



**Center of Excellence for Integrative Health
(CEIH)
Annual Report
2024**

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Summary

- By December 2024, over 47 faculty members had joined the Center. The Center website was established (<https://www.ttuhsu.edu/centers-institutes/integrated-health-research/default.aspx>) and includes member profiles.
- Among 47 members, we have included the scholarly activities of 42 members for this 2024 annual report. These reports indicated important metrics for the Center: 216 peer-referred publications, 13 book chapters, 86 published abstracts, 159 poster presentations, 76 oral presentations, and 99 grants (totaling \$102,065,002 covering the year of 2024 and related years). 15 awards were received by members. Detailed CEIH members' scholarly activities of these 42 members are in the appendix.
- Hosted Research Connect: Center of Excellence for Integrative Health (CEIH) on August 21, 2024. Organized by Office of Research. There were 54 attendees (27 in-person and 27 via zoom). 5 CEIH members highlighted their research activities (see attached CEIH 2024 Research Connect).

Vision/Mission

VISION

- To improve the health of individuals through integrative health research discoveries and high-quality education.

MISSION

- To support the strategic objectives and academic mission of School of Medicine and TTUHSC in enhancing research and research-related education.
- To foster and facilitate synergistic, interdisciplinary, trans-disciplinary, and inter-professional collaboration among researchers/colleagues committed to integrative health research and to assist the professional development of new researchers.
- To promote thoughtful and compassionate healthcare in the broad field of integrative health through innovative and rigorous research at basic, translational, clinical, and population levels, and assist and support researchers in conducting cutting edge research that will grow the empirical evidence base for integrative approaches to health.
- To promote research-associated educational opportunities for medical students.

Strategic Plan

The key goals for the Center are:

1. Establish a critical mass of outstanding faculty with an emphasis on those doing integrative health research through basic, translational, clinical, community, and health service research.
2. Promote and establish collaborations in basic, translational, clinical, community, and health service research in integrative health among TTUHSC campuses, TTU, and other institutions.
3. Enable a significant increase in peer-reviewed integrative health research funding (i.e. foundations, federal funding, industries) to TTUHSC and other TTU Systems.
4. Participate in consortium member meeting of the Academic Consortium for Integrative Medicine and Health to report Center activities, increase research collaboration, and improve medical education in the area of integrative health.

Membership

- Over 47 faculty members have joined the Center, including 3 different schools (School of Medicine, School of Health Professions, and School of Nursing) from TTUHSC and 4 colleges (College of Arts & Sciences, College of Human Sciences, College of Engineering, and College of Education) from TTU. Detailed member profiles can be found in the Center website <https://www.ttuhs.edu/centers-institutes/integrated-health-research/default.aspx>
- Current Steering Committee Members include Dr. Volker Neugebauer, Dr. Michael Blanton, Dr. Betsy Jones, Dr. Naima Moustaid-Moussa, and Dr. Yan Zhang.
- In the past year, 3 members have left TTUHSC or TTU. 2 new members have joined the Center.

MEMBER PROFILES (08/2024) Center of Excellence for Integrative Health

Name/department/school	Contact Information	Research Interest/Expertise	Research Keywords
Albracht-Schulte, Kembra PhD/Kinesiology & Sport Management/TTU	Kembra.Albracht@ttu.edu (806) 834-5786	Lifestyle medicine, including diet and exercise interventions, and role of the microbiome, obesity and related metabolic diseases	
Al-Rahawan, Mohamad MD, MPH/Pediatric Hematology Oncology TTUHSC	m.al@ttuhsc.edu Office: (806) 775-8600	Pediatric Cancer treatment and prevention. Vitamin deficiency and supplementation in survivors of childhood cancer.	
Bennett-Brown, Maggie PhD, Communication Studies, College of Media & Communication	Margaret.bennett@ttu.edu	Sexual health communication, patient-provider communication, sexual health behavior interventions, women's healthcare	Sexual health communication, women's healthcare
Binks, Martin PhD, Nutritional Sciences, Health and Human Sciences, TTU	m.binks@ttu.edu (806) 834-4434	Behavioral pharmacologic and surgical treatment for obesity and metabolic disease, neurophysiology of obesity and ingestive behavior (e.g. fMRI), physiological and behavioral correlates of physical activity (including the influences of pain and sleep)	
Blanton, Michael P. PhD/ Pharmacology & Neuroscience/ SOM-Lubbock, TTUHSC	michael.blanton@ttuhs.edu Office: (806) 743-3496 Cell: (806) 319-1778	Structure/function of neuronal nicotinic acetylcholine receptors; development of smoking cessation agents and PAMs (positive allosteric modulators) for the treatment of Alzheimer's, Parkinsonism, and other disorders of the nervous system. http://legacy.ttuhs.edu/medicine/pharmacology/faculty/blanton.aspx	
Brismée, Jean-Michel	jm.brismee@ttuhsc.edu Office: (806)743-3243 Cell: (806) 789-0387	Clinical trials, intervertebral disc hydration/height, musculoskeletal health including, osteoarthritis, osteoporosis,	

PT, ScD/ Rehabilitation Sciences-SHP- Lubbock, TTUHSC		diagnostics, manipulative therapy, mind-body therapies including yoga, meditation, Tai Chi.	
Chyu, Ming-Chien PhD/Mechanical Engineering/TTU	m.chyu@ttu.edu Office: (806) 834-8982	Non-pharmacological approaches in musculoskeletal issues-healthcare engineering approach- biomechanics.	
Coman, Ioana A PhD/Public Relations/College of Media and Communication	ioana.coman@ttu.edu Cell: 865-607-5406 Office: 806.834.0936	Health communication & promotion (vaccines, outbreaks/pandemics, health issues) in risk and crisis contexts, different levels (local, national, international) and different platforms (media, social media, visuals, etc). Stigma, advocacy and health communication/promotion.	Health promotion Social Media Vaccines Outbreaks Mis/disinfor mation Stigma Advocacy
Dennis, Jeff PhD/Public Health	jeff.Dennis@ttuhsc.edu (806) 743-6812	Social epidemiology, including racial and ethnic disparities in health outcomes, immigrant health, and disparities in birth outcomes. Complementary and alternative medicine, mental health diversion in correctional facilities, sleep disturbance, and life satisfaction among medical students	population health and demography
Dufour, Jannette PhD/Cell Biology and Biochemistry/SO M-Lubbock, TTUHSC	jannette.dufour@ttuhsc.edu Office: (806) 743-2616	Use of immunoprotective Sertoli cells in transplantation. Specifically, mechanisms of Sertoli cell immune privilege, transplantation of genetically modified, immune privileged Sertoli cells and co-transplantation of Sertoli cells and pancreatic islets.	Sertoli cells, Immune privilege, Transplantat ion, Diabetes, Islets, Gene therapy, Cell Therapy
Enakpene, Christopher A MD / Maternal- Fetal Medicine / Obstetrics & Gynecology / SOM, TTUHSC Midland/Permian Basin	christopher.a.enakpene@ttuhsc.edu Cell: 347 217 5127	Diabetes in pregnancy and obesity. On going clinical trial on randomization of early diabetes screening in obese pregnant women. Impact of gestational diabetes and impaired glucose tolerance on short and long-term maternal and child health. Multimodal approach in the prevention of preterm birth.	Clinicaltrial. gov. REDSOAP Study: NCT031160 09. Clinicaltrial. gov ARABIN Study NCT030522 70
Figueroa, Arturo MD, PhD/ Kinesiology and Sport Management/TTU	arturo.figueroa@ttu.edu Office: (806) 834-5587	Arterial function and skeletal muscle health (mass and strength) in middle-aged and older adults, especially in women. Aging, hypertension, obesity, type 2 diabetes, sarcopenia/dynapenia, and cardiovascular diseases. Resistance exercise training and dietary supplements with vascular effects.	Arterial stiffness, aortic hemodynami cs, wave reflection, blood flow,

			endothelial function, L-citrulline supplementation, resistance exercise, muscle metaboreflex
Galyean, Shannon PhD, RDN, LD Nutrition/TTU	shannon.galyean@ttu.edu Office: 806-834-2286	Obesity, type 2 diabetes, dyslipidemia, insulin resistance, vitamin & mineral supplement	Nutrition, clinical trial, chronic disease, bariatric surgery
Garner, Christine PhD, RD/InfantRisk Center, Pediatrics/SOM TTUHSC Amarillo	christine.garner@ttuhs.c.edu Office: (806) 414-9587	Maternal and child nutrition, Breastfeeding, Lactation, Obesity, Food insecurity, Maternal mental health, Mixed methods research, Clinical research	Nutrition, breastfeeding, food insecurity
Hilliard, Wanda DNP,MBA,APRN, PMHNP Nursing TTUHSC	whilliar@ttuhsc.edu Cell: (713) 416.9220	Child/adolescent mental health, AI in education/mental health, vicarious trauma in healthcare professionals, Substance abuse in child/adolescents and other populations	
Jitkajornwanich, Kulsawasd (Bo) PhD/Professional Communication/ College of Media and Communication/ TTU	kulsawasd.jitkajornwanich@ttu.edu Office: (806) 834 2010 Cell: 682 414 9164	Health informatics, Natural Language Processing (NLP), health communication, Big Data Analytics, early detection and diagnosis through data-driven approaches, Medical AI, GIS	Big data, medical AI, NLP, health informatics
Jones, Betsy PhD/Medical Education/TTUHSC	Betsy.jones@ttuhsc.edu	Medical education	
Jung, Kwanghee PhD/Educational Psychology/TTU	kwanghee.jung@ttu.edu Office: (806) 834-0023	Multivariate Statistics and Functional Data Analysis, Psychological Measurement and Testing Theory, Data Analytics and Big Data Analytics, Bio-medical Data and Patient-Reported Outcomes Research, Human Brain and Mental Health Research, Statistical Software Development, Virtual Reality/Augmented Reality Development	
Kahathuduwa, Chanaka MBBS, MPhil, PhD/Laboratory Sciences & Primary Care-SHP/Psychiatry-	chanaka.kahathuduwa@ttuhsc.edu ; chanaka.kahathuduwa@ttu.edu	Neurophysiological mechanisms underlying human cognitive and neurophysiological mechanisms. Obesity and metabolic derangements-related human ingestive behavior. Developmental disorders such as ADHD and autism spectrum disorders.	

SOM-Lubbock, TTUHSC			
Kaur, Gurvinder PhD/Medical Education/SOM-Lubbock, TTUHSC	gurvinder.kaur@ttuhsc.edu	1) Diabetes (both type 1 and type 2) 2) Transplantation immunology (allo and xeno-transplantation, rodents) 3) Islet isolation (from rodents and pigs) 4) Immune cell (T cells, macrophages and dendritic cells) analysis by immunostaining and flow cytometry 5) Amyloid formation in beta cells	
Lawrence, J Josh PhD/Pharmacology & Neuroscience/SOM-Lubbock, TTUHSC	john.lawrence@ttuhsc.edu	nutritional deficiencies, excitation/inhibition balance in disease states, hippocampal neuromodulation, aging, Alzheimer's disease, epilepsy, autism	Autism Epilepsy Late onset of AZ
Lee, Jaehoon (Jason) PhD/Educational Psychology/TTU	jaehoon.lee@ttu.edu Office: (806) 834-5907	high dimensional data analysis, experimental design and sample size calculation, as well as multiple testing adjustments	
Lee, Sue Ann S. PhD, CCC-SLP/Speech-Language-Hearing Sciences, SHP, TTUHSC	sueann.lee@ttuhsc.edu Office (806) 743-9051	Speech and language in children with hearing loss and cleft palate, Bilingual speech and language development, treatment effectiveness using ultrasound and telepractice	Speech-language impairment, bilingualism, speech-language intervention, speech-language instrumentation, ultrasound, telepractice
Levitt, Danielle PhD, CSCS*D PhD/Kinesiology & Sport Management/TTU	Danielle.Levitt@ttu.edu Office: 806-834-1830	Substance misuse, glycemic control, skeletal muscle regeneration, bioenergetics, inter-organ crosstalk, exercise and nutraceutical interventions to improve musculoskeletal and metabolic health	
Li, Dawei PhD/Immunology & Molecular Microbiology/SOM-Lubbock, TTUHSC	Dawei.Li@ttuhsc.edu Office: (806) 743-2852	Genomic sequencing data analysis; Multi-omics; Software development; Myalgic encephalomyelitis/chronic fatigue syndrome; Virus-caused cancer; Substance use disorder; Psychiatric disorder	Genomics; High-throughput sequencing; Bioinformatics
Luk, Hui Ying PhD/Kinesiology & Sport Management/TTU	Huiying.luk@ttu.edu Office: 806-834-0827	Immunoendocrine response on skeletal muscle regeneration and hypertrophy	Musculoskeletal recovery and growth/strength and conditioning / inflammation

			n/ hormones/ muscle mass
Lyford, Conrad PhD Agricultural & Applied Economics, TTU	Conrad.lyford@ttu.edu Office: (806) 834-6881	Behavioral change towards healthy behavior and disease prevention. Community/school interventions for obesity prevention. Cost-benefit analysis. Developing country food security and health systems	
Mello, Inola DNP, APRN, FNP-C Family Practice/SON TTUHSC	inola.mello@ttuhsc.edu Office: (806) 743-7282	Vitamin D, sexual health, sleep patterns/anxiety, recreation drug use/misuse in college health	
Moustaid-Moussa, Naima PhD/Nutritional Sciences /TTU	naima.moustaid-moussa@ttu.edu Office: (806) 834-7946	Basic and integrated nutrition and obesity research. Endocrine function of adipose tissue and nutrient-gene interactions in metabolic diseases. Beta cell function in diabetes and childhood obesity	
Murimi, Mary PhD RD: Nutritional Sciences/TTU	Mary.murimi@ttu.edu Office : (806)834-1812	Investigates the effects of the community environment on the nutrition status of the residents, and coping strategies for food insecure households especially among low-income populations. Applies Community based participatory research. Dr. Murimi has collaborative relationship with institutions in both Ethiopia and Kenya.	Food security, maternal and child nutrition, Nutrition education
Neugebauer, Volker MD,PhD/Pharmacology & Neuroscience/SO M-Lubbock, TTUHSC	Volker.neugebauer@ttuhsc.edu Office: (806) 743-3880	Neurobiological mechanisms of brain dysfunction in preclinical setting related to chronically relevant disorders, such as chronic pain, comorbid conditions of anxiety, depression, alcohol use disorder, and epileptogenesis.	
Oldewage-Theron, Wilna PhD, RD (SA)/Nutritional Sciences/TTU	wilna.oldewage@ttu.edu Office: (806) 834-0567	Investigating the impact of community nutrition programs (food fortification, supplementation, nutrition education, food product development and implementation, school nutrition, vegetable and soy gardening) on food insecurity and the double burden of disease of women, children and the elderly	
Palmer, Ty PhD/Kinesiology and Sport Management/TTU	Ty.palmer@ttu.edu Office: (806) 834-7884	Impact of age-related disparities on muscular function. Interventional strategies to improve functional performance in older adults	
Park, Oak-Hee PhD/Nutritional Sciences/TTU	Oak-hee.park@ttu.edu	Community nutrition. Food environment.	

<p>Narissra M. Punyanunt-Carter, PhD Communication, College of Media & Communication TTU</p>	<p>n.punyanunt@ttu.edu Office: (806)834-3273</p>	<p>Health communication; health advocacy, the crafting of messages about health, and strategies for the promotion of health-care services.</p>	
<p>Shen, Leslie PhD, CCRP/ Pathology/ SOM-Lubbock, TTUHSC</p>	<p>Leslie.Shen@ttuhsc.edu Office: (806) 743-2815 Cell: (806) 787-6971</p>	<p>Clinical trials and animal studies – dietary supplement/phytochemicals in musculoskeletal health and obesity. Mind-body exercise (clinical only) in musculoskeletal health and obesity.</p>	<p>Clinical trials - obesity-related chronic diseases (diabetes, metabolic syndrome).</p>
<p>Shin, Andrew PhD / Nutritional Sciences / TTU</p>	<p>andrew.shin@ttu.edu Office: 806-834-1713</p>	<p>Neurobiology of appetite control, body weight regulation, nutrient metabolism. Behavioral neuroscience, Mechanisms underlying bariatric surgery</p>	<p>Branched-chain amino acids, Roux-en-Y gastric bypass, brain, Alzheimer's disease, obesity, diabetes</p>
<p>Singh, Sharda PhD TTUHSC</p>	<p>Sharda.singh@ttuhsc.edu Office: (806) 743-1540</p>	<p>Clinical trials and animal studies – dietary supplement/phytochemicals in prevention of doxorubicin induced cardiotoxicity. Molecular mechanisms involved in protein-protein interaction that prevents cancer development.</p>	
<p>Sizer, Phillip S. Jr. PT, PhD, OCS, FAAOMPT/Rehabilitation Sciences/SHP- Lubbock, TTUHSC</p>	<p>Phil.sizer@ttuhsc.edu Office: (806) 743-3902</p>	<p>Clinical pathoanatomy, sensorimotor control and functional biomechanics of the spine and extremities Tissue and movement screening</p>	
<p>St. John, Julie DrPH, MPH, MA, CHWI/Dept. of Public Health, GSBS, TTUHSC</p>	<p>julie.st-john@ttuhsc.edu Office: 325.696.0473 Cell: 325.513.4943</p>	<p>Health status and quality of life improvement among diverse and rural populations through community health development and partnership approaches; scope of practice and training of Community Health Workers; addressing human trafficking through community capacity building; health disparities; community health status assessments; program evaluation; intervention development</p>	<p>Community based participatory research; Public health; Community health workers; Partnerships Health disparities;</p>

			Program evaluation
Stroeve , Stephanie PhD, MPH Medical Education	Stephanie.Stroeve@ttuhsc.edu Office: (806) 743-4424	medical education, medical trainee research, healthcare-associated infection prevention, healthcare epidemiology, public health	
Sun, Grace DNP, APRN, FNP- BC TTUHSC/School of Nursing/TTU Student Health and Wellness	Grace.sun@ttuhsc.edu Office: (806) 743-9246	University Student Health and Wellness; Gastroenterology/Hepatology; Interprofessional education; Nutrition, Physiology, Metabolism	
Tinsley, Grant PhD/Kinesiology & Sport Management/TTU	Grant.tinsley@ttu.edu Office: (806) 834-5895	Body composition assessment methodology, lifestyle interventions to improve body composition, intermittent fasting, dietary supplementation, resistance training	Body composition assessment; intermittent fasting; fat mass; muscle mass; resistance training
Zhang, Fangyuan PhD/Mathematics and Statistics/TTU	fangyuan.zhang@ttu.edu Office: (806) 834-2587	Developing statistical methods to detect genetic effects, epigenetic effects, and interaction effects between genes and environment associated with human complex diseases. Application of biostatistical methods to real data analysis.	Statistical genetics, biostatistics
Zhang, Yan PhD, LAc/Texas Christian University	Yan.zhang@tcu.edu Office: 806-743-6056	Clinical trials-acupuncture and mind-body intervention Health services research-secondary data analysis (NHIS) on CAM related topics, patient-outcome study Complementary and integrative health education	Clinical trials-acupuncture and mind-body intervention, integrative pain management study Health services research-secondary data analysis, patient-outcome study
Zook, Julie	Julie.zook@ttu.edu Office: (806) 834-0699	Environmental determinants of health related to architectural and urban/community design;	Architecture

PhD/Architecture/TTU		use of EHR data to better understand functioning of healthcare architecture	Healthcare workers Patient experience
Zu, Yujiao PhD/Nutritional Sciences/TTU	Yujiao.zu@ttu.edu Office: (806) 834 0392	Dietary components and obesity-associated metabolic disorders in cells and animals	Obesity Aging Inflammation Mechanisms
Zumwalt, Mimi MD/Orthopedic Surgery/ Sports Medicine TTUHSC	mimi.zumwalt@ttuhsc.edu Office: (806) 743-2465	Female athletes/Injury prevention Exercise techniques/training Rx Natural/alternative nutrition Sex/Gender differences	female athletes sex/gender musculoskeletal injury/ strength & conditioning

Achieved Goals and Objectives

Summarize goals, objectives, and success toward meeting goals and objectives. Describe any changes to goals and objectives with explanation. (Please include the matrix submitted with the center's original application. If not included in original application, please include a matrix that can be used to assess how well the mission and goals of the Center are being met.)

