obesity & Cancer Prevention. Funding Period: October 2017 – October 2023. Funder: USDA 2017-09503. Grant Amount: \$350, 000.
9. Martha Belury, PI. Effects of Dietary Soybean Oil on Liver Fat, Body Composition and Cardiometabolic Disease Risk in Adults with NAFLD. Funding Period: September 2021 – December 2023. Funder: United Soybean Board Soy Nutrition Institute. Grant Amount: \$900, 100.
10. Martha Belury, PI. Walnuts, The Gut-Brain Axis and Cognitive Function. Funding Period: April 2023 – April 2025. Funder: USDA NIFA #2022-07315. Grant Amount: \$300,000.
11. Sarah Francis, PI. Wellness and Independence through Nutrition (WIN): Food Assistance Outreach. Funder: Iowa Department of Health and Human Services. Grant Amount: \$34,848.
12. Wen-Hsing Cheng, PI. Multi-omic analysis of host-microbiome interactions after dietary intervention with Fruits and Vegetables. Funding Period: May 15, 2023 through May 14, 2024. Funder: USDA corporate agreement grant. Grant Amount: \$7,821.
13. Wen-Hsing Cheng, PI. Prevention of type 2 diabetes by sufficient selenium intakes at nutritional level: A mechanistic study in mice. Funding Period: October 1, 2022 through September 30, 2023. Funder: Mississippi State University. Grant Amount: \$2,000.
14. Wen-Hsing Cheng, PI. Selenium Regulation of Selenoprotein Expression and Glucose Metabolism in Mice. Funding Period: May 16, 2023 through May 15, 2024. Funder: Mississippi Agricultural and Forestry Experiment Station. Grant Amount: \$3,000.
15. Yuxiang Sun, PI. Cardiac Macrophage Plasticity in Sepsis-induced Cardiomyopathy. Funding Period: October 1 through September 30. Funder: National Institutes of Health. Grant Amount: \$113,196.
16. Yuxiang Sun, PI. Diet and the colonic exfoliome: A novel, non-invasive approach to testing interventions in humans. Funder: National Institutes of Health. Grant Amount: \$158,775
17. Yuxiang Sun, PI. Improving the healthspan of aging adults through diet and physical activity. Funding Period: October 1 through September 30. Funder: Texas A&M University, USDA multi-state fund Grant Amount: \$150,000.

18. Yuxiang Sun, PI. Nutrient-sensing GHS-R in macrophage reprogramming and inflamm-aging. Funding Period: October 1 through September 30. Funder: National Institutes of Health. Grant Amount: \$309,744.
19. Yuxiang Sun, PI. The role of GHS-R in macrophage reprogramming during meta-inflammation. Funding Period: October 1 through September 30. Funder: National Institutes of Health Grant. Grant Amount: \$312,169