**2020-2021 PUBLICATIONS AND PRODUCTS FOR NE1939 PROJECT**

**Published Journal Articles (29 TOTAL, 1 Joint Publication)**

1. Belury MA, Cole RM, Andridge R, Keiter A, Raman SV, Lustberg MB, Kiecolt-Glaser JK. Erythrocyte long chain omega-3 fatty acids are positively associated with lean mass and grip strength in women with recent diagnoses of breast cancer. J Nutr 2021; 151: 2125-33 3.
2. Butler MJ, Deems NP, Muscat S, Butt CM, Belury MA, Barrientos RM. Dietary DHA prevents cognitive impairment and inflammatory gene expression in aged male rats fed a diet enriched with refined carbohydrates. Brain Behav Immun 2021; 98:198-209
3. Chen X, Liu B, Li X, An T, Zhou Y, Li G, Wu-Smart J, Alvarez S, Naldrett M, Eudy J, Kubik G, Wilson R, Kachman S, Cui J, Yu J\*. Identification of anti-inflammatory vesicle-like nanoparticles in honey. J Extracell Vesicles. 2021 Jan 31; 10:e12069. doi: 10.1002/jev2.12069.
4. Chia-Shan Wu, Sai Deepak Venkata Muthyala, Cory Klemashevich, Arinzechukwu Uchenna Ufondu, Rani Menon, Zheng Chen, Sridevi Devaraj, Arul Jayaraman, Yuxiang Sun (2021). Age-dependent remodeling of gut microbiome and host serum metabolome in mice. Aging 13:6330-6345
5. Dogra S, Woolf K, Xia Y, Getz A, Newman JD, Slater J, Shah B. Long-term dietary and weight changes following a short-term dietary intervention study: EVADE CAD Trial follow-up. Coronary Artery Dis. 2021. doi: 10.1097/MCA.0000000000001072.
6. Geetali Pradhan, Chia-Shan Wu, Daniel Villarreal, Jong Han Lee, Hye Won Han, Akhilesh Gaharwar, Yanan Tian, Wenxian Fu, Shaodong Guo, Roy G Smith and Yuxiang Sun (2021). β cell GHS-R regulates insulin secretion and sensitivity. Int. J. Mol. Sci. 22:3950.
7. Harrison, E., Monroe-Lord, L., Carson, A.D. et al. COVID-19 pandemic-related changes in wellness behavior among older Americans. BMC Public Health 21, 755 (2021). https://doi.org/10.1186/s12889-021-10825-6 published April 21, 2021
8. Huang YC, Wu TL, Zeng H, and Cheng WH. Dietary Selenium Requirement for the Prevention of Glucose Intolerance and Insulin Resistance in Middle-Aged Mice. J. Nutr. 2021;151(7):1894-1900.
9. Jiang Q, Francis S, Chapman-Novakofski KM, Wilt M, Carbone ET, Cohen NL. Perceived environmental supports for fruit and vegetable consumption among older adults in the US. Nutrition and Health. https://doi.org/10.1177/0260106021993749 **JOINT PUBLICATION**
10. Jong Han Lee, Ligen Lin, Xiangcang Ye, Christian Wolfrum, Yingjie Chen, Shaodong Guo, Yuxiang Sun (2021). GHS-R in brown fat potentiates differential thermogenic responses under metabolic and thermal stresses. PLoS One 16:e0249420.
11. Jong Han Lee, Chuo Fang, Xin Li, Chia Shan Wu, Ji Yeon Noh , Xiangcang Ye, Robert S. Chapkin, Kai Sun, Yuxiang Sun (2021). GHS-R suppression in adipose tissues protects against obesity and insulin resistance by regulating adipose angiogenesis and fibrosis. International Journal of Obesity (IJO) 45:1565-1575.
12. Khanam A, Yu J, Zempleni J. Class A scavenger receptor-1/2 facilitates the uptake of bovine milk exosomes in murine bone marrow-derived macrophages and C57BL/6J mice. Am J Physiol Cell Physiol. 2021 Sep 1;321(3):C607-C614. doi: 10.1152/ajpcell.00222.2021.
13. Liu B, Li X, Yu H, Shi X, Zhou Y, Alvarez S, Naldrett MJ, Kachman SD, Ro SH, Sun X, Chung S, Jing L, Yu J. Therapeutic potential of garlic chive-derived vesicle-like nanoparticles in NLRP3 inflammasome-mediated inflammatory diseases. Theranostics 2021; 11(19):9311-9330. doi:10.7150/thno.60265
14. Liu B, Yu J. Anti-NLRP3 inflammasome natural compounds: an update. Biomedicines 2021, 9(2):136. <https://doi.org/10.3390/biomedicines9020136>.