The following are the Center Goals, Objectives, and Matrix submitted with the center's original application:

GOALS and OBJECTIVES:

Research:

- To foster transdisciplinary/multi-disciplinary collaborations for high quality basic, translational, and clinical research in integrative health within TTUHSC, TTU, and beyond.
- To assist and support researchers in conducting cutting edge research that will grow the empirical evidence base for integrative approaches to healthcare.
- To collaborate with basic scientists to develop biological correlates of integrative health clinical outcomes and explore potential mechanisms of action in effectiveness and efficacy studies.
- To build academic and community research partnerships.
- To rigorously test the safety and effectiveness of integrative health approaches for treatment and management of diseases.
- To present, publish, and disseminate reliable information in integrative health using public and professional outlets.

Education:

- To provide research opportunities for medical students.
- To develop a month-long research elective for 4th-year medical students.
- To host research and education integrative health conference.

METRICS

Achievement of mission and goals will be assessed using the following outcome measures:

- Attendance rate of activities/events organized by the Center.
- Presentations by members (especially invited speaking engagements).
- Publications (abstracts, case-report, full-length manuscripts): joint publications by two or more center members on projects funded by the Center.

- Joint grant applications and new individual applications based on Center projects. These would be expected to be applications to regional and national organizations.
- Participation of number of medical students in research activity related to integrative health.

Based on the Metrics, the following denotes our achieved goals and objectives:

Attendance rate of activities/events organized by the Center.

Hosted Research Connect: Center of Excellence for Integrative Health (CEIH) on August 21, 2024. Organized by Office of Research. There were 54 attendees (27 in-person and 27 via zoom).

- 5 CEIH members highlighted their research activities (see attached CEIH 2024 Research Connect).
 - Leslie Shen, PhD. CCRP, Professor of Pathology, TTUHSC
 - Josh Lawrence, PhD. Associate Professor of Pharmacology & Neurosciences, TTUHSC
 - Volker Neugebauer, MD, PhD. Chair/Professor of Pharmacology & Neurosciences, TTUHSC
 - Danielle Levitt and Hui-Ying Luk, Kinesiology & Sport Management, TTU
- Discussed the future plans:
 - Work with the Division of Research Innovation, Collaboration, and Entrepreneurship (RICE), Office of Research to promote the Center via Research Connect.
 - Add new CEIH leadership to stimulate member involvement (need volunteers): Director of Activity & Director of Recruitment
 - Organize the CEIH planning committee for Symposium
 - Promote the Center and elevate member visibility locally to increase scholarly interaction
 - Promote integrative health/medicine in medical student education
 - Provide research opportunities for students/trainees
 - Provide seed funding for center members collecting preliminary data for future proposal submission

Presentations by members (especially invited speaking engagements):

- Based on 47 member reports, there was a total of 235 presentations including 159 poster and 76 oral presentations at local, national, and international symposiums in 2024. Please see more details in 2024 CEIH member scholarly activities.

Publications (abstracts, case-reports, full-length manuscripts, joint publications by two or more Center members on projects funded by the Center):

- Based on 47 member reports, there were 216 peer-reviewed article publications and 13 book chapters published abstracts by Center members in 2024. Please see more details in 2024 CEIH member scholarly activities.

Number of grant awards by Center members:

- Approximately 99 grants received by the members covering the year of 2024. Please see more details in 2024 CEIH member scholarly activities.

Awards

- A total of 15 awards were received by the members in the year of 2024. Please see more details in 2024 CEIH member scholarly activities.

Others

- Center members are active in teaching medical students, graduate students, and undergraduate students from TTUHSC and TTU.

Descriptions of Center Progress and Activities

Include training activities, meetings sponsored, research, education, services, ongoing research projects, and intellectual property development.

Listed are the following activities that were not included in the Achieved Goals and Objectives section above:

- Center members have met once in 2024 at the Annual Membership Meeting and presented/shared research highlights.
- TTUHSC is an active member of the Academic Consortium for Integrative Medicine and Health.
<https://imconsortium.org/>

Publications, Presentations, and Other Scholarly Activity

Please see attached appendix for (i) 2024 CEIH member scholarly activities and (ii) 2024 CEIH Research Connect.

Funding

List grants submitted, grants funded, endowments, program project/center grants, and contracts.

Please see attached appendix for the list of 99 grant awards with a total amount of \$102 million (covering the year of 2024 and related years) from our 47 Center members who provided this information to include in the 2024 report.

Future Plans

Include areas in need of improvement and detailed, proposed solutions.

The following areas are our 2025 plans:

- Work with the Division of Research Innovation, Collaboration, and Entrepreneurship (RICE), Office of Research to promote the Center via Research Connect.
- Add new CEIH leadership to stimulate member involvement (need volunteers): Director of Activity & Director of Recruitment
- Organize the CEIH planning committee for Symposium
- Promote the Center and elevate member visibitiliy locally to increase scholarly interaction
- Promote integrative health/medicine in medical student education
- Provide research opportunities for students/trainees
- Provide seed funding for center members collecting preliminary data for future proposal submission

Other Highlights

Provide any other information not already covered in this report.

None.

Budget

Include itemized expenses, and proposed budget for upcoming fiscal year.

2024 & Current:

- There is currently no budget designated from the School of Medicine for CEIH.
- The Center currently has available fund ~ \$16,800.

CEIH Reports 2024

Al-Rahawan, MohamedPublications:

1. Khiani AS, Beasley JA, Timberlake MD, Al-Rahawan MM, A patient with Wilms tumor and a new mutation in the REST gene; Published on: 26 May 2024; <https://jmg.bmj.com/content/60/9/842.responses>

Presentations:Poster:

1. March 2024 Poster: Evaluating the incidence of cardiotoxicity in pediatric patients treated with anthracyclines in the West Texas population through a retrospective chart review; Texas Tech University Health Science Center Student Research Week; Lubbock TX; Presented by the first author, Astha Khiani, MS-II

Podium:

1. Jan. 2024 Podium: Evaluating the Incidence of Fever Following Vincristine Administration in Pediatric Patients; Western Medical Research Conference; Carmel, California Presented by Tenley Lehman, MD, PhD Student-III
2. April 2024 Biology of Cancer Course (GBTC 5340); Sarcomas; Texas Tech University Health Sciences Center, Lubbock, TX
3. August 2024 Pediatric Hematology Oncology Block: Variety of Topics. Texas Tech Health Sciences Center, Lubbock, TX
4. October 2024 Bernard Harris Pre-Medical Society, General Body Meeting, Guest Speaker; Pediatric Hematology Oncology as a Career Choice; Texas Tech University, Lubbock, TX
5. March 2025 Biology of Cancer Course (GBTC 5340): Sarcomas; Texas Tech University Health Sciences Center, Lubbock, TX

Awards/Honors:

1. Dean's Distinguished Faculty Service Award, School of Medicine; Lubbock Campus. Texas Tech University Health Sciences Center, Lubbock, TX.

Bennett, MargaretPublications:

1. **Bennett-Brown, M.**, + Chakraborty, J., Gesselman, A.N., , + Smith, C. R., & Campbell, J.T. (2024). The impact of affectionate communication and emotional intelligence on sexual stress among college women. *Communication Reports*. <https://doi.org/10.1080/08934215.2024.2429071>
2. Dubé, S., Gesselman, A.N., Kaufman, E.M., **Bennett-Brown, M.**, Ta, V., & Garcia, J.R. (2024). Beyond words: The relationships between emoji use, personality traits, attachment style, and emotional intelligence. *PLoS One*. <https://doi.org/10.1371/journal.pone.0308880>
3. **Bennett-Brown, M.**,+ Smith, C.R., Brammer, S.E., & Chakraborty, J. (2024). Extending the communication during sexual activity model: What role does sexual communication self-efficacy play? *Communication Research Reports*. <http://dx.doi.org/10.1080/08824096.2024.2402284>
4. Kaufman, E.M., Gesselman, A.N., & **Bennett-Brown, M.** (2024). Clients' perceptions of authentic intimate connection on erotic webcam modeling sites. *Journal of Sex Research*. <https://doi.org/10.1080/00224499.2024.2389211>
5. Gesselman, A.N., **Bennett-Brown, M.**, Dubé, S., Kaufman, E.M., Campbell, J.T., & Garcia, J.R. (2024). The lifelong orgasm gap: Exploring age's impact on orgasm rates. *Sexual Medicine*. <https://doi.org/10.1093/sexmed/qfae042>
6. Gesselman, A.N., Kaufman, E.M., **Bennett-Brown, M.**, & Campbell, J.T. (2024). Camsites as a context for sexual consent education: User experiences. *Journal of Sex Research*. <https://doi.org/10.1080/00224499.2024.2369662>

7. Adams, O.R., Gesselman, A.N., & **Bennett-Brown, M.** (2024). Centering women of color: Chronic vulvovaginal pain (CVVP) communication. *Social Sciences*. <https://doi.org/10.3390/socsci13050265>
8. Gesselman, A.N., Kaufman, E.M., Weeks, L.Y.S., Moscovici, Z., **Bennett-Brown, M.**, Adams, O.R., Campbell, J.T., Piazza, M., Bhuyan, L., Dubé, S., Hille, J.J., & Garcia, J.R. (2024). Exploring patterns in mental health treatment and interests of single adults in the United States: A secondary data analysis. *Frontiers in Public Health*. <https://doi.org/10.3389/fpubh.2024.1292603>
9. Campbell, J.T., **Bennett-Brown, M.**, Kaufman, E.M., Gesselman, A.N., Fredrick, D.A., Garcia, J.R., & Mark, K.P. (2024). Women who experience more affectionate touch report better body satisfaction and relationship outcomes. *Journal of Sex Research*. <https://doi.org/10.1080/00224499.2024.2310705>

Presentations:

1. **Bennett-Brown, M.**, + Chakraborty, J., Gesselman, A.N., , + Smith, C. R., & Campbell, J.T. (2024, November). *The impact of affectionate communication and emotional intelligence on sexual stress among college women*. Paper presented at the annual meeting of the National Communication Association in New Orleans, LA.
2. + Djaba, S., & **Bennett-Brown, M.** (2024, November). *#FreakTok: Analyzing attitudes, norms, and behaviors surrounding rough sexual behaviors as related to TikTok use among college students*. Paper presented at the annual meeting of the National Communication Association in New Orleans, LA.
3. **Bennett-Brown, M.**, Gesselman, A.N., Kaufman, E.M., Campbell, J.T., + Smith, C. R., & Blundell Osorio, M. (2024, November). *Examining comfortability communicating about sex within camming-client interactions*. Paper presented at the annual meeting of The Society for the Scientific Study of Sexuality in San Diego, CA.
4. Gesselman, A.N., Kaufman, E.M., **Bennett-Brown, M.**, Campbell, J.T., Dubé, S., & Garcia, J.R. (2024, October). *The lifelong orgasm gap: Exploring age's impact on orgasm rates*. Paper presented at the annual meeting of the Canadian Sex Research Forum in Halifax, Nova Scotia, Canada.
5. **Bennett-Brown, M.**, Denes, A., Crowley, J.P., Dhillon, A., Cornelius, T., Stebbins, J.L., & Granger, S.W. (2024, July). *Charting salivary oxytocin across an episode of naturally-occurring partnered sex*. Paper presented at the annual meeting of the International Academy of Sex Research in Berlin, Germany.

Other Scholarly Activity (oral invitation, poster presentation)

1. Kaufman, E.M., Gesselman, A.N., & **Bennett-Brown, M.** (2024, October). *"Why would I connect with a computer?": Clients' and models' perceptions of AI performers on erotic webcam modeling sites*. Poster presented at the annual meeting of the Canadian Sex Research Forum in Halifax, Nova Scotia, Canada.
2. + Armstrong, R. & **Bennett-Brown, M.** (2024, October). *Patient provider preferences within the Texas Tech Community*. Poster presented at the annual Undergraduate Research Symposium at Texas Tech University in Lubbock, TX.
3. + Smith, C.R., Brammer, S.E., **Bennett-Brown, M.**, & Cloudy, J. (2024, July). *"Using words to please each other": Analyzing the roles of communication in young adults' positive and negative sexual experiences*. Poster presented at the annual meeting of the International Academy of Sex Research in Berlin, Germany.
4. Gesselman, A.N., Kaufman, E.M., **Bennett-Brown, M.**, & Campbell, J.T. (2024, July). *Camsites as a context for sexual consent education: User experiences*. Poster presented at the annual meeting of the International Academy of Sex Research in Berlin, Germany.
5. Suppiah, T.P., Denes, A., **Bennett-Brown, M.**, & Gesselman, A.N. (2024, July). *Exploring the associations among long-term relationship goals, affection deprivation, and faking orgasm among single heterosexual women in the United States*. Poster presented at the annual meeting of the International Academy of Sex Research in Berlin, Germany.
6. +Chakraborty, J., +Wells, K., Heuman, A.N., **Bennett-Brown, M.**, Adams, R., Amoakwa, A., & +Abakah, W. (2024, April). *Working within the intersections of gender, culture, and sexual and relational health*.

Panel presented at the annual meeting of the Southern States Communication Association in Frisco, TX.

Albracht-Schulte, Kembra

Publications:

1. Sosa-Holwerda A, Park OH, Albracht-Schulte K, Niraula S, Thompson L, Oldewage-Theron W. The Role of Artificial Intelligence in Nutrition Research: A Scoping Review. *Nutrients*. 2024 Jun 28;16(13):2066. doi: 10.3390/nu16132066. PMID: 38999814; PMCID: PMC11243505.
2. Azari H, George M, Albracht-Schulte K. Gut Microbiota-microRNA Interactions and Obesity Pathophysiology: A Systematic Review of Integrated Studies. *Int J Mol Sci*. 2024 Nov 29;25(23):12836. doi: 10.3390/ijms252312836. PMID: 39684547; PMCID: PMC11640985.

Blanton, Michael

Publications:

1. Toni Denison, Kristyn Sorensen, Michael Blanton, Lara Johnson, Theresa Byrd, Steven Pass, Lacy Phillips, Joyce Miller, Lance McMahon, Barbara Cherry. (2024) Quality Improvement Review Board: An Innovative Approach to Oversight of Projects that don't meet Institutional Review Board criteria of Human Subjects Research. *Quality Management in Healthcare* DOI: 10.1097/QMH.0000000000000446
2. Christine Prater, Thomas E. Tenner, Michael P. Blanton, and David Trotter (2024). Transitioning from faculty-written examinations to National Board of Examiners custom examinations in medical education. *Medical Science Educator* 34(2):357-361 DOI:10.1007/s40670-023- 01972-z

Presentations:

1. The Department of Pharmacology and Neuroscience & Garrison Institute on Aging Retreat, Texas Tech University HSC. (October 6-9, 2024-Cloudcroft, New Mexico) "Update from the GSBS and TTUHSC Office of Research.

Professional Service:

1. Editorial Board Member for *Current Molecular Pharmacology*, 2010-present
2. Editorial Board Member for *Frontiers in Membrane Physiology and Biophysics*, 2011-present
3. American Heart Association CDA Basic Science 1 Study Section, Regular, Member of Research Grant Study Session, 2022 – 2024

Funding:

1. Research supported by TTUHSC/GSBS Intramural funds (\$9,000 for FY 2024-2025)
2. NIH, 1UC2MD019638-01 "The Future of Rural Health: Accelerating Biomedical Excellence at TUHSC" 07/01/24-06/30/27, Principal Investigator, Lance McMahon (MP Blanton role- faculty), \$1,162,500

Brismee, JM

Publications:

1. Requejo-Salinas N, Fernández-Matías R, Cadogan A, Chester R, Roy JS, Struyf F, Bateman M, Balster S, Haik MN, Seitz AL, Bisset L, Camargo PR, **Brismée JM**, May S, Walker T, Wassinger C, Lenssen R, Powell JK, McCreesh K, Gibson J, Ludewig PM, La Touche R, Lluch-Girbés E. Neck or Shoulder? Establishing Consensus for Spine Screening in Patients with Shoulder Pain: an International Modified Delphi Study. *Physical Therapy*. 2024:pzae133.
2. Riley SP, Flowers DW, Swanson BT, Shaffer SM, Cook CE, **Brismée JM**. 'Trustworthy' systematic reviews can only result in meaningful conclusions if the quality of randomized clinical trials and the certainty of evidence improves: an update on the 'trustworthy' living systematic review project. *Journal of Manual and Manipulative Therapy*. 2024 Jul 11:1-5.
3. Gross AR, Milne N, Olson K, Pool J, Clewley D, Basson A, Dice JL, **Brismée JM**. IFOMPT & IOPTP, Paediatric Manipulation and Mobilisation Evidence-based Practice Position Statement; London, UK, 04/2024.

4. Hoops JF, Hooper TL, Sobczak S, Kapila J, Dewan BM, Matthijs OC, **Brismée JM**. Participants With Restricted Dominant Shoulder Internal Rotation Range of Motion Demonstrate No Side-to-Side Difference in Humeral Head Translation; And No Difference Before and After Joint Mobilization: A Pilot Study. *Journal of Physical Therapy Science*. 2024; 36:259–266. <https://doi.org/10.1589/jpts.36.259>
5. Olson KA, Clewley D, Milne N, **Brismée JM**, Pool J, Basson A, Dice JL, Gross AR. Spinal manipulation and mobilisation for paediatric conditions: time to stop the madness. *Journal of Manual and Manipulative Therapy*. 2024 Jun;32(3):207-210.
6. Salimi M, Khanzadeh M, Nabipoorashrafi SA, Seyedi SA, Yaghoobpoor S, **Brismée JM**, Lucke-Wold B, Ebadi M, Ghaedi A, Kumar VS, Mirghaderi P. Association of neutrophil to lymphocyte ratio with bone mineral density in post-menopausal women: a systematic review and meta-analysis. *BMC Women's Health*. 2024 Mar 9;24(1):169. <https://link.springer.com/content/pdf/10.1186/s12905-024-03006-1.pdf>
7. Dice JL, **Brismée JM**, Froment FP, Henricksen J, Sherwin R, Pool J, Milne N, Clewley D, Basson A, Olson A, Gross AR. Perceived factors and barriers affecting physiotherapists' decision to use spinal manipulation and mobilisation among infants, children, and adolescents: an international survey. *Journal of Manual and Manipulative Therapy*. 2024 Jun;32(3):295-303.
8. Dice JL, **Brismée JM**, Froment FP, Henricksen J, Sherwin R, Pool J, Milne N, Clewley D, Basson A, Olson KA, Gross AR. Spinal manipulation and mobilisation among infants, children, and adolescents: an international Delphi survey of expert physiotherapists. *Journal of Manual and Manipulative Therapy*. 2024 Jun;32(3):284-294.
9. Henderson VK, **Brismée JM**. Pediatric neck pain of a 10-year-old child with cervical spinal tumor evaluated and managed in direct access physical therapy: a case report. *Journal of Manual and Manipulative Therapy*. 2024 Jun;32(3):335-342.
10. Henderson VK, **Brismée JM**. New clinical decision tool to assist physical therapists with joint mobilization application to the pediatric population. *Journal of Manual and Manipulative Therapy*. 2024 Jun;32(3):304-309.
11. Harrison JJ, **Brismée JM**, Sizer Jr PS, Denny BK, Sobczak S. Sustained versus Repetitive Standing Trunk Extension Results in Greater Spinal Growth and Pain Improvement in Back Pain: A randomized clinical trial. *Journal of Back and Musculoskeletal Rehabilitation*. 2024; 37:395–405.
12. Hage G, Buisseret F, **Brismée JM**, Dierick F, Detrembleur C, Hage R. Evaluating the additive diagnostic value of DidRen LaserTest: Correlating temporal and kinematic predictors and patient-reported outcome measures in acute-subacute non-specific neck pain. *Journal of Bodywork and Movement Therapies*. 2024; 39:201–208.
13. Johnson A, **Brismée JM**, Hooper TL, Hintz CN, Hando BR. Incidence and Risk Factors for Bone Stress Injuries in United States Air Force Special Warfare Trainees. *Military Medicine*. 2024 Feb 7:usae017.
14. Walimbe V, **Brismée JM**, Kulkarni S, Malani R. Patient Reported Experience Measures: A New Scale that Records another Dimension of Patient Care Quality Important in Clinical Practice – Letter to the Editor. *European Journal of Physiotherapy*. 2024 Feb 1:1-3.
15. Ward A, Drusch A, Chenc YR, Ouellette M, **Brismée JM**, Hooper T, Wilfordb K, Seeber GH, Sizer PS. Effect of verbal instructions on trunk muscle activity during volitional preemptive abdominal contraction. *Journal of Bodywork & Movement Therapies*. 2024. 37;332-343.

Published Abstracts in Non-Peer Reviewed Journals

1. Moore L, Brismée JM. An Unexpected Connection between Gut Microbiome and Musculoskeletal Pain. Tonelli Enrico V, Vo N, Methe B, Morris A, Sowa G. An unexpected connection: A narrative review of the associations between Gut Microbiome and Musculoskeletal Pain. *Eur Spine J*. 2022 Dec;31(12):3603-3615. In IAOM-US Commons, 01/06/2025 <https://iaom-us.com/an-unexpected-connection-between-gut-microbiome-and-musculoskeletal-pain/>
2. Moore L, Brismée JM. Ischemic preconditioning upregulates Mitofusin2 and preserves muscle strength in tourniquet-induced ischemia reperfusion. Leurcharusmee P, Sawaddiruk P, Punjasawadwong Y, et al. Ischemic preconditioning upregulates Mitofusin2 and preserves muscle strength in tourniquet-induced ischemia/reperfusion. *J Orthop Transl*. 2022; 35:113-121. In IAOM-US Commons, 11/02/2024 <https://iaom-us.com/ischemic-preconditioning-upregulates-mitofusin2-and-preserves-muscle-strength-in-tourniquet-induced-ischemia-reperfusion/>

3. Moore L, Brismée JM. Robotic assisted total knee arthroplasties show better anatomical and mechanical alignment compared to conventional methods but similar clinical and functional outcomes. Alrajeb R, Zarti M, Shuia Z, Alzobi O, Ahmed G, Elmhiregh A. Robotic-assisted versus conventional total knee arthroplasty: a systematic review and meta-analysis of randomized controlled trials. *Eur J Orthop Surg Traumatol.* 2024;34(3):1333-1343. In IAOM-US Commons, 09/12/2024 <https://iaom-us.com/robotic-assisted-total-knee-arthroplasties-show-better-anatomical-and-mechanical-alignment-compared-to-conventional-methods-but-similar-clinical-and-functional-outcomes/>
4. Moore L, Brismée JM. Malnutrition is linked to worse postoperative outcomes, while perioperative supplementation with amino acids and micronutrients can improve recovery and reduce complications. Tedesco A, Sharma AK, Acharya N, et al. The Role of Perioperative Nutritional Status and Supplementation in Orthopaedic Surgery: A Review of Postoperative Outcomes. *JBJS Rev.* 2024;12(4). In IAOM-US Commons, 09/12/2024 <https://iaom-us.com/malnutrition-is-linked-to-worse-postoperative-outcomes-while-perioperative-supplementation-with-amino-acids-and-micronutrients-can-improve-recovery-and-reduce-complications/>
5. Lodhi M, Brismée JM. Dry needling, eccentric-concentric exercise and stretching for the management of chronic bicipital tendinopathy. McDevitt AW, Snodgrass SJ, Cleland JA, Leibold MB, et al. Treatment of individual with chronic bicipital tendinopathy using dry needling, eccentric-concentric exercise and stretching; a case series. *Physiotherapy Theory and Practice.* 2018;36(3):397-407. In IAOM-US Commons, 02/01/2024 <https://iaom-us.com/dry-needling-eccentric-concentric-exercise-and-stretching-for-the-management-of-chronic-bicipital-tendinopathy/>

Scientific and Professional Presentations: Platform Presentations

1. APTA Pediatrics Annual Conference 2024. Henderson VK, Dendy D, Dice JL, Brismée JM. "Small Steps, Bright Futures: Adapting Joint Mobilization to Meet the Needs and Presentation of the Pediatric Patient." Providence, Rhode Island, 11/22/2024
2. Combined Section Meeting of the American Physical Therapy Association 2025. Deo C, Allen BS, Sizer PS, Brismée JM. "Variables Predictive of Falls during Home Health Care Episode in the Elderly: A Retrospective Study." Houston, Texas, 02/14/2025
3. Combined Section Meeting of the American Physical Therapy Association 2025. Barrett T, Kearns G, Puentedura L, Neilson B, Unverzagt C, Brismée JM. "Integrating Dry Needling in Entry-Level DPT Education: A Multi-Program Analysis." Houston, Texas, 02/14/2025
4. AAOMPT Conference 2024. Bassett CC, Gilbert KK, Lierly M, Hooper TL, Burgess NE, Kearns G, Brismée JM. "Displacement and Strain of the Obturator Nerve During Neurodynamic Testing with Various Limb Positions in Cadavers." Orlando, Florida, 10/26/2024.
5. AAOMPT Conference 2024. Harrison JJ, Brismée JM, Sizer PS, Denny BK, Sobczak S. "McKenzie Standing Sustained Trunk Extension Posture Results in Spinal Growth and Decreased Low Back Pain: A Randomized Clinical Trial." Orlando, Florida, 10/24/2024.
6. AAOMPT Conference 2024. Barrett T, Kearns G, Puentedura L, Brismée JM. "Dry Needling Safety in United States Doctor of Physical Therapy Programs." Orlando, Florida, 10/26/2024.
7. AAOMPT Conference 2024. Dice JL, Brismée JM, Froment FP, Henriksen J, Sherwin R, Pool J, Milne N, Clewley D, Basson A, Olson A, Gross AR. "Perceived Factors and Barriers Affecting Physiotherapists' Decision to Use Spinal Manipulation and Mobilisation among Infants, Children, and Adolescents: An International Survey." Orlando, Florida, 10/26/2024

Poster Presentations

1. Annual AAOMPT Conference 2024. Henderson VK, Brismée JM, Dendy D, Dice JL. "Training Physical and Occupational Therapists In Joint Mobilization for the Pediatric Population Using A Case Study Approach: Improvements In Knowledge And Skills." Orlando, Florida, 10/25/2024
2. 8th Annual Symposium on Brain Health at Texas Tech University Health Sciences Center (2024). Vintimilla A, James CR, Hooper T, Brismée JM, Jarman N, Kartrick N, Likness A, Chidarrwar V,

- Adams L, Sizer P. The Effect of Exercise-Induced Central Fatigue and Concussion History on Cervical Spine Neuromuscular Function. Lubbock, Texas, 04/17/2024
3. 8th Annual Symposium on Brain Health at Texas Tech University Health Sciences Center (2024). Shah M, Brismée JM, Hooper TL, Brite L, Allen B, Ibrahim MA, Schneider S, Singer J. Life Story Questionnaire Use Improves Depression Symptoms and Physical Therapy Participation in Dementia Facility Residents: A Randomized Control Trial. Lubbock, Texas, 04/17/2024
 4. Endowed Lecture Series Meeting at Texas Tech University Health Sciences Center (2024). Harrison JJ, Brismée JM, Sizer PS, Denny BK, Sobczak S. "Sustained Trunk Extension Posture in Standing Results in Greater Spinal Height Increase in Patients with Low Back Pain: A Randomized Clinical Trial." Lubbock, Texas, 04/22/2024
 5. Endowed Lecture Series Meeting at Texas Tech University Health Sciences Center (2024). Henderson VK, Brismée JM. "Interprofessional Collaboration: A Decision Tool to Help Guide Pediatric Occupational Therapists in the Use of Joint Mobilization." Lubbock, Texas, 04/22/2024.
 6. Combined Section Meeting of the American Physical Therapy Association (2024). Ashby J, Brismée JM, Allen B. "Doctor of Physical Therapy Programs Report Teaching Telehealth with Large Discrepancies." Boston, Massachusetts, 02/16/2024

Post-Professional Education Deliveries

1. Invited Lectureship At State, Regional, National And International Conferences
Lecturer: Annual AAOMPT Conference 2024 – Breakout Session
Title: Henderson V, Brismée JM, Vargo A. Joint mobilization for the paediatric athlete – guided by the PUMT (Paediatric Utilization of Manual Therapy) decision tool.
Orlando, Florida, 10/27/2024
<https://utmb.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=1e545fbc-9c2e-47f4-9fde-b1ea00db20b1>
2. Lecturer: 3rd International Conference on Advances in Physiotherapy and Rehabilitation (AIPR 2024),
Topic: Physiotherapists' role in patient health and prevention of non-communicable diseases
Chitkara University, Punjab, India, 09/12/2024
3. Lecturer: Chilean Physiotherapy Conference (Congreso Internacional II version Kinesiologia)
Topic: The science behind manipulative therapy: Is there a place for manual therapy in the management of our patients?
Webinar, Chile, 08/22/2024
4. Lecturer: Fullphysio
Topic: Prévention et augmentation des effets des traitements de lombalgie avec un programme d'hydratation discale
<https://vimeo.com/953490398/927271e827?share=copy>
Webinar, France, 06/20/2024
5. Lecturer: Chilean Physiotherapy Group
Topic: Using Disc Hydration Principles To Help The Intervertebral Disc Heal
Webinar, Chile, 01/24/2024

Coman, Ioana

Positions and Fellowships:

1. 2024-2025 - Vice Head Public Relations Division (PRD), Association for Education in Journalism and Mass Communication (AEJMC)
 - a. 2023/26 **Vice Head Elect, Vice Head, Head**, Public Relations Division (PRD), Association for Education in Journalism and Mass Communication (AEJMC)
2. 2023/24 **TTU Institute for Faculty Excellence**

Publications:Books:

1. **Coman, I. A.**, Gregor, M., Lilleker, D. (Eds.). (2025). *Risk Communication and COVID-19 Governmental Communication and Management of Pandemic*. Routledge.
 - a. Contribution: **led the theoretical framework and chapter**, design, conceptual, chapter write-up, other editor contributions and activities (e.g. working with contributors, editing).

Peer Reviewed Journal Articles:

1. Yamamoto, M., Xu., S., & **Coman, I.A.** (2025). Testing belief gaps in COVID-19 vaccines: Evidence from a short-term longitudinal study. *Current Psychology*. <https://doi.org/10.1007/s12144-024-07242-4>
2. **Coman, I.A.**, Dominguez Partida G., Sreepada, N. & Hopkins, N. (2024). Friends or foes? Hispanic and Black media portrayals of corporate environmental sustainability. *Public Relations Journal*. 17(3), 1-39. <https://instituteofpr.org/prj-vol-17-issue-3-article-5/>

Book ChaptersUpcoming:

1. **Coman, I. A.** (2024/25). Teaching crisis communication. In S. Keith (Ed.), *Teaching journalism and media*, Volume III in the Teaching Communication series, M. Strawser & D. Sellnow (Series Eds.). Cognella.

Published:

1. **Coman, I. A.**, Gregor, M., Lilleker, D. (2025). Risk Communication During Crisis and Post-Crisis Loops: How Governments Communicated about COVID-19 and the Vaccines – Conceptual Framework. In **I. A. Coman**, Gregor, M., D. Lilleker (Eds.). *Risk Communication and COVID-19 Governmental Communication and Management of Pandemic*. Routledge.
2. **Coman, I. A.**, Gregor, M., Lilleker, D. (2025). Conclusion: Risk Communication during COVID-19 and National and Global Lessons Learned. In **I. A. Coman**, Gregor, M., D. Lilleker (Eds.). *Risk Communication and COVID-19 Governmental Communication and Management of Pandemic*. Routledge.

Presentations:

1. **Coman, I.A.**, Tsai, JY., Yuan, S., **Weedon, E.** (June 2025). Solving or Causing Polarization: Centering the Role of Political Identity in CSA perceptions and expectations among politically polarized publics. International Communication Association.
2. **Tahmin, A.** , & **Coman, I. A.** (November 2024). *Celebrities Disclosing Their Mental Health Struggles: A Thematic Analysis of Public Attitudes*. National Communication Association (NCA), New Orleans.
3. **Okoro, Y.** & **Coman, I. A.** (August 2024). *The Elephant in The Nursing Room: A Thematic Analysis of Postpartum psychosis on Twitter and Instagram*. AEJMC, Philadelphia
4. **Coman, I. A.** (February 2024). *Building TRUST with online audiences: the impact of being first in today's online society*. Invited speaker at the "Medical Communication course" part of the **Conference of the College of Doctors from the Municipality of Bucharest CMB** (12th Edition). Virtual.

Culberson, JohnPublications:

1. Selman A, Burns S, Reddy AP, **Culberson J**, Reddy PH. The Role of Obesity and Diabetes in Dementia. *Int J Mol Sci*. 2022 Aug 17;23(16):9267. doi: 10.3390/ijms23169267. PMID: 36012526; PMCID: PMC9408882.
2. George M, Tharakan M, **Culberson J**, Reddy AP, Reddy PH. Role of Nrf2 in aging, Alzheimer's and other neurodegenerative diseases. *Ageing Res Rev*. 2022 Dec;82:101756. doi: 10.1016/j.arr.2022.101756. Epub 2022 Oct 13. PMID: 36243357.

- Rawat P, Sehar U, Bisht J, Selman A, **Culberson J**, Reddy PH. Phosphorylated Tau in Alzheimer's Disease and Other Tauopathies. *Int J Mol Sci*. 2022 Oct 25;23(21):12841. doi: 10.3390/ijms232112841. PMID: 36361631; PMCID: PMC9654278.
- Eshak N, Abdelnabi M, Benjanuwattra J, Ismail A, Leelaviwat N, Elharabi Z, **Culberson J**. Refractory Shock Secondary to Denosumab-induced Severe Hypocalcaemia. *Eur J Case Rep Intern Med*. 2022 Dec 23;9(12):003706. doi: 10.12890/2022_003706. PMID: 36632534; PMCID: PMC9829022.
- Sehar U, Rawat P, Choudhury M, Boles A, **Culberson J**, Khan H, Malhotra K, Basu T, and Reddy H. Comprehensive Understanding of Hispanic Caregivers: Focus on Innovative Methods and Validations. *Journal of Alzheimer's Disease Reports*. 2022 December, In Press.

Abstracts:

- American Geriatrics Society Annual Scientific Meeting. Ashcraft A, Owen D, **Culberson J**. Technology Guided Assessment for Urinary Tract Infection: Creating a Common Interprofessional Language. *J Am Geriatr Soc* 2022 April;70(Suppl 1): S66
- American Geriatrics Society Annual Scientific Meeting. Ashcraft A, Owen D, **Culberson J**, and Song H. Communication and Workflow on a Typical Day in NH Versus a Change in Resident Condition. *Innovation in Aging* 2022, Vol 6(S1);700-701.

Dennis, Jeff

Grants:

- Dennis, J. A., St. John, J. S., Carrillo, E., Sprinkles, K. (2024). 2024 Gray County DSHS Health Equity Report. Final community health report for #HHS00111770001.
<https://sites.google.com/view/ttuhsdshsproject/home/gray-county-health-equity-report>
- Dennis, J. A., St. John, J. S., Carrillo, E., Sprinkles, K. (2024). 2024 Deaf Smith and Parmer County DSHS Health Equity Report. Final community health report for #HHS00111770001.
<https://sites.google.com/view/ttuhsdshsproject/home/deaf-smithparmer-county-health-equity-report>

Dufour, Jannette

*Collaboration with CEIH member

Publications

- Miller SC, Tikhonova EB, Hernandez SM, Dufour JM, AL Karamyshev. 2024 Loss of preproinsulin interaction with signal recognition particle activates protein quality control, decreasing mRNA stability. *Journal of Molecular Biology*. <https://doi.org/10.1016/j.jmb.2024.168492>
- *Shen CL, Wankhade U, Shanker K, Najjar RS, Feresin RG, Elmassry MM, Dufour JM, Kaur G, Chintapalli SV, Piccolo BD, Dunn DM, JJ Coa. 2024 Effects of statin and annatto-extracted tocotrienol supplementation on glucose homeostasis, bone microstructure, and gut microbiota composition in obese mice. *In vivo* 38(4):1557-1570. doi: 10.21873/in vivo.13606.
- *Deshmukh H, Santos JM, Bender M, Dufour JM, Lovett J, Shen CL. 2024 Peanut shell extract improves mitochondrial function in db/db mice via suppression of oxidative stress and inflammation. *Nutrients* 16(13), 1977; <https://doi.org/10.3390/nu16131977>
- Rodriguez A, Babcock RL, Tôrres Guimarães JP, Kaur G, Dufour JM. 2024 Immune Regulation in the Testis and Epididymis. *Adv Exp Med Biol* (in press)
- Tôrres Guimarães JP, Babcock RL, Rodriguez A, Dufour JM, Kaur G. 2024 The Blood-Testis Barrier: An Overview of the Physical, Physiological, and Immunological Functions. *Encyclopedia of reproduction*, third edition (in press)
- *Bender M, Santos JM, Dufour JM, Deshmukh H, Trasti S, Elmassry MM, Shen CL. 2024 Peanut shell extract improves markers of glucose homeostasis in diabetic mice by modulating gut dysbiosis and suppressing inflammatory immune response. *Nutrients* (in press)

Abstracts:

1. *Kaur G, Webster D, Dufour JM, Bishop K, Schneider BL. From postbac triumph to medical school mastery: secretst to less stress and student success. 2024 SGEA (Southern Group of Educational Affairs) Annual Meeting (Houston, TX April 11-13, 2024) (Oral presentation)
2. Bennett AI, Washburn RL, Adeniyi M, Sandilya V, Dufour JM, Mechref Y. Characterization of Proteins in Pig Sertoli Cells to Understand Complement System Behavior and Possible Xenotransplantation Applications Using LC-MS/MS Techniques. American Society for Mass Spectroscopy. (Anaheim, CA June 2-6, 2024)
3. *Deshmukh H, Santos JM, Bender M, Dufour JM, Lovett J, Shen CL. Peanut shell extract improves mitochondrial function in db/db mice via suppression of oxidative stress and inflammation. Nutrition 2024 (Chicago, IL, June 29 to July 2, 2024)
4. Rodriguez A, Washburn RL, Kaur G, Dufour JM. Sertoli Cell Regulation of the Complement System. 29th Annual Texas Forum for Reproductive Sciences (UT Southwestern, Dallas, TX April 18-19, 2024) (Oral presentation)
5. *Mendóza R, Deshmukh H, Santos JM, Sivaprakasam S, Dufour JM, Driver Z, Shen CL. Effect of Peanut Shell Extract and Luteolin on Colonic Mitochondrial Physiology in a Murine Model of Metabolic Syndrome. American College of Gastroenterology 2024 Annual Meeting (Philadelphia, PA, October 25-30, 2024)
6. *Shen CL, Deshmukh H, Santos JM, Bender M, Elmassry MM, Driver Z, Sivaprakasam S, Miranda JM, Dufour JM, Lovett J. Peanut shell extract and luteolin improve glucose homeostasis and modify gut microbiome composition in type 2 diabetes-prone mice. 13th Annual Conference American Council for Medically Active Plants (Prairie View, TX, October 3-6, 2024)
7. Babcock RL, Martinez-Marin D, Boligala G, Stroman G, Rahman RL, Dufour JM, Pruitt K. Identifying roles of nuclear DVL1, a Wnt-pathway protein, in mRNA regulation and splicing. 2024 Symposium on RNA Biology XV, RNA Tool and Target meeting (Trent Semans Center, Duke University Medical Center, Durham, North Carolina, November 14-15, 2024).
8. Rodriguez A, Torres Guimaraes JP, Washburn R, Kaur G, Dufour JM Comprehensive Analysis of Sertoli Cell Resistance To Complement-Mediated Lysis: Implications For Immune Modulation And Transplant Survival. 56th Annual Gene Families and Isozymes (GFI) Conference (San Pedro, Belize, December 8-13, 2024)

Presentations:

1. Complement and Sertoli cell Immune Regulation, The Immune Milieu of the Male Reproductive Tract. American Society for Reproductive Immunology. (Houston, TX, May 18-22, 2024).
2. Comprehensive Analysis of Sertoli Cell Resistance To Complement-Mediated Lysis: Implications For Immune Modulation And Transplant Survival, 56th Annual Gene Families and Isozymes (GFI) Conference (San Pedro, Belize, December 8-14, 2024)

Grant Awards

1. Research and Extension Experiences for Undergraduates, Agriculture and Food Research Initiative, (NIFA, USDA), "Nutrition Bench-to-Community Engaged Scholars in Texas (Nutrition BEST) REEU Program." (\$500,000, 5/2021 to 4/2026)
Dufour (Collaborating Mentor), Moustaid-Moussa (Director)
2. Welch Endowed Chair, Promotion of basic and clinical research (\$120,000/year, 3/1/2023-no end date)
Dufour (Principal Investigator)
3. University of North Carolina, "Novel Mechanisms of Wnt Pathway Modulation." (\$54,689, 5/1/2024-12/31/2024)
Dufour (Principal Investigator), Pruitt (Co- Investigator)

4. RH Pickering Family Foundation, Diabetes research (\$15,000, 12/17/2024-no end date)
Dufour (Principal Investigator)

Grants Submitted (pending)

1. DOD, Harnessing the immunoregulatory properties of Sertoli cells to prevent antibody-mediated rejection of VCA grafts.
(\$500,000, June 1, 2025 – May 31, 2027)
Dufour (PI), Kaur (Co-I)
2. CPRIT, Exploring the SnoRNA U3-DDX21 Axis: Implications for Fatty Liver and Hepatocellular Carcinoma.
(\$250,000, June 1, 2025 – May 31, 2027)
Dufour (PI), Chilton (Co-I)

Grants Submitted (Not Funded)

1. The Peanut Institute Foundation, Effect of peanut shell extract on type 2 diabetes..
(\$250,000, 9/2024 – 8/2026)
Shen (PI), Dufour (Co-I), Chemitigati (Co-I), Elmarssy (Co-I)
2. USDA NIFA AFRI Sustainable Agricultural Systems, SORGHUM: Innovative and sustainable food system option and climate resilient grain to address human nutrition insecurity and health disparities.
(\$10 million, 4/2025 – 5/2030)
Moustaid-Moussa N (Project Director), Dufour JM (Collaborating Investigator), Park, Thompson, Singh, Simpson, Forman, Brown
3. NIH R01, Post-translational regulation of aromatase.
(\$638,525 (Dufour subcontract), 4/2025 – 5/2030)
Pruitt (PI), Dufour (Co-I), Rahman (Co-I)
4. NIH R01, Metabolic effects of fish oil involve mTORC2.
(\$186,958 (Dufour subcontract), 9/2024 – 8/2029)
Moustaid-Moussa N (MPI), Festuccia (MPI), Dufour (Co-I)

Awards:

1. Recognized by University Medical Center Health System for teaching excellence, 2024
2. SOM Dean's Basic Science Teaching Award – Year 1, 2024

Figuroa, Arturo

Publications:

1. Kang Y, Dillon KN, Martinez MA, Maharaj A, Fischer SM, Figuroa A. L-Citrulline Supplementation Improves Arterial Blood Flow and Muscle Oxygenation during Handgrip Exercise in Hypertensive Postmenopausal Women. *Nutrients*. 2024 Jun 19;16(12):1935. doi: 10.3390/nu16121935. PMID: 38931289; PMCID: PMC11206967.
2. Dillon KN, Kang Y, Maharaj A, Martinez MA, Fischer SM, Figuroa A. L-Citrulline supplementation attenuates aortic pressure and pressure waves during metaboreflex activation in postmenopausal women. *Br J Nutr*. 2024 Feb 14;131(3):474-481. doi: 10.1017/S000711452300199X. Epub 2023 Sep 4. PMID: 37664994.
3. Martinez MA, Dillon KN, Kang Y, Maharaj A, Fischer SM, Figuroa A. Endothelial dysfunction influences augmented aortic hemodynamic responses to metaboreflex activation in postmenopausal

women. *Eur J Appl Physiol*. 2024 Sep;124(9):2603-2613. doi: 10.1007/s00421-024-05476-5. Epub 2024 Apr 12. PMID: 38607608.

4. Fischer SM, Maharaj A, Kang Y, Dillon KN, Martinez MA, Figueroa A. Endothelial and exercise vasodilation are reduced in postmenopausal females with obesity versus lean and overweight. *Int J Obes (Lond)*. 2024 Nov;48(11):1534-1541. doi: 10.1038/s41366-024-01462-1. Epub 2024 Jan 17. PMID: 38228876.

Galyean, Shannon

Publications:

1. Marsa Zaroudi, Shannon Galyean, Andrew Shin, The Effects of a Synbiotic Supplement on Age-related Biomarkers and Cognitive Function in Senior Adults: A Study Protocol, *Current Developments in Nutrition*, Volume 8, Supplement 2, 2024, 103698, ISSN 2475-2991, <https://doi.org/10.1016/j.cdnut.2024.103698>.
(<https://www.sciencedirect.com/science/article/pii/S2475299124016329>)
2. Subih H, Batayneh S, Obeidat B, Rashdan M, Obeidat F, Abuhmeidan JH, Galyean S, Obeidat LB, Hadri Z, Alyahya L. A high adherence level to nutritional recommendations minimizes protein and minerals loss while maximizes visceral fat loss in bariatric surgery patients. *Surg Obes Relat Dis*. 2024 Oct 12:S1550-7289(24)00852-9. doi: 10.1016/j.soard.2024.10.011. Epub ahead of print. PMID: 39706719.
3. Salas-Groves E, Alcorn M, Childress A, & Galyean S. The Effect of Web-Based Culinary Medicine to Enhance Protein Intake on Muscle Quality in Older Adults: Randomized Controlled Trial. *JMIR Form Res*. 2024 Feb 13;8:e49322. doi: 10.2196/49322. PMID: 38349721; PMCID: PMC10900082.
4. Galyean S, Sawant, D, Childress A, Alcorn M, & Dawson, JA. Effect of potatoes as part of the DASH diet on blood pressure in individuals with and without type 2 diabetes: A randomized controlled trial. *Human Nutrition & Metabolism*, Volume 35, 2024, 200225, ISSN 2666-1497, <https://doi.org/10.1016/j.hnm.2023.200225>.

Grants:

1. Source: TTU College of Health and Human Sciences: Strategic Research Themes Seed. Status: Active. Budget: \$20,000. Title: Growing Wellness: A Holistic Approach to Health and Empowerment with Culinary Medicine and Home-Grown Tomatoes. Role: Principal Investigator. Dates of project: 3/2024 – 3/2025.
2. Source: Texas Tech University: College of Human Sciences Health and Wellness Research Seed Grant. Status: Active. Budget: \$10,000. Title: Tirzaepatide Impact Assessment: Exploring Health and Wellness Outcomes. Role: Principal Investigator. Dates of project: 3/2024 – 12/2025.
3. Source: College of Human Sciences General Funding Grant. Status: Active. Budget: \$5,000. Title: The Feasibility of a Smartphone App Utilizing Culinary Medicine to Promote the Self-Management of Chronic Disease. Role: Principal Investigator. Dates of project: 6/2023 – 8/2025.
4. Source: College of Human Sciences General Funding Grant. Status: Active. Budget: \$ 14,195. Title: The role of synbiotics in age-related biomarkers and cognitive function in older adults. Role: Lead Principal Investigator. Dates of project: 9/2023 – 4/2025.
5. Source: National Cattlemen's Beef Association Status: Active. Budget: \$53,731. Title: The Effect of Culinary Medicine to Enhance Protein Intake on Muscle Quality in Older Adults. Role: Lead Principal Investigator. Dates of entire project: 5/1/2023-5/1/2024

Garner, Christine

Publications:

1. Kendall-Tackett K, Poulin SR, **Garner CD**. Health problems mediate the effects adverse childhood experiences and other trauma on frequency of cannabis use in pregnant and breastfeeding women. *J Interpers Violence*. 2024 Aug 14:8862605241270084. doi: 10.1177/08862605241270084.

2. Benson J, Devries M, McLaurin-Jiang S, **Garner CD**. Experiences accessing nutritious foods and perceptions of nutritional support needs among pregnant and post-partum mothers with low income in the United States. *Matern Child Nutr* 2024 May 29:e13660. doi: 10.1111/mcn.13660.
3. Boerner Z, Natha C, Baker T, **Garner CD**. Perceptions of cannabis use and its benefits and risks among breastfeeding mothers. *Women's Health Reports*. 2024;5(1):412-423. <https://doi.org/10.1089/whr.2024.0021>.

Invited Presentations and Lectures:

1. *Prevention (with low-dose aspirin), screening, and blood pressure management to address preeclampsia*. Invited presentation by the Implementing a Maternal health & PRegnancy Outcomes Vision for Everyone (IMPROVE) Initiative, 5th Anniversary Meeting. October 16, 2024. Bethesda, MD.
2. *Identifying Maternal Health Priorities and Addressing Challenges through Community Engagement in the Texas Panhandle*. Invited presentation by the NIH Community Engagement Alliance (CEAL) Subject Matter Expert Meeting. October 2, 2024. Virtual meeting.
3. *Identifying maternal health priorities and addressing disparities through community engagement in the Texas Panhandle*. Invited presentation by the National Heart, Lung, and Blood Institute (NHLBI) Global Implementation Science Approaches to Improve Maternal Heart, Lung, Blood, and Sleep Health Outcomes, Virtual Workshop. September 16, 2024.
4. *Maternal morbidity and mortality*. Invited presentation at the Amarillo Unitarian Universalist Fellowship. September 15, 2024, Amarillo, TX.
5. *Food is Medicine Opportunities for Collaborations and Funding*. Invited presentation at the Obesity Research Institute Annual Meeting. May 1, 2024, Lubbock, TX.
6. *Maternal health in the Texas Panhandle*. Invited presentation at the League of Women Voters meeting. April 20, 2024, Amarillo, TX.
7. *Perinatal nutrition and care in the Texas Panhandle*. Invited presentation at the Women's Health Symposium, Obesity Research Institute, TTUHSC. March 8, 2024. Lubbock, TX.
8. *VIBRANT MOMS Update*. Invited presentation at the Maternal Health Transformations Summit, hosted by NIH CEAL and Westat CETAC. January 22, 2024. Atlanta, GA.

Abstracts and Conference Presentations:

1. Garner CD, Stroeveer S, Stoughton C, Baker T, St. John JA. Application of the Consolidated Framework for Implementation Research 2.0 for planning implementation of preeclampsia screening and prevention strategies in six Texas panhandle counties: The phase I vibrant MOMS study. American Public Health Association Annual Meeting and Expo. Accepted for oral presentation. October 2024, Minneapolis, MN.
2. Stroeveer S, Baker T, St. John JA, Garner CD. Prevalence of preeclampsia and eclampsia in six counties of the Texas panhandle with variable access to maternity care services. American Public Health Association Annual Meeting and Expo. Accepted for oral presentation. October 2024, Minneapolis, MN.
3. Wynia C, Schiele J, St. John JA, Stroeveer S, Stoughton C, Garner CD. VIBRANT MOMS phase I: Year 1 update. Implementing a Maternal health & PRegnancy Outcomes Vision for Everyone (IMPROVE) Initiative, 5th Anniversary Meeting. Invited for poster presentation. October 16, 2024. Bethesda, MD.
4. McLaurin-Jiang S, Allcorn A, McCarty I, High CE, Ortega R, Baker T, Appiah D, Garner CD. Program addressing maternal food insecurity and its relation to maternal and infant diet quality: Initial findings from the Maternal Well-Being Study. Pediatric Academic Societies Meeting. Presented as poster. May 2024, Toronto, ON, Canada.
5. Seemann M, Cripps J, Dougherty K, McLaurin-Jiang S, Garner CD. Perceived impact of a maternal food insecurity intervention on infant and family nutrition: A qualitative exploration from the Maternal Well-Being Study. Pediatric Academic Societies Meeting. Presented as poster. May 2024, Toronto, ON, Canada.

6. High C, Cripps J, Seemann M, Ortega R, Garner CD, McLaurin-Jiang S. Acceptability of a home-delivered meal program for postpartum mothers. Presented as oral presentation. Amarillo Research Symposium. April 2024, Amarillo, TX.
7. Cripps J, Seeman M, Dougherty K, Camp T, McLaurin-Jiang S, Garner CD. Perceived impact of postpartum home-delivered meals on maternal well-being and nutrition decisions: A qualitative study. Presented as oral presentation. Amarillo Research Symposium. April 2024, Amarillo, TX.
8. Garner CD, Stroeve S, Stoughton C, Baker T, St. John JA. Use of an implementation science framework for planning implementation of preeclampsia screening and prevention interventions in six Texas Panhandle counties: VIBRANT MOMS Phase I. TAMEST Meeting. Presented as poster presentation. February 2024, Austin, TX.

Funding:

1. 1UC2MD019638-01 McMahon (PI) (2024-2027), National Institutes of Health – NIMHD, \$1,163,500, The Future of Rural Health: Accelerating Biomedical Excellence at TTUHSC: The purpose of this grant is to conduct a needs assessment and develop a plan to improve research infrastructure at Texas Tech Health Sciences Center. Role: Co-I
2. Centering Healthcare Institute HCSC Grant (2024-2026), CenteringPregnancy®, \$24,995: The purpose of this grant is to cover costs of implementing CenteringPregnancy® group prenatal care in Amarillo Obstetrics and Gynecology clinic, including staff training, accreditation, and site licensure for 2 years. Role: PI
3. TTUHSC School of Medicine Collaborative Seed Grant, Krutsch (PI) (2024-2025), \$20,000, Validation of a novel lactation-specific medical claims- phenotype: This project aims to validate a new algorithm to identify lactating individuals using medical claims data; a method that has had preliminary success in a now outdated dataset. Role: Co-I
4. NIH – National Heart Lung and Blood Institute (NHLBI) / IMPROVE-CIP, (2023-2025), Sub-OTA 6922-05-IMPROVE-S003, \$1,385,989, VIBRANT MOMS: The purpose of this award is to carry out a phase 1 implementation science study to address maternal health disparities in 6 Texas Panhandle counties. Role: PI

Hilliard, Wanda

Publications:

1. Hilliard W, Kearney K, Lucas S, Flores MED. Improving Diagnostic Strategies for Pediatric Anxiety Disorders: Advice for the Clinician. *Psychol Res Behav Manag*. 2024 Nov 25;17:4035-4042. doi: 10.2147/PRBM.S431337. PMID: 39619943; PMCID: PMC11606183.
2. Finocchio B, Hilliard W. Therapeutic Outcomes of Treatment With Long-Acting Injectable Antipsychotics in Forensic Populations With Schizophrenia-Spectrum Diagnoses. *J Correct Health Care*. 2024 Apr;30(2):71-81. doi: 10.1089/jchc.23.10.0089. Epub 2024 Mar 6. PMID: 38442318.
3. Chen CJ, Hilliard W. Text Message Reminders for Long-Acting Injectable Antipsychotics in Patients with Schizophrenia Spectrum Disorders. *J Am Psychiatr Nurses Assoc*. 2024 Jul-Aug;30(4):828-833. doi: 10.1177/10783903231183918. Epub 2023 Jul 6. PMID: 37408491.

Jones, Betsy

Publications:

1. Santen SA, Yingling S, Hogan SO, Vitto CM, Traba CM, Strano-Paul L, Robinson AN, Reboli AC, Leong SL, Jones BG, Gonzalez-Flores A, Grinnell ME, Dodson LG, Coe CL, Cangiarella J, Bruce EL, Richardson J, Hunsaker ML, Holmboe ES, Park YS. Are They Prepared? Comparing Intern Milestone Performance of Accelerated 3-Year and 4-Year Medical Graduates. *Acad Med*. 2024 Nov 1;99(11):1267-1277. doi: 10.1097/ACM.0000000000005855. Epub 2024 Aug 23. PMID: 39178363.
2. Coe CL, Santen SA, Reboli AC, Boscamp JR, Stoltz AM, Latif E, Dodson LG, Hunsaker M, Paavuluri A, Brenner J, Ramanathan S, Macerollo A, Leong SL, Strano-Paul L, Traba C, Jones BG, Rundell K, Gonzalez-Flores A, Crump WJ, Vining M, Buchanan AO, Borschel DTM, Vitto CM, Cangiarella J.

Accelerated 3YMD programs: the last decade of growth of the Consortium of Accelerated Medical Pathway Programs (CAMPP). Med Educ Online. 2024 Dec 31;29(1):2400394. doi: 10.1080/10872981.2024.2400394. Epub 2024 Sep 27. PMID: 39328035; PMCID: PMC11441013.

Jung, Kwanghee

Publications:

1. Taylor, L., Gupta, V., & **Jung, K.** Leveraging Visualization and Machine Learning Techniques in Education: A Case Study of K-12 State Assessment Data, *Multimodal Technologies and Interaction*, 8 (4), 28.
2. Yoo, S., Kang, S., Truong, T., & **Jung, K.** (2024). Harnessing Mobile Technology for Retail Advancement: A Scientific Exploration Gumaetan Traditional Market in Suwon City. *Journal of OOH Advertising Research*, 21, 31-51.

Presentation:

1. Jung, J., **Jung, K.**, & Lee, J. Enhancing Predictive Models for Student Success: A Multidimensional Approach, 2023 TAIR Conference, March 2024, Frisco, USA.

Grant:

1. Innovating and advancing in STEM education, Wahi (PI), ED P031C210026, 10/01/2021–9/30/2026, \$4,783,323
2. Competitive Edge Seed Grant, Developing Early Alert Dashboard Using Power BI and Machine Learning Techniques, Texas Tech University, 09/01/2023–08/31/2024, \$10,000

Kahathuduwa, Chanaka

Publications:

1. Duarte-Celada W, Alnosair E, Paz A, Gusdon AM, Brown RJ, **Kahathuduwa CN**, Blackburn S, Kumar A, Choi HA. Treatment of patients with aneurysmal subarachnoid hemorrhage and multiple aneurysms: Concurrent versus delayed treatment. *Clinical Neurology and Neurosurgery*. 2024 Dec 1;247:108647.
2. Dhanasekara CS, **Kahathuduwa CN**, Quispe-Orozco D, Ota R, Duarte Celada WR, Bushnaq S. Effects of Social Determinants of Health on Acute Stroke Care Among Patients With Acute Ischemic Stroke: A Retrospective Cohort Study. *Neurology*. 2024 Nov 12;103(9):e209951.
3. Montalvan, V., Neves, G., Shannon, J., Clifford, T., Curry, J., **Kahathuduwa, C.**, Tan, Y., Barnes, R., Kopel, J., Chintakayala, L. and Brister, R. The use of a pre-hospital questionnaire expedited the acute management of patients with ischemic stroke in a comprehensive stroke center. *Clinical Neurology and Neurosurgery*, 2024 Sep 1;244:108442.
4. Stephens E, Dhanasekara CS, Montalvan V, Zhang B, Bassett A, Hall R, Rodaniche A, Robohm-Leavitt C, Shen CL, **Kahathuduwa CN***. Utility of Repetitive Transcranial Magnetic Stimulation for Chronic Daily Headache Prophylaxis: A Systematic Review and Meta-Analysis. *Current Pain and Headache Reports*. 2024 Jan 26:1-9. **(*corresponding author)**
5. Songtanin B, **Kahathuduwa C**, Nugent K. Esophageal Stent in Acute Refractory Variceal Bleeding: A Systematic Review and a Meta-Analysis. *Journal of Clinical Medicine*. 2024 Jan 9;13(2):357.

Oral Presentations:

1. Kahathuduwa C*, Quispe Orozco D, Ota R, Duarte-Celada W, Bushnaq S, Dhanasekara CS. Effects of Social Determinants of Health on Thrombolytic Therapy Among Patients with Acute Ischemic Stroke: A Retrospective Cohort Study. Accepted for an oral presentation at the American Academy of Neurology (AAN) Annual Meeting 2024: April 18, 2023 in Denver, CO

Provisional Patents:

1. System and methods for optimization of the human brain to a target state using auditory binaural beats guided by continuous single-electrode electroencephalography feedback (U.S. Provisional Patent, US 63/572,772).