15. Madison, AA, Belury, MA, Andridge, R, Renna, ME, Shrout, MR, Malarkey, WB, Lin, J, Epel, ES, Kiecolt-Glaser, JK. Omega-3 supplementation and stress reactivity of cellular aging biomarkers: An ancillary substudy of a randomized, controlled trial in midlife adults. Mol Psychol 2021; 26(7):3034-3042 4.
16. Manford AG, Rodriguez-Perez F, Shih KY, Shi Z, Berdan CB, Choe M, Titov DV, Nomura DK, Rape M. A cellular mechanism to detect and alleviate reductive stress. Cell. 2020 Oct 1;183(1):46-61.
17. Rubinfeld G, Driggin E, Woolf K, Slater J, Newman JD, Heffron S, Shah B. Factors associated with participation in a short-term dietary intervention study among patients with established coronary artery disease: insights from the EVADE CAD trial. Coronary Artery Dis. 2021;32(3):258-260.
18. Rudolph CS, Francis SL. Nutritional risk and dietary intake among newly enrolled meals on wheels participants. Journal of Public Health: From Theory to Practice. https://doi.org/10.1007/s10389-021-01552-8
19. Schultz S, Francis SL, Russell C, Getty T, Bauman A. Innovating the Iowa Congregate Nutrition Program: A Needs and Preference. J Nutr Gerontol Geriatr https://doi.org/10.1080/21551197.2021.1963905
20. Schultz S, Francis SL, Russell C, Getty T, Bauman A, Shelley M. Encore Café: An Innovative and Effective Congregate Nutrition Program Implementation Strategy. J Nutr Gerontol Geriatr https://doi.org/10.1080/21551197.2021.1986455
21. St-Jules DE, Woolf K, Goldfarb DS, Pompeie ML, Li H, Wang W, Mattoo A, Marcum ZA, Sevick MA. Feasibility and acceptability of mHealth interventions for managing hyperphosphatemia in patients undergoing hemodialysis. J Ren Nutr. 2021;31(4):403-410.
22. Vadiveloo, M., Adami, A., Delmonico, M.J., Lofgren, I.E., & Greaney, M.L The relationships between total protein intake, protein sources, physical activity, and lean mass in a representative sample of US adults. Nutrients. 2020; 12(10): 3151. doi: 10.3390/nu12103151
23. Vaudin, A., Wambogo, E., Moshfegh, A., Sahyoun, NR. Awareness and use of nutrition information predict measured and self-rated diet quality of older adults in the USA. Public Health Nutr. 2021; 24:1687-97. doi:10.1017/S1368980020004681
24. Vaudin A, Wambogo E, Moshfegh A, Sahyoun NR. Usual Sodium and Potassium Intake, the Sodium to Potassium Ratio, and Associated Characteristics in Older Adults, NHANES 2011-2016. J Acad Nutr Diet. 2021 Jul 21;S2212-2672(21)00412-3. doi: 10.1016/j.jand.2021.06.012. Online ahead of print.
25. Webb JL, Moe SM, Bolstad AK, McNeill EM. Identification of conserved transcriptome features between humans and Drosophila in the aging brain utilizing machine learning on combined data from the NIH Sequence Read Archive. PLoS One. 2021;16(8):e0255085.
26. Wilson SJ, Peng J, Andridge R, Jaremka LM, Fagundes CP, Malarkey WB, Belury MA, Kiecolt-Glaser JK. For better and worse? The importance of closeness, satisfaction, and age in spouses’ cardiometabolic similarity. Psychoneuroendocrinology 2020; 120:104777
27. Xu, F., Greene, G.W., Earp, J.E., Adami, A., Delmonico, M.J., Lofgren, I.E., & Greaney, M.L. The relationships of physical activity and dietary quality with body composition and fat distribution in US adults. Obesity (Silver Spring). 2020; 28(12): 2431-2440. doi: 10.1002/oby.23018 2. Xu, F., Earp, J.E.,
28. Yang X, Heinemann M, Howard J, Huber G, Iyer-Biswas S, Le Treut G, Lynch M, Montooth KL, Needleman DJ, Pigolotti S, Rodenfels J, Ronceray P, Shankar S, Tavassoly I, Thutupalli S, Titov DV, Wang J, and Foster PJ. Physical bioenergetics: Energy fluxes, budgets, and constraints in cells. PNAS. 2021 Jun 29;118(26):e2026786118.
29. Yuxiang Sun (2020). Thrifty hormone ghrelin: the secret of aging muscularly. Journal of Aging Science 8 (3):005.