Awards:

1. Emerging inventor of the year, Texas Tech University Office of Research Commercialization – 10/2024

Grants:

Role	Funding Mechanism	Amount	Funding Dates	Project Title
Co-I, Technical Lead	National Science Foundation I-Corps - Award Number (FAIN): 2427526	\$50,000	09/01/2024-08/31/2025	Adaptive Auditory Binaural Beats Guided by Electroencephalographic Bio-feedback system (PI: Dr. Chathurika Dhanasekara)
Co-I	TTUHSC School of Medicine School of Medicine Dean's Seed Grant Program	\$20,000	05/10/2024-04/10/2025	Combining L-theanine and Paraxanthine for Transient Improvement of Cognitive Deficits among Patients with Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder: A Series of Translational Pilot Neuroimaging Studies (PI: Dr. Chathurika Dhanasekara)
Co-I	USDA National Institute of Food and Agriculture – Award Number 2024-67018-42457	\$607,561	05/01/2024 – 04/30/2026	Ginger And The Microbiota-Gut-Brain Connection In Sciatic Pain Individuals (PI: Dr. Leslie Shen)

Service:

1. Grant reviewer, Neurological, Mental, and Behavioral Health (NMBH) study section of National Institute of Health, held February 21-22, 2024 in Washington, DC

Kaur, Gurvinder**Publications:**

1. Zeitouni F, Matejka C, Boomer M, Lee V, Brower G, Hewetson A, Kim J, Mitchell J, Edwards D, Kaur G#. 2024 Integration of point of care ultrasound into undergraduate medical education at Texas Tech University Health Sciences Center school of medicine: a 6 year review. BMC Medical Education 24:1476. doi.org/10.1186/s12909-024-06483-y.
2. Rodriguez A, Babcock RL, Torres-Guimaraes JP, Kaur G, Dufour JM. 2024 Book title- Molecular Reproductive Medicine-Biology & Clinical Perspectives. Chapter title- Immune regulation in the testis and epididymis. (Accepted for publication).
3. Torres-Guimaraes JP, Babcock RL, Rodriguez A, Dufour JM, Kaur G. 2024 Book title-Encyclopedia of Reproduction (3rd edition). Chapter title: The Blood-Testis Barrier: An overview of the physical, physiological, and immunological functions. (Accepted for publication).

Presentations/Exhibits/Productions

1. Brower GL, Kaur G, Lee VH. Navigating the integration of Point-of-Care Ultrasound in undergraduate medical education: Fostering clinical diagnostic skills from anatomical and imaging perspectives. American Association for Anatomy Regional Meeting (Birmingham, AL, Nov 15-17, 2024).

2. Bachler M, Kaur G. Go with the flow: Visualizing embryological development with flowcharts to supplement learning. 41st Annual Meeting of the American Association of Clinical Anatomists (New York City, NY, June 17-21, 2024).
3. Hussain N, Chilton BS, Kaur G. Histology reinvented: Bridging theory and practice in reproductive workshops for enhanced learning. 41st Annual Meeting of the American Association of Clinical Anatomists (New York City, NY, June 17-21, 2024).
4. Bishop KN, Villalobos A, Potu A, Saini S, Hussain N, Mucharraz V, Kaur G. Cardiac ultrasound images vs 3D models: A study to identify specific structures. 41st Annual Meeting of the American Association of Clinical Anatomists (New York City, NY, June 17-21, 2024).
5. Willem N, Kaur G, Schneider B. Optimizing education: Anatomical model-based videos are an effective learning resource and reduce student stress. 41st Annual Meeting of the American Association of Clinical Anatomists (New York City, NY, June 17-21, 2024).
6. Dufour JM, Rodruguez A, Washburn R, Kaur G. Complement and Sertoli cell immune regulation. The American Society for Reproduction Immunology (Houston, TX, May 18-22, 2024). Invited for Plenary Session Presentation.
7. Rodriguez A, Washburn R, Kaur G, Dufour JM. Sertoli cell regulation of the complement system. Texas Forum for Reproductive Sciences (Dallas, TX, April 18-19, 2024). Selected for platform presentation.
8. Kaur G, Bishop KN, Webster D, Dufour JM, Schneider B. From postbac triumph to medical school mastery: Secrets to less stress and student success. Southern Group on Education Affairs 2024 Annual Conference (Houston, TX, April 11-13, 2024). Selected for Platform Presentation (Medical Education Scholarship Award finalist (Early Career Scholar category)-5 selected out of 50 applications)
9. Arciniega M, Schneider B, Kaur G. Enhancing medical education: The impact of formative exams and supplemental lectures on summative exam performance. Southern Group on Education Affairs 2024 Annual Conference (Houston, TX, April 11-13, 2024). Selected for Platform Presentation.
10. Higbea A, Bishop KN, Irons RS, Schneider BL, Kaur G, Webster D, Brown K. Starting strong together: A live introductory IPE anatomy and patient safety event. Texas IPE Consortium (San Antonio, TX, April 11, 2024). Selected for Lightning talk.

Honors and awards:

2024	Dean's Educational Innovation Award, TTUHSC-SOM
2024	Outstanding Faculty of the Year-Graduate Medical Education Sciences (GMES), TTUHSC SGA
2024	Outstanding Faculty of the Year-MS1; TTUHSC SGA
2024	Outstanding Faculty of the Year-MS2; TTUHSC SGA

Lawrence, John

Grants:

1. Transcriptional Dysfunction in Dentate Gyrus Cell Types: Roles of Retinoic Acid Responsive Genes in Protection Against Alzheimer's Disease Pathogenesis
NIH R01 AG071859-01A1 Lawrence (PI) 1/1/2022-12/31/2026 Total costs:
\$1,872,220
2. The hippocampal dentate gyrus in aging and Alzheimer's disease: boosting transcription of retinoic acid-sensitive genes through HDAC inhibition and vitamin A supplementation.
NIH R01 AG073826-01A1 Lawrence (PI) 8/1/2022-4/30/2027 Total costs:
\$3,158,615

Publications:

1. J. D. Bailoo, S. E. Bergeson, I. Ponomarev, J. O Willms, B. R. Kisby, G. A Cornwall, C. C. MacDonald, J. J. Lawrence, V. Ganapathy, S. Sivaprakasam, P. Panthagani, S. Trasti, J. A. Varholick, M. Findlater, and A. Deonarine. A bespoke water T-maze apparatus and protocol: An optimized, reliable, and repeatable method for screening learning, memory, and executive functioning in laboratory mice. *Submitted 9/6/24 to Frontiers in Behavioral Neuroscience, section Learning and Memory. Accepted.*

2. M. Pourghaed, A. Sarangi, F. Ramirez-Velandia, J. Kopel, J. Culberson, G. Ashworth, H. Khan, A. Boles, V. Neugebauer, and J. J. Lawrence. Associations between Vitamin D Deficiency/Insufficiency and Depression Expose Health Disparities in Older Rural West Texans: A Project FRONTIER Study. *American Journal of Geriatric Psychiatry* 32(7): 808-820, July 2024. PMID: **38320908**; DOI: [10.1016/j.jagp.2024.01.029](https://doi.org/10.1016/j.jagp.2024.01.029). Accepted 1/23/24, published online 1/26/24.
3. **An editorial in the same issue entitled "Vitamin D and Depression: Racial Differences Suggest an Alternate Biomarker" by Candida J. Rebello, Ph.D., highlighted this article. PMID: 38443297, DOI: <https://doi.org/10.1016/j.jagp.2024.02.008>.*

Invited Talks and Workshops:

1. **J. J. Lawrence.** Mental Health, Health Disparities, and Vitamin D. First Friday Lunch, Honors College, Texas Tech University, Lubbock, TX, April 5th, 2024. Host: Dean Jill Hernandez.
2. R. McCreedy, C. Morris, and **J. J. Lawrence.** Associations between Diabetes, Cognitive Status, and Hispanic/Latino Ethnicity amongst Older Rural West Texans: A Project FRONTIER Study. Second Annual West Texas Health Disparities Research Symposium, Texas Tech University Health Sciences Center, Lubbock, TX, March 23rd, 2024.
3. **J. J. Lawrence.** Institute for One Health Innovation Brain Health Faculty Networking Event. Organized by the TTU and TTUHSC Offices of Research. Texas Tech System Institute for One Health Innovation, Texas Tech University Innovation Hub, February 22nd, 2024.
4. Institute for One Health Innovation Neurological Strategy Workshop. Moderators: **J. J. Lawrence** and Andrew C. Shin. Organized by the TTU and TTUHSC Offices of Research. Location was at Texas Tech University Health Sciences Center, February 23rd, 2024.
5. *The purpose of this OHI Workshop was to develop the strategy that will guide future decisions for the neurological research area of the Institute for One Health Innovation, including research priorities and future investments. This event was for faculty only.*

Center, Departmental, and Institutional Seminars:

1. C. Bose, A. Hindle, S. C. Smith, J. Strickland, C. Zhang, I. Guzman, A. Baker, I. Ponomarev, M. Manczak, A. C. Shin, R. Pal, S. Singh, and **J. J. Lawrence.** Low dose dietary vorinostat increases brain histone acetylation levels and reduces oxidative stress in an AD mouse model. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
2. C. Bose, S. P. Singh, A. Hindle, A. Baker, S. C. Smith, and **J. J. Lawrence.** Vitamin A and HDAC inhibition protects mouse neuronal cells from oxidative stress. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
3. Baker, A. Hindle, S. C. Smith, S. Skawratananond, I. Ponomarev, M. Manczak, J. D. Bailoo, and **J. J. Lawrence.** The role of hippocampal all-trans retinoic acid in a vitamin A-deficient mouse model of Alzheimer's Disease. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
4. **J. J. Lawrence.** Graduate School of Biomedical Sciences Student-Faculty Retreat, Texas Tech University Health Sciences Center, Lubbock, TX, August 23rd, 2024.
5. **J. J. Lawrence.** Interdisciplinary, Collaborative Neuroscience. Research Connect: Center of Excellence for Integrative Health, Office of Research, Texas Tech University Health Sciences Center, Annual Membership Meeting, Texas Tech University Health Sciences Center, Lubbock, TX, August 21st, 2024. Host: Dr. Leslie Shen.
6. **J. J. Lawrence.** Vitamin A nutrigenomics and Alzheimer's disease pathogenesis: emerging multi-level preclinical and human studies. Eighth Annual Center for Translational Neuroscience and Therapeutics Conference, Texas Tech University Health Sciences Center, April 17th, 2024.

7. **J. J. Lawrence.** Interdisciplinary, collaborative neuroscience: connecting mind and brain across multi-level preclinical and human studies. Inaugural Conference on Promoting Cross-Disciplinary Faculty Collaborations in Research, Office of the Provost, Texas Tech University, April 12th, 2024.
8. **J. J. Lawrence.** Interdisciplinary, Collaborative Neuroscience. Research Connect: Center of Excellence for Translational Neuroscience and Therapeutics, Office of Research, Texas Tech University Health Sciences Center, January 17th, 2024.

Poster Abstracts (International Meetings):

1. *S. C. Smith, *C. Bose, A. Hindle, J. Strickland, I. Guzman, C. Zhang, A. Baker, I. Ponomarev, M. Manczak, A. C. Shin, R. Pal, S. P. Singh, and **J. J. Lawrence.** Tolerability of Vitamin A and Histone Deacetylase Inhibitors in Alzheimer's Disease Animal Models. Society for Neuroscience Conference, Chicago, IL, October 5th- 9th, 2024.
2. Baker*, A. Hindle*, S. C. Smith, J. Strickland, M. Hernandez, J. Medina, N. Tanner, I. Ponomarev, M. Manczak, and **J. J. Lawrence.** RARE-LacZ Mice as a Model to Study of Retinoic Acid Signaling at Cellular Resolution in Alzheimer's Disease. Society for Neuroscience Conference, Chicago, IL, October 5th- 9th, 2024.
3. F. Tsurukawa, N. Khanna, R. Pal, and **J. J. Lawrence.** Multi-study transcriptomic analysis of Alzheimer's brain tissue: insights and caveats. Society for Neuroscience Conference, Chicago, IL, October 5th- 9th, 2024.
4. Hindle, S. C. Smith, M. Hernandez, A. Baker, J. Strickland, J. Medina, and **J. J. Lawrence.** RARE-LacZ Mice as a Model to Study of Retinoic Acid Signaling in Alzheimer's Disease. Alzheimer's Association International Conference, Philadelphia, PA, July 28th-August 1st, 2024.
5. Bose, A. Hindle, A. Baker, S. C. Smith, J. Strickland, I. Guzman, S. P. Singh, and **J. J. Lawrence.** Vitamin A and Histone Deacetylases in Alzheimer's Disease: The good, the bad, and the ugly. Alzheimer's Association International Conference, Philadelphia, PA, July 28th-August 1st, 2024.
6. Morris, R. McCready, G. McCrea, B. Decourt, and **J. J. Lawrence.** Examining Relationships Between Vitamin D Deficiency, Healthcare Access, Hispanic Ethnicity, and General Health Rating among Aging Rural West Texans: A Project FRONTIER Study. Alzheimer's Association International Conference, Philadelphia, PA, July 28th-August 1st, 2024.
7. R. McCready, C. Morris, P. Antwi-Adjei, M. Pourghaed, F. Ramirez-Velandia, J. Kopel, J. Culbertson, G. Ashworth, J. Singer, V. Molinar-Lopez, M. N. Sabbagh, V. Neugebauer, B. Decourt, and **J. J. Lawrence.** Relationships between Diabetes, Vitamin D Status, Neuropsychological Functioning, and Hispanic Ethnicity in Older Rural West Texans: A Project FRONTIER Study. Alzheimer's Association International Conference, Philadelphia, PA, July 28th-August 1st, 2024.
8. **N. Khanna**, F. K. Tsurukawa, C. A. Sanchez-Villalobos, I. Castro-Piedras, E. Reed, I. Ponomarev, C. Bose, A. C. Shin, R. B. Sutton, C. Crasto, R. Pal, and J. J. Lawrence. KCNIP1 at the Convergence of Nutritional Deficiency, Ion Channel Dysfunction, and Alzheimer's Disease. Seventh Annual Abilene Research Symposium, Texas Tech University Health Sciences Center, October 25th, 2024.

Abstracts (National/Regional Meetings):

1. C. Morris, R. McCready, G. McCrea, B. Decourt, and **J. J. Lawrence.** Reduced Health Care Accessibility Increases Risk of Vitamin D Deficiency/Insufficiency: A Project FRONTIER Study. Second Annual West Texas Health Disparities Research Symposium, Texas Tech University Health Sciences Center, Lubbock, TX, March 22nd-23rd, 2024.
2. C. Bose, A. Hindle, A. Baker, S. C. Smith, J. Strickland, I. Guzman, S. P. Singh, and **J. J. Lawrence.** Crosstalk between histone deacetylases and vitamin A in Alzheimer's disease: the role of HDAC inhibition. Texas Alzheimer's Research and Care Consortium, Austin, TX, February 8th, 2024.
3. C. Morris, R. McCready, G. McCrea, B. Decourt, and J. J. Lawrence. Reduced Health Care Accessibility Increases Risk of Vitamin D Deficiency/Insufficiency: A Project FRONTIER Study. Texas Alzheimer's Research and Care Consortium, Austin, TX, February 8th, 2024.

Abstracts (Local Conferences):

1. J. Medina, C. Morris, E. Keith, R. McReady, G. McCrea, M. Pourghaed, F. Ramirez Velandia, A. Sarangi, J. Culberson, V. Neugebauer, and J. J. Lawrence. Bridging Health Disparities: The Critical Role of Vitamin D in Rural and Hispanic Populations. Third Transformative Undergraduate Experiences Symposium, Texas Tech University, Lubbock, TX, October 25th-26th, 2024.
2. E. Abdul-Rahman, R. McCready, and **J. J. Lawrence**. The Exposome in Health and Disease: The Toxic Combination of Chemical Exposure and Diabetes in Accelerating Cognitive Decline. Third Transformative Undergraduate Experiences Symposium, Texas Tech University, Lubbock, TX, October 25th-26th, 2024.
3. H. Hashmi, R. McCready, and **J. J. Lawrence**. Link Between Vitamin B12 Deficiency and Depression: A Project FRONTIER Study. Third Transformative Undergraduate Experiences Symposium, Texas Tech University, Lubbock, TX, October 25th-26th, 2024.
4. R. M. S. Tijerina, A. G. Rudd, M. Mahmud-Syed, B. Liu, and **J. J. Lawrence**. The Role of Retinoic Acid and Glucocorticoids on Alzheimer's Disease Pathogenesis. Third Transformative Undergraduate Experiences Symposium, Texas Tech University, Lubbock, TX, October 25th-26th, 2024.
5. C. Zhang, S. Skawwatananond, S. C. Smith, N. Khanna, I. Zambrano, and **J. J. Lawrence**. Nourishing the Mind: The Promise of Vitamin K2's Hidden Link to Osteocalcin in Aging and Alzheimer's Prevention. Third Transformative Undergraduate Experiences Symposium, Texas Tech University, Lubbock, TX, October 25th-26th, 2024.
6. N. Khanna, F. Tsurukawa, C. A. Sanchez-Villalobos, I. Castro, E. Reed, I. Ponomarev, C. Bose, A. C. Shin, R. B. Sutton, C. Crasto, R. Pal, and **J. J. Lawrence**. KCNIP1 at the Convergence of Alzheimer's Disease and Nutritional Deficiencies. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
7. S. C. Smith, C. Sanchez Villalobos, C. Zhang, J. Yang, A. Hindle, A. Shin, R. Pal, and **J. J. Lawrence**. All-trans Retinoic Acid Signaling and RBP1 Dysregulation: Common mechanistic links across diverse disease pathologies. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
8. R. McCready, C. Morris, P. Antwi-Adjei, M. Pourghaed, A. Sarangi, A. Boles, F. Ramirez-Velandia, J. Kopel, J. Culberson, J. Singer, G. Ashworth, M. N. Sabbagh, V. Neugebauer, B. Decourt, and **J. J. Lawrence**. Relationships between Diabetes, Vitamin D Status, Neuropsychological Functioning, Depression, and Hispanic Ethnicity: A Project FRONTIER Study. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
9. C. Morris, R. McCready, G. McCrea, B. Decourt, and **J. J. Lawrence**. Reduced Health Care Accessibility Increases Risk of Vitamin D Deficiency/Insufficiency: A Project FRONTIER Study. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
10. B. Henderson and **J. J. Lawrence**. Relationships between Thyroid and Cognitive Function Amongst Older Rural West Texans: A Project FRONTIER Study. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
11. C. Morris, R. McCready, E. Keith, J. Medina, G. McCrea, B. Decourt, and **J. Josh Lawrence**. Examining Relationships Between Vitamin D Deficiency, Hispanic Ethnicity, and General Health Rating among Aging Rural West Texans: A Project FRONTIER Study. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison

- Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
12. F. K. Tsurukawa, Y. Mao, C. Sanchez-Villalobos, N. Khanna, C. J. Crasto, **J. J. Lawrence**, and R. Pal. Multi-study Transcriptomic Analysis of Alzheimer's Brain Tissue: Insights and Caveats. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
 13. C. Zhang, S. Skawratananond, S. C. Smith, N. Khanna, I. Zambrano, and **J. J. Lawrence**. Nourishing the Mind: The Promise of Vitamin K2's Hidden Link to Osteocalcin in Aging and Alzheimer's Prevention. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
 14. R. McCready, H. Hashmi, J. Singer, and **J. J. Lawrence**. The Relationship Between Vitamin B12 Deficiency and Depression: A Project FRONTIER Study. Ninth Annual Translational Neuroscience Research Retreat, Department of Pharmacology and Neuroscience and Garrison Institute on Aging, Texas Tech University Health Sciences Center, Cloudcroft, NM, October 18th-19th, 2024.
 15. K. Rodgers, S. C. Smith, A. Baker, A. Hindle, N. Tanner, and **J. J. Lawrence**. The Effects of Vitamin A Deficiency and Supplementation on Amyloid Beta Pathology. Summer Accelerated Biomedical Research Symposium, Texas Tech University Health Sciences Center, Lubbock, TX, July 26th, 2024.
 16. N. Vojtkofsky, M. Buxton, and **J. J. Lawrence**. Relationships Between Nonalcoholic Fatty Liver Disease Indices, Vitamin D Status, Alcohol Consumption, and Cognitive Impairment in a West Texas Elderly Cohort: A Project FRONTIER Study. Obesity Research Institute 9th Annual Meeting: One Health: Metabolic Health, Texas Tech University System, May 1st, 2024.
 17. Guzman, T. Matthews, K. Whitaker, B. Addington, S. L. Trasti, S. C. Smith, A. Hindle, J. Strickland, and **J. J. Lawrence**. Using Vaginal Cytology to Optimize Reproductive Productivity in an Alzheimer's Disease Mouse Model. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
 18. Zambrano, A. Shin, and **J. J. Lawrence**. Molecular mechanisms of action of flaxseed biochemical components: relevance to the gut-brain-axis and prevention of Alzheimer's disease. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
 19. C. Zhang, M. Shapiro, and **J. J. Lawrence**. Vitamin K2 in Healthy Aging and Protection Against Alzheimer's Disease Pathogenesis: Potential Mechanisms Mediated by Osteocalcin. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
 20. F. Tsurukawa, N. Khanna, R. Pal, and **J. J. Lawrence**. Multi-Study Transcriptomic Analysis of Alzheimer's Brain Tissue: Insights and Caveats. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
 21. S. Smith, A. Hindle, J. Strickland, A. Baker, I. Guzman, S. Singh, J. J. Lawrence, and C. Bose. Vitamin A and Histone Deacetylases in Alzheimer's Disease. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
 22. J. Strickland, S. Smith, A. Hindle, M. Hernandez, A. Baker, J. Medina, and J. J. Lawrence. RARE-LacZ Mice as a Model to Study Retinoic Acid Signaling at Cellular Resolution in Alzheimer's Disease. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
 23. R. McCready, C. Morris, P. Antwi-Adjei, and **J. J. Lawrence**. Associations between Vitamin D, Diabetes, Cognitive Status, and Hispanic Ethnicity amongst Older Rural West Texans: A Project FRONTIER Study. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and

- Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
24. C. Morris, R. McCready, G. McCrea, B. Decourt, and **J. J. Lawrence**. Examining Relationships Between Hispanic/Latino Ethnicity, Healthcare Access, Vitamin D Deficiency, and General Health Rating among Aging Rural West Texans: A Project FRONTIER Study. Eighth Annual Symposium on Brain Health, Center of Excellence for Translational Neuroscience and Therapeutics and Garrison Institute on Aging, Texas Tech University Health Sciences Center, April 17th, 2024.
 25. J. Medina, M. Hernandez, A. Baker, A. Hindle, and **J. J. Lawrence**. Mapping Retinoic Acid Signaling in Dentate Gyrus Granule Cells and Its Spatial Interplay with Parvalbumin-Expressing Circuit Components. Undergraduate Research Conference 2024, Center for Transformative Undergraduate Experiences, Texas Tech University, April 10th, 2024.
 26. Zambrano, A. Shin, and **J. J. Lawrence**. Molecular mechanism of action of flaxseed biochemical components: relevance to gut-brain axis and prevention of Alzheimer's Disease. Undergraduate Research Conference 2024, Center for Transformative Undergraduate Experiences, Texas Tech University, April 9th, 2024.
 27. C. Zhang, A. Hindle, S. C. Smith, J. Strickland, A. Baker, I. Guzman, S. P. Singh, **J. J. Lawrence**, and C. Bose. Reversing epigenetic silencing through diet: repurposing a histone deacetylase inhibitor for application to Alzheimer's Disease. Undergraduate Research Conference 2024, Center for Transformative Undergraduate Experiences, Texas Tech University, April 10th, 2024.
 28. F. Tsurukawa, C. Sanchez-Villalobos, **J. J. Lawrence**, and R. Pal. Multi-study transcriptomic analysis of Alzheimer's Disease brain tissue: insights and caveats. 23rd Annual Graduate Student Research Poster Competition. Graduate School, Texas Tech University, March 8th, 2024.
 29. C. Zhang and **J. J. Lawrence**. Vitamin K2 in Healthy Aging and Protection Against Alzheimer's Disease Pathogenesis: Potential Mechanisms Mediated by Osteocalcin. 36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 28th-March 1st, 2024.
 30. Zambrano, **J. J. Lawrence**, and A. C. Shin. Molecular mechanisms of action of flaxseed biochemical components: relevance to the gut-brain axis and prevention of Alzheimer's disease. 36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 28th-March 1st, 2024.
 31. C. Lawrence and **J. J. Lawrence**. Vitamin A Deficiency in Children with Autism Spectrum Disorder. 36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 28th-March 1st, 2024.
 32. J. Medina, M. Hernandez, A. Baker, A. Hindle, and **J. J. Lawrence**. Visualizing retinoic acid signaling in dentate gyrus granule cells and spatial relationships with parvalbumin-positive circuit elements. 36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 29th, 2024.
 33. Hindle, S. C. Smith, J. Strickland, A. Baker, I. Guzman, S. P. Singh, **J. J. Lawrence**, and C. Bose. Vitamin A and Histone Deacetylases in Alzheimer's disease. 36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 28th-March 1st, 2024.
 34. S. C. Smith, A. Hindle, M. Hernandez, A. Baker, J. Strickland, J. Medina, and **J. J. Lawrence**. RARE-lacZ Mice as a Model to Study Retinoic Acid Signaling at Cellular Resolution in Alzheimer's Disease. 36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 28th-March 1st, 2024.
 35. Morris, R. McCready, G. McCrea, B. Decourt, and **J. J. Lawrence**. Examining Relationships Between Hispanic/Latino Ethnicity, Healthcare Access, Vitamin D Deficiency, and General Health Rating among Aging Rural West Texans: A Project FRONTIER Study. 36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 28th-March 1st, 2024.
 36. R. McCready, C. Morris, and **J. J. Lawrence**. Associations between Vitamin D, Diabetes, Cognitive Status, and Hispanic/Latino Ethnicity amongst Older Rural West Texans: A Project FRONTIER Study.

36th Annual Student Research Week 2024: Brain Wars: May The Neurons Be With You, Texas Tech University Health Sciences Center, Lubbock, TX, February 28th-March 1st, 2024.

Lee, Jaehoon

Publications:

1. Assimonye, S., **Lee, J.**, Smith, S., Glenn, J., Kennedy, M., & Ramaswamy, M. (in press). Understanding the changing social and health circumstances of women leaving jail: A social bonds analysis. *Women & Criminal Justice*.
2. Bagwell-Gray, M. E., Garcia-Hallett, J., **Lee, J.**, Kepple, N. J., Sisson, M., Comfort, M., & Ramaswamy, M. (2024). Black women's physical, mental, and sexual health in the criminal legal system: Influences of victimization, healthcare access, and living conditions. *Affilia: Feminist Inquiry in Social Work*, 39(1), 128–147.
3. Guo, L., Wang, J., **Lee, J.**, & Lesley, M. (2024). Examining the differentiated impacts of balanced literacy: An analysis of reading comprehension skills. *Reading & Writing Quarterly*, 40(3), 236–250.
4. Kim, S., Moon, H., Lee, S., & **Lee, J.** (2024). Exploring the evolution of public perception towards online medical education: A machine learning analysis of Twitter data. *American Journal of Clinical Medicine Research*, 377, 117.
5. Ko, E., Shamsalizadeh, N., **Lee, J.**, & Ping, N. (2024). Prognosis-related communication: Ethical dilemmas among the oncology nurses in China. *Asian/Pacific Island Nursing Journal*, 8, e63006.
6. Lee, S.-A., **Lee, J.**, & Davis, B. L. (2024). Revisiting frequencies of phonological sound classes in speech input: Change over time in child-directed speech. *Journal of Child Language*, 51(3), 550–572.
7. O'Brien, B., **Lee, J.**, Kim, S., Nandra, G. S., Pannu, P., Tamman, A., Amarnah, D., Swann, A. C., Murphy, N., Averill, L., Jha, M., & Mathew, S. J. (2024). Anti-suicidal effects of IV ketamine in a real-world setting. *Psychiatry Research*, 331, 115604.
8. Ong, Y.-Q., Hasmid, N.-N., **Lee, J.**, Hamzah, D.-A., Unicomb, R., & Chu, S.-Y. (2024). Awareness and knowledge of stuttering among Malaysian school-age children: An exploratory study. *Folia Phoniatrica et Logopaedica*, 76(4), 398–410.
9. Ong, Y.-Q., **Lee, J.**, Chu, S.-Y., Chui, C.-S., Beng, G.-K., Norlinah, M.-I., & Barlow, S. M. (in press). Oral-diadochokinesis between Parkinson's disease and neurotypical elderly among Malaysian-Malay speakers. *International Journal of Language & Communication Disorders*.
10. Ong, Y.-Q., Lim, A., Park, H.-R., Harrison, E., McConnell, G., **Lee, J.**, Ng, L.-S., & Chu, S.-Y. (2024). Attitudes of Malaysian speech–language pathologists and speech-language pathology students toward stuttering. *Folia Phoniatrica et Logopaedica*, 76(4), 386–397.
11. Ong, Y.-Q., Zakaria, N.-Z., **Lee, J.**, Gan, C.-H., Chai, S.-C., Fierro, V., Hassan, F.-H., & Chu, S.-Y. (2024). The relationship between self-stigma, basic and instrumental activities of daily living, and communication participation among individuals with Parkinson's disease. *SAGE Open*, 14(4).
12. Ptomey, L. T., Washburn, R. A., **Lee, J.**, Sherman, J. R., Rice, A. M., Danon, J. C., White, D. A., Szabo-Reed, A. N., Helsel, B. C., Donnelly, J. E. (2024). An individual vs parent supported physical activity intervention in adolescents with intellectual disabilities. *Medicine & Science in Sports & Exercise*, 56(12), 2256–2266.
13. Wheeler, K., Hixson, J., Hamrick, J., **Lee, J.**, & Ratliff, C. (in press). Behavior analysts' training and practice regarding trauma-informed care. *Behavior Analysis in Practice*.

Presentations:

1. Song, W., Lee, J. H., Yi, M., Williams, G., Dwyer, J., Moskal, B., MathFest, "Revised Calculus Concept Inventory (RCCI): Psychometric evaluation," Mathematical Association of America, Indianapolis, IN. (August 8, 2024).
2. Watkins, B. A., Newman, J. W., Snodgrass, I. R., Chyu, M.-C., Lee, J. H., Luk, H.-Y., Appel, C., Neugebauer, V., Shen, C.-L., American Society for Nutrition, "Tai Chi exercise of short duration alters circulating oxylipins in post-menopausal women with knee osteoarthritis," Chicago, IL. (July 2024).
3. Chu, S.-Y., Ong, Y.-Q., Hasmid, N.-N., Lee, J. H., Hamzah, D.-A., Unicomb, R., International Hybrid Conference on ENT, Audiology, and Speech-language Pathology, "Stuttering Awareness among School-Age Children in Malaysia," Rome, Italy. (July 2024).

4. Wang, H.-S., Rogers, K., Moustaid-Moussa, K., Oldewage, W., Thompson, L., Lee, J. H., Albracht, K., Park, O.-H., American Society for Nutrition, "An evaluation of the design and measured outcomes for school-based nutrition education intervention: A systematic review for the comparison between urban and rural environment," Chicago, IL. (June 2024).
5. Wang, H.-S., Moustaid-Moussa, N., Oldewage, W., Thompson, L., Lee, J. H., Albract, K., Park, O.-H., American Society for Nutrition, "Design and implementation of Healthy Eating and Active Lifestyle for Rural Texas High School Students (HEALTH) Program," Chicago, IL. (June 2024).
6. Shen, C.-L., Newman, J. W., Snodgrass, I. R., Chyu, M.-C., Lee, J., Luk, H.-Y., Appel, C., Neugebauer, V., Watkins, B. A., American College of Sports Medicine, "Effects of short-term Tai Chi on circulating oxylipins and endocannabinoids In post-menopausal women," Boston, MA. (May 2024).
7. Moon, H., Kim, S., Lee, J. H., Kim, H., American Educational Research Association, "Examining the changing public perception of online medical education through social media analysis," San Francisco, CA. (April 2024).
8. Yi, M., Strong, M., Lee, J. H., Gargani, J., Moon, H.-C., Shim, H.-J., Tetteh, L., Association of Teacher Educators, "Comparing lesson audio and lesson transcripts for making judgments of teaching quality," Anaheim, CA. (March 2024).
9. Coward, F. (Presenter & Author), Lee, J. H. (Author Only), Hamman, D. (Author Only), The annual meeting of the Association of Teacher Educators, "Teacher Recruitment: Validation of A Survey That Informs How Schools Can Help," Association of Teacher Educators, Anaheim, CA. (March 2024).

Grant Awards:

1. Localized mHealth approach to boosting COVID-19 testing and vaccine literacy, access, and uptake among women with criminal legal system involvement, Ramaswamy (PI), NIMHD U01MD017415, 01/01/2022–11/30/2026, \$2,458,129, Co-I
2. Innovating and advancing in STEM education, Wahi (PI), ED P031C210026, 10/01/2021–9/30/2026, \$4,783,323, Co-I.
3. Curcumin and retinal amyloid-beta pilot study, Shen (PI), Sabinsa Corporation, 01/01/2022–12/31/2022, \$94,991, Co-I.
4. Effect of annatto-derived geranylgeraniol (GG) on statin-associated myopathy, Shen (PI), American River Nutrition, 01/01/2022–12/31/2023, \$266,294, Co-I.
5. Oral diadochokinesis among Malaysian-Malay speakers: A comparative study of neurotypical adults and individuals with Parkinson's disease, Chu (PI), Universiti Kebangsaan Malaysia, 10/01/2022–09/31/2023, \$22,000, Co-I.

Grant Applications:

FEDERAL

1. Characterizing the effects of chronic substance misuse on auditory and vestibular function, Chiao (PI), NIH 1R01DC021301, 07/03/2023–6/30/2028, \$2,418,732.
2. Developing cyber-aerial computing curriculum for improving sky-of-privacy-things education through a modular-based integrated framework, Lim (PI), NSF 2335681, 10/01/2023–09/30/2025, \$299,448.
3. Ginger and the microbiota-gut-brain connection in sciatic pain individuals, Shen (PI), USDA, 04/01/2024–03/31/2027, \$607,561.
4. Innovating and advancing in STEM education, Wahi (PI), ED P031C210026, 10/01/2021–9/30/2026, \$4,783,323.
5. A dyadic approach for a remote physical activity intervention in adults with Alzheimer's disease and their caregivers, Donnelly & Ptomey (PIs), NICHD R01AG061187, 09/15/2019–05/31/2024, \$3,635,657.
6. Kansas-Missouri Nutrition Incentive Collaborative Program, Gibson (PI), USDA, 10/01/2020–09/30/2024, \$710,415.
7. Medication development for the treatment of alcohol use disorder, Bergeson & Shen (PIs), NIAAA U01AA028957, 09/20/2020-08/31/2025, \$7,251,682.
8. Revised Calculus Concept Inventory: Measuring the learning gains of first year calculus students, Lee (PI), NSF 1916751, 10/01/2019-09/30/2024, \$300,000 (PI).

9. Sexual health empowerment for jail-involved women's health literacy and prevention, Ramaswamy (PI), NCI R01CA181047, 04/01/2019–03/31/2024, \$1,602,097.
10. Tri-city cervical cancer prevention study among women in the justice system, Ramaswamy (PI), NCI R01CA226838, 09/01/2018–08/31/2024, \$2,929,836.

STATE

1. Teacher Incentive Allotment, Hamman (PI), Texas Education Agency, 11/01/2019–08/31/2030, \$44,005,744.
2. Competitive Edge Seed Grant: Developing early alert dashboard using Power BI and machine learning techniques, Jung & Lee (PIs), Texas Tech University, 09/01/2023-08/31/2024, \$11,890.

FOUNDATION / PRIVATE / INTERNATIONAL

1. Elucidating cross-linguistic speech rate mechanism variations across Malay and Japanese speakers, Chu (PI), National University of Malaysia, 10/01/2023–09/30/2025, RM 66,360.
2. Oral diadochokinesis among Malaysian-Malay speakers: A comparative study of neurotypical adults and individuals with Parkinson's disease, Chu (PI), National University of Malaysia, 01/26/2023–01/25/2025, RM 100,000.

Grant Applications: 20+ applications to federal and state agencies and foundations

Lee, Sueann

Publications:

1. **Lee, S.A.S.****, Winkleman, L., & Hooper, T. (in press). Survey on emotional intelligence among students, practitioners, and faculty members in communication disorders. Submitted to ASHA Perspectives. https://doi.org/10.1044/2024_PERSP-24-0004
2. **Lee, S.A.S.** (2024). SLP and audiology in Asia: the past and current status. ASHA Perspectives of Special Interest Group, 9, 4 1197-1216.
3. **Lee, S.A.S.**, Byrd A. & Gregory-Martin, K., (2024). Professionalism in CSD: Consideration of diversity, equity, inclusion, and access. ASHA Perspectives of Special Interest Group, 9, 3, 804-816.

Book chapters:

1. Lersukprasert, K. & Lee, S.A.S. (in press). Strategies to enhance SLP and Audiology profession in the developing Asia countries. Educating, supporting and empowering speech-language pathologists and related healthcare and educational professionals in the Asian context. Routledge/Taylor & Francis Publisher
2. Lee, S.A.S. (in press). Review of speech-language pathology and audiology licensure system in Western and Asian countries: Implications for countries where SLP and Audiology professions are emerging. Educating, supporting, and empowering speech-language pathologists and related healthcare and educational professionals in the Asian context. Routledge/Taylor & Francis Publisher

Keynote talk:

1. **Lee, S. Lee, S. A.S.** (2024). Development of SLP and Audiology profession in Vietnam. The 3rd International Ear and Audiology Scientific Conference, Da Lat, Vietnam, June 14-15

Invited talks:

1. Ngyen, T., Ngyen-Phuoc, T. M., **Lee, S.A.S.** (2024). Language universal and language specific characteristics in Vietnamese cleft palate speech, Invited talk at Tokyo Cleft, Japan, July 15-16.
2. **Lee, S.A.S.** (2024). The benefit of ultrasound and clinical evidence for treating children with cleft palate. Invited talk at Tokyo Cleft, Tokyo, Japan, July 15-16

3. **Lee, S.A.S.** (2024). Stop consonants in Vietnamese adults and children. Invited talk at the 3rd International Ear and Audiology Conference, Da Lat, Vietnam

Grant:

1. Received 3rd year of NIDCR grant

Others:

1. Fellow of American Speech-Language-Hearing Association

Levitt, Danielle

Publications:

1. Mirzayev, J, and **Levitt, DE**✉. (2024). Comparison of muscle adaptation to blood flow-restricted versus traditional resistance training in healthy adults: A brief systematic review and meta-analysis. *Strength and Conditioning Journal*. Ahead-of-print (scheduled for April 2025 issue). DOI: 10.1519/SSC.0000000000000854.
2. DiLeo, MR**, Hall, RE**, **Vellers, HL**, Daniels, CL**, and **Levitt, DE**✉. (2024). Alcohol alters skeletal muscle bioenergetic function: A scoping review. *International Journal of Molecular Sciences*. 25(22):12280. PMID: 39596345. DOI: 10.3390/ijms252212280.
3. Delery, EC*, **Levitt, DE***, Amedee, AM, Molina, PE, and Simon, L. (2024). High fat, high sucrose diet promotes increased expression of ACE2 receptor in the SIV-infected host: Implications for SARS-CoV-2 infection. *Frontiers in Nutrition*. 11:1458106. PMID: 39403392. DOI: 10.3389/fnut.2024.1458106. ***Equal contributions; co-first authors.**
4. Bourgeois, BL, Gallegos, EM, **Levitt, DE**, Bergeaux, PJ, Molina, PE, and Simon, L. (2024). Extracellular vesicle miR-206 improves chronic binge alcohol mediated decreased myoblast differentiation in SIV-infected female macaques. *American Journal of Physiology-Cell Physiology*. 327:C1626-C1637. PMID: 39099419. DOI: 10.1152/ajpcell.00290.2024.
5. Dobson, NL, **Levitt, DE**, **Luk, H-Y**, and **Vellers, HL**. (2024). Adverse skeletal muscle adaptations in individuals born preterm-A comprehensive review. *Current Issues in Molecular Biology*. 46(5):4551-4564. PMID: 38785544. DOI: 10.3390/cimb46050276.
6. **Levitt, DE**, Bourgeois, BL, Rodríguez-Graciani, KM, Molina, PE, and Simon, L. (2024). Alcohol impairs bioenergetics and differentiation capacity of myoblasts from SIV-infected female macaques. *International Journal of Molecular Sciences*. 25(4):2448. PMID: 38397125. DOI: 10.3390/ijms25042448.