**Published Research Abstracts (18 TOTAL, 1 Joint)**

1. Allaire A, Curran M, Fu Z, Woolf K. Health-related quality of life among US adults with and without food allergies. J Acad Nutr Diet. 2021;121(9):A25.
2. Angelotti A, Snoke D, Cole RM, Belury MA. Using Fish Oil to Prevent Anthracycline-Induced Cardiotoxicity Curr Dev Nutr 2020; 4 (suppl 2) <https://doi.org/10.1093/cdn/nzaa044_002>
3. Cole RM, Angelotti A, Belury MA. The relationship of plasma linoleic acid and oleic acid levels with markers of inflammation and glycemia in healthy adults. Curr Dev Nutr 2020; 4 (suppl 2): https://doi.org/10.1093/cdn/nzaa049\_011 2.
4. Colleen O’Reilly, Daniel Villarreal, Yuxiang Sun\*, James Fluckey (2021). Myeloid-Specific Inhibition of GHS-R on Metabolic Dysregulation in Skeletal Muscle During Experimental Type 2 Diabetes. Accepted by Experimental Biology (EB) April 27-30, 2021.
5. Da Mi Kim, Jong Han Lee, Hye Won Han, Quan Pan, Sahar Eshghjoo, Gus Wright, Wanbao Yang, Ji Yeon Noh, Chia-Shan Wu, Shaodong Guo, Robert Alaniz, Yuxiang Sun (2021). Nutrient-sensing GHS-R in macrophage reprogramming and meta-inﬂammation. 25th annual Texas A&M University College of Medicine graduate student organization research symposium, April 30, 2021.
6. Herbert S, Ganguzza L, Shah B, Newman J, Gianos E, Heffron S, Woolf K. Dietary inflammatory index and cardiometabolic risk in individuals with coronary artery disease. J Acad Nutr Diet. 2021;121(9):A21.
7. Herbert S, Fu Z, Woolf K, St-Jules S, Popp C, Hu L, Li H, Williams S, Goldfarb D, Katz S, Sevick MA. Dietary inflammatory index and cardiovascular disease risk factors in patients with chronic kidney disease and type 2 diabetes. Curr Dev Nutr. 2021;5(Supp 2):412.
8. Hongying Wang, Chia-Shan Wu, Pengfei Ji, Ji Yeon Noh, Da Mi Kim, Alexandra Trott, David Threadgill, Hui Zheng, Xiaoqiu Xiao, and Yuxiang Sun (2021). Neuronal ablation of GHS-R mitigates diet-induced neuro-inflammation showing improved memory. Texas Alzheimer’s Research and Care Consortium (TARCC) 2021 Scientific Symposium – Advances in Alzheimer’s disease Science Research, and Care, January 28, 2021 via Zoom.
9. Liu B, Chen X, Yu J. Identification of anti-inflammatory vesicle-like nanoparticles in honey. International ISEV Annual Meeting 2021. Virtual.
10. LoBuono DL, Dobiszewski S, Tovar A, Leedahl S, Xu F, Delmonico, M, Mahler L, Lofgren, I.E. Proposed Features for a Digital Nutrition Intervention for Managing Parkinson’s Disease. Innovation in Aging. 2020; 4:256-257. doi: 10.1093/geroni/igaa057.824.  **JOINT**

**PUBLICATION**

1. LoBuono, D.L., Shea, K.S., Dobizaewski, S., Tovar, A., Leedahl, S.N., Xu, F., Delmonico, M.J., Mahler, L., Lofgren, I.E. (2020, November). Proposed features for a digital nutrition intervention for managing Parkinson’s disease. Poster session at the 2020 Gerontological Society Annual Scientific Meeting, virtual conference.
2. LoBuono DL, Uygur M. The Impact of COVID-19 on Nutrition Behaviors Among People with Parkinson's Disease. Current Developments in Nutrition. 2021;5(2): 232. doi: 10.1093/cdn/nzab029\_033.
3. Sakr-Ashour F, Sahyoun N. Association Between Social Relationships, Depressive Symptoms, Food Security, Usual Protein Intake and Healthcare Utilization in Homebound Older Adults: A PATH Analysis. American Society of Nutrition Conference, June 2021. Abstract Presentation Number: P01-045-21.
4. Snoke, D, Cole RM, Sparagna G, Belury MA. Markers of Metabolism in Skeletal Muscle and White Adipose Tissue are Distinctly Altered by Differing Dietary Oils in ob/ob Mice Curr Dev Nutr 2020; 4 (suppl 2): https://doi.org/10.1093/cdn/nzaa049\_054 3.
5. Szmanski, A., Lofgren, I.E., Leedahl, S.N., Xu, F., Delmonico, M.J., LoBuono, D.L. (2021, June). Diet quality and social and community engagement of people with Parkinson’s disease and their informal caregivers. Poster session at the American Society for Nutrition, virtual conference.
6. Szymanski A, Lofgren IE, Leedahl S, Xu F, Delmonico MJ, LoBuono DL. Diet Quality and Social Engagement of People with Parkinson's Disease and Their Informal Caregivers. Current Developments in Nutrition. 2021; 5(2): 928. doi: 10.1093/cdn/nzab049\_041.
7. Vaudin A, Sahyoun NS. Food, Eating, and Quality of Life in Community-Dwelling Older Adults. American. American Society of Nutrition Conference, June 2021. Abstract P01-054-21.
8. Yu J. Identification of exosome-like nanoparticles as a new bioactive component in honey. International ASN Annual Meeting 2021. Virtual.