Presentations:

**mentee presenter

1. **Levitt, DE**, Natividad, LA, and Collier, JJ. (October 2024). Ethanol in vitro does not directly impact beta cell insulin secretion. National Hispanic Science Network Annual Meeting, New Orleans, LA.
2. Appell, CR, Jiwan, NC, Sekiguchi, Y, **Vellers, HL**, **Levitt, DE**, and **Luk, H-Y**. (May 2024). Dehydration and resistance exercise increased muscle and immune cell oxidative stress in trained men. American College of Sports Medicine Annual Meeting, Boston, MA.

3. **Khartabil, A, Helmberger, R, DiLeo, M, Mills, C, Williams, A, Budnar, R, and **Levitt, D.** (April 2024). Using computer vision libraries to streamline nuclei quantification: A validation study. American Physiology Summit, Long Beach, CA.
4. Jiwan, NC, **Levitt, DE**, Appell, CR, and **Luk, H-Y.** (April 2024). Resistance-exercise-induced circulating factors on damaged skeletal muscle tissue proteome in young untrained men. American Physiology Summit, Long Beach, CA.
5. **Levitt, D**, Helmberger, R, and DiLeo, M. (April 2024). Untangling the impacts of ethanol on myoblast proliferation. American Physiology Summit, Long Beach, CA.
6. **Newman, C, Khartabil, A, DiLeo, M, Villalba, Z, and **Levitt, D.** (February 2024). Alcohol-mediated Changes in Myoblast Hif-1 α Protein Expression and Relationships with Decreased Differentiation Capacity: A Preliminary Analysis. Annual Meeting of the American College of Sports Medicine - Texas Chapter, Waco, TX.
7. Appell, CR, Jiwan, NC, Sekiguchi, Y, **Vellers, HL, Levitt, DE**, and **Luk, H-Y.** (February 2024). Dehydration and resistance exercise increased muscle and immune cell oxidative stress in trained men. Annual Meeting of the American College of Sports Medicine - Texas Chapter, Waco, TX.

Grant awards:

1. R01 AG084597 (**Levitt/Luk [multi-PI]**), 8/1/2024-7/31/2029, NIH/NIA [ESI R01], \$3,501,732, *Glycemic control and frailty risk in older people at risk for type 2 diabetes: Impact of local heat therapy*. The goal of this project is to test local heat therapy as an alternative method to improve muscle architecture, glycemic control, and subsequent exercise adaptations, and decrease frailty risk in older adults with prediabetes, with TRPV1 as an underlying mechanism. ORS proposal #23-0477, Role: **Principal Investigator**, Additional CEIH members: **Leslie Shen, PhD** (consultant); **Heather Vellers, PhD** (collaborator)
2. Young Investigator Grant (**Levitt**), 9/1/2024-8/31/2026, National Strength and Conditioning Association Foundation, \$24,000, *Resveratrol-mediated changes in extracellular vesicle microRNA cargo as a novel contributor to resistance training-induced skeletal muscle adaptations in older adults*. The goal is to determine resistance training- and resveratrol-mediated changes in the miRNA profile of circulating extracellular vesicles and their relationship with muscle strength and hypertrophy adaptations in older adults. ORS proposal #24-0590, Role: **Principal Investigator**, Additional CEIH Members: **Arturo Figueroa, MD, PhD** (Co-Investigator)
3. Center of Excellence for Translational Neuroscience and Therapeutics (Singer), 2/1/2024-1/31/2026, TTUHSC Seed Funding, \$30,000, *Neural correlates and biological markers of pre-death grief and psychosocial distress in persons with life limiting illnesses and their family caregivers*: The goal of this project is to determine improvements in psychosocial stress and associated physiological markers in persons with Alzheimer's disease and related dementias and their caregivers after a respite intervention. Role: **Co-Investigator**
4. TrUE Transformers Program (**Levitt/Lochbaum [multi-PI]**), 2/15/2024-11/30/2024, Center for Transformative Undergraduate Education (TrUE), \$5,000, *Understanding the relationship among substance (mis)use (alcohol and cannabis), physical activity, and physiological and psychological stress in college students*. The goal of this undergraduate-focused project is to understand substance use patterns in college students with varying levels of physical activity engagement and stress, and how physiological and psychological indicators of stress resilience differ among physically fit students who use these substances. Role: **Principal Investigator**
5. Office of Research and Innovation Funding Requests (**Levitt/Vellers [multi-PI]**), 9/1/2023-8/31/2024, Texas Tech University, \$150,172, *Seahorse XF Pro and Cytation C10*: Together with Departmental and College contributions of \$100,000 each, these funds are dedicated to purchasing a Seahorse XF Pro and Cytation C10 to improve our capabilities to perform cell metabolism research. Application ID: Assistant Professor (006511). Role: **Principal Investigator**

6. College of Arts and Sciences Undergraduate Research Experience (**Levitt**), 9/1/2023-08/31/2024, Texas Tech University, \$2,000, *Metabolomic signature of EtOH-treated skeletal muscle precursor cells*: The goal of this project is to determine ethanol-induced differences in the metabolomic signature of C2C12 myoblasts and myotubes. Additionally, the undergraduate student leading the project (Matthew DiLeo) will gain experience in all aspects of the research process. Role: **Principal Investigator**
7. 24AIREA1191995 (**Vellers**), 1/1/2024-12/31/2025, American Heart Association, \$154,000, *Mitochondrial DNA signatures of poor aerobic exercise trainability in young adults born preterm*: The goal of this project is to test the hypothesis that adults born very preterm (≤ 32 weeks gestational age) will have unique mitochondrial DNA (mtDNA) variants/mutations and that aerobic exercise training will decrease peripheral blood mononuclear cell (PBMC) mtDNA heteroplasmy, copy number, and oxidative capacity compared to normal-term birth (NTB) adults. ORS proposal #24-0010. Role: **Collaborating Investigator**

Other scholarly activity (oral invitation, poster presentation, etc.)

1. **Fellowship**: R25 DA050687 (Valdez), 4/1/2020-3/31/2025, NIH/NIDA and NIH/NIAAA, \$264,017, *Enhanced Interdisciplinary Research Training Institute (eIRTI) on Hispanic Drug Abuse*: The goal of this program is to strengthen the research pipeline by increasing the number of independently funded Hispanic investigators that have gone underrepresented in substance abuse and addiction research. Role: **Fellow**, June 2023-May 2025

Invited seminars and talks:

1. "Mental health in STEM" LSUHSC Postbaccalaureate Research Education Program (PREP) virtual workshop, New Orleans, LA, December 4, 2024.
2. "Understanding substance (mis)use, physical activity, & psycho-physiological stress." Transformative Undergraduate Experiences (TrUE) Symposium, Texas Tech University, Lubbock, TX, October 25, 2024.
3. "Alcohol and metabolic dysregulation: A skeletal muscle-centric view." First Friday Seminar Series, Department of Kinesiology, Health Promotion, and Recreation, Denton TX, September 6, 2024.
4. "Cardiometabolic consequences of alcohol misuse: A cross-disciplinary venture." Promoting Cross-Disciplinary Faculty Collaborations in Research Conference, Lubbock, TX, April 12, 2024.

Additional conference participation:

1. Scientific session co-chair. *Alcohol and whole-person health throughout the lifespan*. National Hispanic Science Network 24th International Conference, New Orleans, LA, October 4th, 2024.
2. Poster session co-chair (2 sessions). National Hispanic Science Network 24th International Conference, New Orleans, LA, October 3rd-4th, 2024.
3. Invited speaker (introduced the "state of the science" for the topic) and moderator. *Mitochondrial adaptations: Basic mechanism in alcohol-associated end organ injury*. Research Society on Alcohol Annual Scientific Meeting, Minneapolis, MN, June 23rd, 2024.
4. Conference planning committee member. Promoting Cross-Disciplinary Faculty Collaborations in Research, Lubbock, TX, April 12th, 2024.
5. PhysioHub session moderator. *Trending topics in endocrinology and metabolism*. American Physiology Summit, Long Beach, CA, April 6, 2024.

Li, Dawei

Publications:

1. Obraitis D, Li D. Blood virome research in myalgic encephalomyelitis/chronic fatigue syndrome: challenges and opportunities. *Curr Opin Virol.* 2024 Sep-Dec;68-69:101437. doi: 10.1016/j.coviro.2024.101437. Epub 2024 Nov 12. PMID: 39537445; PMCID: PMC11795702.
2. Qian R, Wu M, Yang Z, Wu Y, Guo W, Zhou Z, Wang X, Li D, Lu Y. Rectifying artificial nanochannels with multiple interconvertible permeability states. *Nat Commun.* 2024 Mar 6;15(1):2051. doi: 10.1038/s41467-024-46312-w. PMID: 38448408; PMCID: PMC10918189.
3. Liu G, Chen X, Luan Y, Li D. VirusPredictor: XGBoost-based software to predict virus-related sequences in human data. *Bioinformatics.* 2024 Mar 29;40(4):btac192. doi: 10.1093/bioinformatics/btac192. PMID: 38597887; PMCID: PMC11052659.

Luk, HuiYing

Papers: [number 1, 2, and 6, in collaboration with Dr. Leslie Shen]

1. Appell, C.R., Jiwan, N.C., Shen, C.L., Luk, H.Y. (2024) Curcumin Mitigates Muscle Atrophy Potentially by Attenuating Calcium Signaling and Inflammation in a Spinal Nerve Ligation Model. *Current Issues in Molecular Biology.* 46(11), 12497-12511. <https://doi.org/10.3390/cimb46110742>
2. Jiwan, N.C., Appell, C.R., Sterling, R., Shen, C.L., Luk, H.Y. (2024) The Effect of Geranylgeraniol and Ginger on Satellite Cells Myogenic State in Type 2 Diabetic Rats. *Current Issues in Molecular Biology.* 46(11), 12299-12310. <https://doi.org/10.3390/cimb46110730>
3. Elliott KB, Keefe MS, Rolloque JJS, Jiwan NC, Dunn RA, Luk HY, Sekiguchi Y. Relationships between Morning Thirst and Later Hydration Status and Total Water Intake (2024). *Nutrient.* 16, 3212: 1-10.
4. Dunn, RA., Luk, H.Y., Appell, C., Jiwan, NC., Keefe, MS., Rolloque, JS., Sekiguchi, Y., (2024) Eccentric muscle-damaging exercise in the heat lowers cellular stress prior to and immediately following future exertional heat exposure. *Cell Stress and Chaperones*, 29 (3). <https://doi.org/10.1016/j.cstres.2024.05.001>
5. Dobson NL., Levitt, DE., Luk, H.Y., & Vellers, HL. Adverse Skeletal Muscle Adaptations in Individuals Born Preterm – A Comprehensive Review (2024). *Current Issues in Molecular Biology*, 46(5). <https://doi.org/10.3390/cimb46050276>
6. Appell, CR., Jiwan, NC., Wang, R., Shen, CL., & Luk, H.Y. (2024). Ginger Root Supplementation Attenuated Mitochondrial Fusion and Improved Skeletal Muscle Size in Type 2 Diabetic Rats. *In vivo*, 38(1). <https://doi.org/10.21873/invivo.13412>
7. Keefe, MS., Luk, H.Y., Rolloque, JS., Jiwan, NC., McCollum, TB., & Sekiguchi, Y. (2024). The WUT (Weight, Urine Color, and Thirst) Venn Diagram is an Accurate Tool Compared to Urinary and Blood Markers for Hydration Assessment at Morning and Afternoon Timepoints in Euhydrated and Free-Living Individuals. *The British journal of nutrition*, 131(7). <https://doi.org/10.1017/S000711452300274X>

Poster Presentations:

1. Appell, CR., Jiwan, NC, & Luk, H.Y. (2024). Investigation on Transient Receptor Potential Vanilloid 1 (TRPV1) Activation in Skeletal Muscle: Pilot Studies. *Physiology*, 39(S1), 2051. <https://doi.org/10.1152/physiol.2024.39.S1.2051>
2. Appell, C. R., Jiwan, NC., Sekiguchi, Y., Levitt, DE., & Luk, H.Y. (2024) Dehydration and Resistance Exercise Increased Muscle and Immune Cell Oxidative Stress in Trained Men. *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 47.* Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/47>
3. Jiwan, NC., Levitt, DE, Appell, R., & Luk, H.Y. (2024). Resistance-Exercise-Induced Circulating Factors on Damaged Skeletal Muscle Tissue Proteome in Young Untrained Men. *Physiology*, 39(S1), 1251. <https://doi.org/10.1152/physiol.2024.39.S1.1251>
4. Luk, H.Y., Jiwan, NC, Appell, C., Ellis, R., Trevino, I., Schindel, A., Sterling, R., Lewis, C., Ky, A., Moya, R., Dunlap, J., Washington, C., Levitt, DE., Sekiguchi, Y. (2024). Mild Osmotic Stress Alters mTOR Pathway Signaling. *Physiology*, 39(S1), 1331. <https://doi.org/10.1152/physiol.2024.39.S1.1331>

5. Dunn RA, Luk HY, Appell CR, Jiwan NC, Keefe MS, Rolloque JJS, Sekiguchi Y. Eccentric muscle-damaging exercise in the heat lowers cellular stress prior to and immediately following future exertional-heat exposure (2024). *European Journal of Sports Science*.
6. Watkins, BA., Newman, JW., Faria Snodgrass, IR., Chyu, MC., Lee, J., Luk, HY., Appell, C., Neugebauer, V., & Shen, CL. (2024). Tai Chi Exercise of Short Duration Alters Circulating Oxylipins in Post-Menopausal Women with Knee Osteoarthritis. Annual Meeting of the American Society of Nutrition.
7. Sekiguchi, Y., Jiwan, NC, Appell, CR, Moya, R., Ky, A., Sekiguchi, JS, Keefe, M. & Luk, HY. (2024). Dehydration Decreases Slow Wave Sleep After Heavy Resistance Exercise. *Physiology*, 39(S1), 1321. <https://doi.org/10.1152/physiol.2024.39.S1.1321>
8. Dunn, RA., Jiwan, NC., Appell, CR., Schindel, A., Ellis, R., Dunlap, J., Washington, C., Trevino, IR., Lewis, C., Moya, RE., Rolloque, JS., Keefe, MS., Luk, HY., & Sekiguchi, Y. (2024) "The Effects of Hydration Status on Heart Rate Variability Following Supramaximal Intensity Exercise," *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 33*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/33>
9. Keefe, M., Dunn, RA., Appell, CR., Jiwan, NC., Rolloque, JS., Luk, HY., & Sekiguchi, Y. (2024) "Sleep Duration is Increased Following Muscle Damaging Exercise in Hot Environmental Conditions," *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 6*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/6>
10. Moya, RE., Luk, HY., Appell, CR., Ky, A., Elliott, KB., Dunlap, C., Jiwan, NC, & Sekiguchi, Y. (2024) "Habitual Fluid Intake Does Not Affect Sleep Parameters in Young Women.," *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 10*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/10>
11. Lawrence, C., Appell, CR., Jiwan, NC., Blinch, J., Ky, AT., Moya, RM., Keeney, CA., Sekiguchi, Y., & Luk, HY. (2024) "Characterization of Physical and Cognitive Performance and Hydration in Older Adults" *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 56*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/56>
12. Hollis, EA., Dunn, R., Appell, CR., Keefe, MA., Jiwan, NC., Luk, HY., & Sekiguchi, Y. (2024) "The Effect of Eccentric Muscle-Damaging Exercise in the Heat on Perceptual Stress Measures During Future Exertional-Heat Exposure," *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 70*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/70>
13. Mesquita, KA., Rolloque, JS., Keefe, MA., Dunn, R., Appell, CR, Jiwan, NC, Luk, HY., & Sekiguchi, Y. (2024) "Morning vs Afternoon Differences in Hydration Status Assessments," *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 72*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/72>
14. Uriegas, MA., Jiwan, NC., Appell, CR., Schindel, A., Ellis, RO., Dunlap, J., Washington, C., Trevino, I R., Lewis, CW., Rolloque, JS., Moya, R., Keefe, MA., Dunn, RA, Sekiguchi, Y., & Luk, HY. (2024) "Dehydration and Heavy Resistance Exercise Effect on Intracellular and Intramuscular Fluid Shifts" *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 118*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/118>
15. Dunlap, J., Jiwan, NC., Appell, CR., Schindel, A., Berrios, J., Adjetey, S., Uriegas, M., & Luk, HY. (2024) "The Effect of Capsaicin on Peak Force and Rate of Force Development in Resistance-Trained Men - A Pilot Study," *International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 16, Article 120*. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/120>

Grant:

1. Agency: National Institute of Health/National Institute of Aging. Title: Glycemic control and frailty risk in older people at risk for type 2 diabetes: Impact of local heat therapy -R01AG084597. Luk HY (multi-PI), Levitt DE (multi-PI), Zhang, FY (Co-I). Amount Obtained: \$3,505,732. Duration: Aug 2024- July 2028

Moustaid-Moussa, NaimiPublications:

1. Kalupahana NS, Moustaid-Moussa N. Beyond blood pressure, fluid and electrolyte homeostasis - Role of the renin angiotensin aldosterone system in the interplay between metabolic diseases and breast cancer. *Acta Physiol (Oxf)*. 2024 Jul;240(7):e14164. doi: 10.1111/apha.14164. Epub 2024 May 21. PMID: 38770946.
2. Pahlavani M, Pham K, Kalupahana NS, Morovati A, Ramalingam L, Abidi H, Kiridana V, Moustaid-Moussa N. Thermogenic adipose tissues: Promising therapeutic targets for metabolic diseases. *J Nutr Biochem*. 2024 Dec 7;137:109832. doi: 10.1016/j.jnutbio.2024.109832. Epub ahead of print. PMID: 39653156.
3. Ramalingam L, Mabry B, Menikdiwela KR, Moussa H, Moustaid-Moussa N. Enhanced Metabolic Effects of Fish Oil When Combined with Vitamin D in Diet-Induced Obese Male Mice. *Biomolecules*. 2024 Apr 12;14(4):474. doi: 10.3390/biom14040474. PMID: 38672490; PMCID: PMC11048485.
4. Harris BN, Yavari M, Ramalingam L, Mounce PL, Alers Maldonado K, Chavira AC, Thomas S, Scoggin S, Biltz C, Moustaid-Moussa N. Impact of Long-Term Dietary High Fat and Eicosapentaenoic Acid on Behavior and Hypothalamic-Pituitary-Adrenal Axis Activity in Amyloidogenic APP^{swe}/PSEN1^{dE9} Mice. *Neuroendocrinology*. 2024;114(6):553-576. doi: 10.1159/000536586. Epub 2024 Feb 1. Erratum in: *Neuroendocrinology*. 2024;114(6):603. doi: 10.1159/000538845. PMID: 38301617; PMCID: PMC11153005.
5. Seifishahpar M, Kim JH, Parkman JK, Rhode A, Menikdiwela K, Zu Y, Scoggin S, Freeman L, Kalupahana NS, Moustaid-Moussa N. Mechanisms Mediating Tart Cherry and Fish Oil Metabolic Effects in Diet-Induced (C57BL/6J) and Genetically (TALYHO/Jng) Obese Mice. *Nutrients*. 2024 Dec 1;16(23):4179. doi: 10.3390/nu16234179. PMID: 39683572; PMCID: PMC11644550.
6. Garrison EC, Brown AMV, Salazar MM, Barr B, Moustaid-Moussa N, Gollahon LS. Microbiome Taxonomic and Functional Differences in C3H/HeJ Mice Fed a Long-Term High-Fat Diet with Beef Protein ± Ammonium Hydroxide Supplementation. *Nutrients*. 2024 May 25;16(11):1613. doi: 10.3390/nu16111613. PMID: 38892546; PMCID: PMC11174526.