**Invited Talks (17 TOTAL)**

1. Belden, WJ., Applying Antibody Phage Display and Single-chain Variable Fragments to the COVID-19 Pandemic. CCRP2 Monthly Seminar Series, October 2020.
2. Belury M. Invited speaker, Dietary fats that impact mitochondrial function: Fatty acids are more than just an energy substrate, College of Food and Agriculture Seminar series, Iowa State University, October 14, 2020.
3. Belury M. Invited speaker, From the Bench to the Bedside: How Nutrition Biology and Dietetic Behavior Inform Implementation Science, Global One Heath International Conference, OSU, Nov 11, 2020.
4. Belury M. Invited speaker, Modeling the Impact of High Oleic Acid Oils on EFA Intake in Children. Annual Meetings of the American Oil Chemists’ Society and International Society of the Study of Fatty Acids and Lipids, May 12, 2021 3.
5. Belury M. Invited speaker, Using Dietary Fat to Target Mitochondria and Improve Energy Metabolism: Implications in Type 2 Diabetes, Program of Human Nutrition Seminar Series, OSU, March 10, 2021.
6. Belury M. Invited speaker, Using Dietary Fat to Target Mitochondria and Improve Energy Metabolism: Implications in Cachexia, Program of Cancer Cachexia and Pancreatic Diseases, OSU, Feb 26, 2021.
7. Contrady, A., Johnson, K., Francis, S.L., Jung, S.E., Wolf, T. Promoting Older Adult Resilience: Solutions to Ageism in Nutrition Education. 2021 SNEB Annual Conference Session for the Healthy Aging Division. August 9, 2021.
8. Francis, S.L., Chaudhuri, N., Turner, T. Changing the Conversation Around Congregate Meals. Meals on Wheels Virtual Conference. August 17, 2021.
9. Belury M., Nutrition’s impact on cardiovascular disease and metabolism. Cardiometabolic Science Bootcamp, OSU Wexner Medical Center, July 9, 2021 2.
10. Sun Y. Invited Keynote speaker, 4th Turkish Neuroendocrinology Congress (virtual meeting) Title: Ghrelin Receptor on Metabolic Health and Cognitive Function in Aging Aug. 8, 2021\*
11. [Sun Y](https://www.nimss.org/users/1000002103) Oct. 19-20, 2020\* Invited Keynote Speaker & Organizer, International webinar on Aging and Rejuvenation (ARC-2020) Title: Gut Hormone Ghrelin Signal is a Critical Link between Chronic Inflammation and Metabolic Dysfunction in Aging Nov. 26-28, 2020\*
12. Sun Y. Keynote speaker and Organizing Committee Member, World Congress on Diabetes and endocrinology (WCDE) 2021 on “To Translate and Harness Novel Therapies in Diabetes and Endocrinology” Title: Gut hormone ghrelin signaling in meta-inflammation and insulin resistance. March 26, 2021\*
13. Sun Y.Invited speaker, 3rd Edition - Global Webinar on ENDOCRINOLOGY & DIABETES (Zoom). Title: GHS-R in brown fat potentiates differential thermogenic responses under metabolic and thermal stresses Sept. 15-16, 2021\*
14. Sun Y.Invited talk, Diabetes Center, Indiana University Title: Nutrient-sensing ghrelin signaling in health and disease: an immunometabolic perspective
15. Sun Y.Invited VIP speaker, The 15th Congress of Chinese Society of Critical Care Medicine, Zhuhai, China, Aug. 5-8. (via Zoom) Title: The tug-of-war between hunger and inflammation - ghrelin signal in septic shock. July 20-21, 2021\*
16. Titov DV. Gordon Research Conference Stochastic Physics in Biology, 2021 Oct 10-15.
17. Yu J. Invited Talk (2021): Anti-inflammatory functions of dietary vesicle-like nanoparticles. Department of Biochemistry and Redox Biology Center Seminar Series, University of Nebraska-Lincoln, Lincoln, NE

**Theses and Dissertations (4 TOTAL)**

1. Da MI Kim. Dissertation defense: March 18, 2021 Title: Nutrient-sensing GHS-R in macrophage programming and meta-inflammation.
2. Deena Snoke, PhD (2020) Investigations of lipophilic bioactive dietary components to improve aspects of metabolic dysregulation in mice.
3. Food Insecurity, Service Awareness, Social Factors, and Quality of Life in Community-Dwelling Older Adults.
4. Rachel Cole, MS, PhD, RDN (2020) Exploring the Metabolic Effects of Dietary Linoleic Acid Supplementation

**Educational Aids (1 TOTAL)**

1. Francis, S.L. Spring 2021. WIN Training Presentation. Original Item.

**Grants and Contracts (17 TOTAL; $1,747,915 total awarded)**

1. Funding Period: October 2020 – September 2021 Title of Grant: Fresh Conversations Evaluation Funder: Iowa Department of Public Health Grant Amount: $44,531 Role: Sarah L. Francis, PI—program evaluation
2. Funding Period: October 2020 – September 2021 Title of Grant: Wellness and Independence through Nutrition (WIN): Food Assistance Outreach, Funder: Iowa Department of Human Services Grant Amount: $35,625 Role: Sarah L. Francis, PI
3. Funding Period: October 1, 2020 through September 30, 2021 Title of Grant: Effects of Dietary Soybean Oil on Liver Fat, Body Composition and Cardiometabolic Disease Risk in Adults with NAFLD Funder: United Soybean Board Grant Amount: $846,200 Role: Martha Belury, PI
4. Funding Period: October 1, 2020 through September 30, 2021 Title of Grant: National Needs Fellowship: Multidisciplinary Training of Fellows in Food & Nutrition for Obesity & Cancer Prevention Funder: United States Department of Agriculture Grant Amount: $260,00 Role: Martha Belury, PI
5. Funding Period: October 1, 2020 through September 30, 2021 Title of Grant: Dietary fats, mitochondrial function and muscle health in cancer patients. Funder: NCI-NIH Grant Amount: $ 400,000 Role: Martha Belury,Multi-PI (Subha Raman, Multi-PI).
6. Funding Period: October 1, 2020 through September 30, 2021 Title of Grant: Cardiometabolic Effects of Low Carbohydrate/Healthy Fat Diets / Macronutrient intakes & diet quality for contemporary consumer diets Funder: Institute for Food and Nutrition Sciences Grant Amount: $200,000 Role: Martha Belury, Co-I (Zach Conrad, PI)
7. Funding Period: October 1, 2020 through September 30, 2021 Title of Grant: Mediators of Pancreatic Cancer-Associated Cachexia Funder: United Soybean Board Grant Amount: $400,000 Role: Martha Belury, Co-I (Zobeida Cruz-Monserrate, PI)
8. Funding Period: October 1 through September 30 Title of Grant: Nutrient-sensing GHS-R in macrophage reprogramming and inflamm-aging Funder: National Institutes of Health Grant Amount: $325,342 Role: Yuxiang Sun, PI
9. Funding Period: October 1 through September 30 Title of Grant: Myeloid GHS-R in neuroinflammation of Alzheimer’s Disease Funder: BrightFocus Foundation Grant Amount: $100,000 Role: Yuxiang Sun, PI
10. Funding Period: October 1 through September 30 Title of Grant: Nutrient sensing ghrelin signaling - a novel pathogenic factor for Alzheimer’s Disease Funder: National Institutes of Health Grant Amount: $378,750 Role: Yuxiang Sun, PI
11. Funding Period: October 1, 2020 through September 30, 2021 Type of Grant:State funds Funder: University Experiment Station Matchmatch Grant Amount: $154,000. Role: Lillie Monroe-Lord, PI
12. Funding Period: October 1, 2020 through September 30, 2021 Type of Grant: Federal Funder: NIFA, Experiment Station Grant Amount: $145,000. Role: Lillie Monroe-Lord, PI.
13. Funding Period: 1/1/21-9/30/25 Title of Grant: Dietary exosome-like nanoparticles and their impact on the gut microbiome in obesity Funder: USDA NIFA Grant Amount: $500,000 Role: Jiujiu Yu, PI
14. Funding Period: 8/1/2020-07/31/2021 Title of Grant: Bioavailability and bioactivity of shiitake mushroom-derived exosome-like nanoparticles Funder: University of Nebraska-Lincoln Grant Amount: $10,000 Role: Jiujiu Yu PI.
15. Funding Period: October 1, 2020 through September 30, 2021 Title of Grant: Type 2 diabetes, gut microbiota, and selenium Funder: National Institutes of Health Grant Amount: $91,667 (direct cost) Role: Wen-Hsing Cheng, PI.
16. Funding Period: April 1, 2021 through September 22, 2021 Title of Grant: Testing the Prioritization Tool for Home-Delivered Meal Services using NHANES data Funder: US Department of Agriculture Grant Amount: $50,000 Role: Nadine Sahyoun, PI.
17. Funding Period: July 1, 2020 – December 31, 2020 Title of Grant: Novel Antibody Phage Display to Find Antibodies Specific to SARS-CoV-2 Funder: Center for COVID-19 Response and Pandemic Preparedness (CCRP2) Grant Amount: $22,000 Role: William J. Belden, PI.