Murimi, MaryPublications:

1. Ingabire-Gasana E, Murimi M. Impact of Harvest Lentil Vegetable Blend and Nutrition Education on Child Growth, Caregivers' Nutrition Knowledge, and WASH Practices. *J Nutr Educ Behav*. 2024 Nov 11:S1499-4046(24)00468-8. doi: 10.1016/j.jneb.2024.09.009. Epub ahead of print. PMID: 39530960.
2. Daba AK, Murimi M, Abegaz K, Hailu D. Animal source food consumption practice and factors associated among infant and young children from selected rural districts in Ethiopia: A cross-sectional study. *PLoS One*. 2024 Jul 5;19(7):e0306648. doi: 10.1371/journal.pone.0306648. PMID: 38968240; PMCID: PMC11226061.

Neugebauer, VolkerPublications (* peer-reviewed)

1. *Navratilova, E., Qu, C., Ji, G., **Neugebauer, V.**, Guerrero, M., Rosen, H., Roberts, E., Porreca, F. Opposing effects on descending control of nociception by mu and kappa opioid receptors in the anterior cingulate cortex. *Anesthesiology*, 140: 272-283, **2024**. PMID: 37725756. *PMC11466009*.
2. *Pourghaed, M., Sarangi, A., Ramirez-Velandia, F., Kopel, J., Culberson, J., Ashworth, G., Khan, H., Boles, A., **Neugebauer, V.**, Lawrence, J.J. Associations between Vitamin D deficiency/insufficiency and depression expose health disparities in older rural West Texans: A Project FRONTIER study. *Am. J. Geriatr. Psychiatry* 32:808-820, **2024**. PMID: 38320908.

3. *Shen, C.L., Wang, R., Santos, J.M., Elmassy, M.M., Stephens, E., Kim, N., **Neugebauer, V.** Ginger alleviates mechanical hypersensitivity and anxio-depressive behavior in rats with diabetic neuropathy through beneficial actions on gut microbiome composition, mitochondria and neuroimmune cells of colon and spinal cord. Nutr. Res. 124: 73–84, **2024**. PMID: 38402829. *PMC11466295*.
4. *Mazzitelli, M., Ponomareva, O., Presto, P., John, J., **Neugebauer, V.** Impaired amygdala astrocytic signaling worsens neuropathic pain-associated neuronal functions and behaviors. Front. Pharmacol. 15: 1368634 (15 pp), **2024**. PMID 38576475. *PMC10991799*.
5. *Ji, G., Presto, P., Kiritoshi, T., Chen, Y., Navratilova, E., Porreca, F., **Neugebauer, V.** Chemogenetic manipulation of amygdala kappa opioid receptor neurons modulates amygdala neuronal activity and neuropathic pain behaviors. Cells 13:705 (19 pp), **2024**. PMID 38667320. *PMC11049235*.
6. *Shen, C.-L., Santos, J.M., Elmassy, M.M., Bhakta, V., Driver, Z., Ji, G., Yakhnitsa, V., Kiritoshi, T., Lovett, J., Hamood, A.N., Sang, S., **Neugebauer, V.** Ginger polyphenols mitigate hypersensitivity in neuropathic pain rats by reversing the molecular signature of amygdala neuroimmune signaling: implication of microbiome-gut-brain-axis. Antioxidants 13:502 (17 pp) **2024**. PMID: 38790607; *PMC11118883*.
7. *Yakhnitsa, V., Thompson, J., Ponomareva, O., Ji, G., Kiritoshi, T., Mahimainathan, L., Molehin, D., Pruitt, K., **Neugebauer, V.** Dysfunction of small conductance Ca²⁺-activated potassium (SK) channels drives amygdala hyperexcitability and neuropathic pain behaviors: Involvement of epigenetic mechanisms. Cells 13: 1055 (27 pp), **2024**. PMID 38920682; *PMC11201618*.
8. *Shen, C.-L., Deshmukh, H., Santos, J.M., Elmassy, M.M., Presto, P., Driver, Z., Bhakta, V., Yakhnitsa, V., Kiritoshi, T., Ji, G., Lovett, J., Hamood, A.N., **Neugebauer, V.** Fecal microbiota transplantation attenuates mechanical hypersensitivity in rats with neuropathy via modulation of gut microbiome, suppression of microglial activation and inflammation in colon and brain: microbiota-gut-brain axis. J. Frailty Aging 13:319-330, **2024**. PMID: 39574251.
9. *Notartomaso, S., Antenucci, N., Mazzitelli, M., Rovira, X., Boccella, S., Ricciardi, F., Liberatore, F., Gomez-Santacana, X., Imbriglio, T., Cannella, M., Zussy, C., Luongo, L., Maione, S., Goudet, C., Battaglia, G., Llebaria, A., Nicoletti, F., **Neugebauer, V.** A "double-edged" role for type-5 metabotropic glutamate receptors in pain disclosed by light-sensitive drugs. eLife 13:e94931 (21 pp), **2024**. PMID: 39172042. *PMC11341090*.
10. *Kiritoshi, T., Yakhnitsa, V., Singh, S., Wilson, T.D., Chaudhry, S., Neugebauer, B., Torres-Rodriguez, J.M., Lin, J.L., Carrasquillo, Y., **Neugebauer, V.** Cells and circuits for amygdala neuroplasticity in the transition to chronic pain. Cell Reports 43:114669 (28 pp), **2024**. PMID: 39178115. *PMC11473139*.
11. *Fadalla, C., Singer, J., Rerick, P., Elliott, L., McLean, E., Schneider, S., Molinar-Lopez, V., **Neugebauer, V.** Neurocognitive Disparities: Investigating ethnicity and mental health in rural aging adults. Aging 16:1-18, **2024**.
12. *Santos, J.M., Deshmukh, H., Elmassy, M.M., Yakhnitsa, V., Ji, G., Kiritoshi, T., Presto, P., Antenucci, N., Liu, X., **Neugebauer, V.**, Shen, C.-L. Beneficial effects of ginger extract on pain behaviors, inflammation and mitochondrial function in the colon and different brain regions of male and female neuropathic rats: a gut-brain axis. Nutrients 16, 3563 (23 pp), **2024**. PMID: 39458557. *PMC11510108*.
13. *Neugebauer, V., Kiritoshi, T. Cortico-limbic plasticity in pain - Hippocampus joins the party. Pain 165:963-964, 2024. PMID: 37889585. *PMC11045655*.
14. *Neugebauer, V., Ponomarev, I. Alcohol withdrawal and pain: Peripheral mechanisms join central circuits. Neuron 112: 1-3, 2024. PMID: 38176389. *PMC11045655*.

Abstracts (* peer-reviewed)

1. Singer, J., **Neugebauer, V.** Investigating the relationship between stress and neurocognitive functioning in persons with dementia and their caregivers: A dyadic intervention study. TARCC Scientific Symposium, Invited talk, #11, p. 2, 2024.
2. Schneider, S., Elliott, L., **Neugebauer, V.**, Singer, J. Examining the Effects of an Intervention for Persons with Dementia and Their Family Caregivers on Neurocognitive Outcomes: A Pilot Study. TARCC Scientific Symposium, #61, 2024.
3. Chrzanowski, L., Singer, J., Elliott, L., Rerick, P., Molinar-Lopez, V., **Neugebauer, V.** Investigation of inflammation and chronic pain on cognitive decline in rural Texas: A Project FRONTIER Study. TARCC Scientific Symposium, #49, 2024.
4. Yin, X., Chen, Y., Kiritoshi, T., Manczak, M., **Neugebauer, V.** Cbln1 alleviates cognitive deficits in J20 mice. TARCC Scientific Symposium, #16, 2024.
5. *Shen, C.-L., Deshmukh, H., Santos, J.M., Elmassy, M.M., Presto, P., Driver, Z., Bhakta, V., Yakhnitsa, V., Kiritoshi, T., Ji, G., Lovett, J., Hamood, A., **Neugebauer, V.** Fecal microbiota transplantation modulated gut microbiome composition and suppressed microglial activation in brain and colon of neuropathic rats: microbiota-gut-brain axis. International Conference on Frailty and Sarcopenia Research (ICSFR), P10-3, 2024.
6. Liu, B., Presto, P., Mazzitelli, M., Ponomarev, I., **Neugebauer, V.** The role of amygdala lateralization and sex on pain-like behaviors following exogenous neuroinflammation. 36th Annual Student Research Week, p. 166, 2024.
7. Hurtado, Z.J., Presto, P., Kiritoshi, T., Mazzitelli, M., Ji, G., **Neugebauer, V.** BDNF in the amygdala modulates sensory and affective neuropathic pain behaviors. 36th Annual Student Research Week, p. 31, 2024.
8. John, J., Mazzitelli, M., Ponomareva, O., **Neugebauer, V.** Effects of astrocyte silencing in the amygdala on pain behaviors in a pre-clinical neuropathic pain model. The National Conference on Undergraduate Research (NCUR), 1207, 2024.
9. Turner, C.E., Abu-Samaha, A., **Neugebauer, V.**, Molinar-Lopez, V., Singer, J. Examining the Relationship Between Hypertension and Neurocognitive Functioning in a Unique Rural Sample [Poster Presentation]. Texas Tech University Undergraduate Research Conference (URC), A1035, 2024.
10. Nunez-Miranda, A., Hendrix, J., Elliott, L., Schneider, S., Sparks, S., Levitt, D., Singer, J., **Neugebauer, V.**, Harris, B. N. Is leptin an effective biomarker of stress in patients with dementia and their corresponding caregivers? Texas Tech University Undergraduate Research Conference (URC), A1378, 2024.
11. Liu, B., Presto, P., Mazzitelli, M., Ponomarev, I., **Neugebauer, V.** The role of amygdala lateralization and sex on pain-like behaviors following exogenous neuroinflammation. Texas Tech University Undergraduate Research Conference (URC), A3255, 2024.
12. Jump, A., Singer, J., Fadalla, C., Chrzanowski, L., Molinar-Lopez, V., **Neugebauer, V.** Examining Differences in Neurocognitive Functioning Between Hispanics who Preferred Assessments in Spanish vs. English: A Project Frontier Study. Texas Tech University Undergraduate Research Conference (URC), A3195, 2024.
13. *Shen, C.-L., Newman, J.W., Snodgrass, I.R., Chyu, M.-C., Lee, J., Luk, H.-J., Appel, C., **Neugebauer, V.**, Watkins, B.A. Effects of Short-term Tai Chi on Circulating Oxylipins and Endocannabinoids in Post-menopausal Women. American College of Sports Medicine (ACSM), 2982, 2024.
14. *Shoji, E., Decourt, B., **Neugebauer, V.** Nicotine addiction and cognitive functions among rural older West Texans using data from Project FRONTIER conducted at the Garrison Institute on Aging. Annual Meeting, American Psychiatric Association, 4345, 2024.
15. *Shen, C.-L., Santos, J.M., Yakhnitsa, V., Antenucci, N., Kiritoshi, T., Ji, G., Presto, P., Lovett, J., **Neugebauer, V.** Effects of ginger supplementation on neuroinflammation and mitochondrial

- function in spinal cords of rats with neuropathic pain: evidence for gender differences. *Nutrition*, 1752505, 2024.
16. *Watkins, B.A., Newman, J.W., Snodgrass, I.R., Chyu, M.-C., Lee, J., Luk, H.-Y., Appel, C., **Neugebauer, V.**, Shen, C.-L. Tai Chi exercise of short duration alters circulating oxylipins in post-menopausal women with knee osteoarthritis. *Nutrition*, 1760665, 2024.
 17. *McReady, R., Morris, C., Antwi-Adjei, P., Pourghaed, M., Ramirez-Velandia, F., Kopel, J., Culberson, J., Ashworth, G., Singer, J., Molinar-Lopez, V., Sabbagh, M.N., **Neugebauer, V.**, Decourt, B., Lawrence, J.J. Relationships between Diabetes, Vitamin D Status, Neuropsychological Functioning, and Hispanic Ethnicity in Older Rural West Texans: A Project FRONTIER Study. Alzheimer's Association International Conference, ID#: 91599, 2024.
 18. *Decourt, B., Singer, J., Molinar-Lopez, V., Yin, X.-L., **Neugebauer, V.** Project FRONTIER: A Cohort to Study Aging in Rural West Texas. Alzheimer's Association International Conference, ID#: 95032, #867, 2024.
 19. *Shen, C.-L., Santos, J.M., Deshmukh, H., Elmassry, M.M., Chen, F., Presto, P., **Neugebauer, V.** Effects of ginger supplementation in a rat model of neuropathic pain: sex differences in spontaneous pain, intestinal integrity, fecal metabolites, and neuroinflammation gene expression. IASP World Congress, 2024.
 20. *Manczak, M., Yin, X.L., Chen, Y., Lawrence, J.J., **Neugebauer, V.** The autophagy/mitophagy system and their receptors in Alzheimer's disease progression in APP23 and Tau-P301L transgenic mouse models. *Soc. Neurosci. Abstr.* PSTR061.18, 2024.
 21. *Kiritoshi, T., Narasimhan, K., Ji, G., Dravid, S., **Neugebauer, V.** Involvement of impaired GluD1-Cbln1 trans-synaptic signaling and autophagy in pain-related behaviors and neuroplasticity in central amygdala PKC δ neurons in a neuropathic pain model. *Soc. Neurosci. Abstr.* PSTR167.14, 2024.
 22. *Yakhnitsa, V., Ji, G., Antenucci, N., Navratilova, E., Porreca, F. **Neugebauer, V.** Kappa opioid receptor signaling in hypothalamus promotes stress-induced functional pain. *Soc. Neurosci. Abstr.* PSTR167.15, 2024.
 23. ***Neugebauer, V.**, Salvemini, D., Mazzitelli, M., Antenucci, N. Effects of P2Y14 receptor activation on amygdala neurons. *Soc. Neurosci. Abstr.* PSTR167.16, 2024.
 24. *Mazzitelli, M., Antenucci, N., Salvemini, D., **Neugebauer, V.** Beneficial effects of amygdala P2Y14 receptor blockade in a model of neuropathic pain. *Soc. Neurosci. Abstr.* PSTR167.17, 2024.
 25. *Hurtado, Z.J., Presto, P., Kiritoshi, T., Antenucci, N., Yakhnitsa, V., Ji, G., **Neugebauer, V.** Exogenous BDNF modulates electrophysiologic changes in neurons of the amygdala. *Soc. Neurosci. Abstr.* PSTR167.18, 2024.
 26. *Antenucci, N., Presto, P., Mazzitelli, M., **Neugebauer, V.** Sex differences in the contribution of microglia in the amygdala to neuropathic pain. *Soc. Neurosci. Abstr.* PSTR167.19, 2024.
 27. *Ji, G., Kiritoshi, T., Yakhnitsa, V., **Neugebauer, V.** Microglia depletion blocks the induction of pain behaviors by chemogenetic activation of amygdala CRF neurons. *Soc. Neurosci. Abstr.* PSTR167.20, 2024.
 28. *Chen, Y., Yin, X.L., Kiritoshi, T., Presto, P., Mazzitelli, M., Manczak, M., **Neugebauer, V.** Cerebellin 1 alleviates cognitive deficits in a mouse model of Alzheimer's disease (J20 mice). *Soc. Neurosci. Abstr.* PSTR327.11, 2024.
 29. *Chrzanowski, L., Elliott, L., Schneider, S., Diehl, K., Abu-Samaha, A., **Neugebauer, V.**, Singer, J. The Impact of Sleep Quality on Neurocognitive Functioning in Caregivers of Persons with Dementia. Gerontological Society of America (GSA), Annual Scientific Meeting, 1792306, 2024.
 30. *Elliott, L., Sparks, S., Schneider, S., McLean, E., Fadalla, C., **Neugebauer, V.**, Singer, J. Relationship Between Stress and Pre-Death Grief in Family Caregivers of Persons With AD/ABRD. Gerontological Society of America (GSA), Annual Scientific Meeting, 1792310, 2024.

31. *Schneider, S., Elliott, L., McLean, E., Diehl, K., **Neugebauer, V.**, Singer, J. Impact of Respite Services on Dementia Caregivers' Neurocognitive and Pre-Death Grief Outcomes: A Pilot Study. Gerontological Society of America (GSA), Annual Scientific Meeting, 1793529, 2024.
32. *McLean, E., Elliott, L., Schneider, S., Neugebauer, V., Singer, J. Personality and Pre-Death Grief in Family Caregivers of Persons With Dementia. Gerontological Society of America (GSA), Annual Scientific Meeting, 1793546, 2024.
33. *Jump, A., Elliott, L., Schneider, S., McLean, E., Chrzanowski, L., Abu-Samaha, A., **Neugebauer, V.**, Singer, J. Examining the Relationship Between Personality Factors and Neurocognitive Functioning in Dementia Caregivers. Gerontological Society of America (GSA), Annual Scientific Meeting, 1793722, 2024.
34. *Neugebauer, B., Sparks, S., Elliott, L., Chrzanowski, L., McLean, E., Cummings, C., **Neugebauer, V.**, Singer, J. Feasibility and Acceptability of MBCT and BA to Reduce Pre-Death Grief in Family Caregivers of Persons with Dementia. Gerontological Society of America (GSA), Annual Scientific Meeting, 1914223, 2024.

Presentations

- 10-03-2024 "mGlu and neuroimmune signaling in the amygdala in pain modulation". 11th International Meeting on Metabotropic Glutamate Receptors: From the bench to the clinic. **Taormina, Italy.**
- 05-23-2024 "Amygdala neuroplasticity and neuroimmune signaling". Pain Mechanisms and Therapeutics Conference. **Verona, Italy.**

Grants active in 2024

Alzheimer's Research Seed Grant,
Texas Tech University College of Health and Human Sciences, 10/07/24 – 9/30/25
"Smartphone-based Cognitive Impairment Assessment Tool: A Pilot Study of Feasibility and Validation" The goal of this study is to validate a machine learning approach, Alzguard, a 20-minute cognitive impairment screening mobile application, using cognitive tasks and digital biomarkers as a new screening tool for cognitive impairment related to AD/ADRD among rural older adults in West Texas.
PI (Contact), Woosang Hwang
MPI, Volker Neugebauer
MPI, Boris Decourt
MPI, Jonathan Singer
Total costs: \$20,000

2024-67018-42457 USDA/NIFA
"Ginger and the microbiota-gut-brain connection in sciatic pain individuals", 06/01/24 – 05-31-27
The goal of this clinical study is to evaluate the effects of supplementing gingerols-enriched ginger in patients with sciatic pain and to understand the role of microbiota-gut-brain interactions in sciatica states in a randomized, double-blinded, and placebo-controlled trial
PI (Contact), Chwan-Li (Leslie) Shen (TTUHSC)
MPI, Volker Neugebauer
Total costs: \$607,561

Garrison Family Foundation, 02/01/24 – 01/31/25
"Innovative mental health services, recreational intervention, and imaging-based biomarker screening for AD/ADRD patients and caregivers"
The goals for this GIA pilot project are (i) to provide individual mental health services for care providers of persons with AD/ARD and a recreational intervention for persons with AD/ADRD for

three hours a week; (ii) to add other clinical services (e.g. free neuropsychological assessments); and (iii) to test amyloid PET imaging in Lubbock, TX, to increase diagnostic and research capabilities for the entire West Texas (TTUHSC medical centers serve 108 Texas counties, as well as East New Mexico and Southern Oklahoma).

PI, Volker Neugebauer

MPI, Boris Decourt

MPI, Jonathan Singer (TTU)

Total costs: \$65,000

CTNT-OR-GIA JSBDVN Seed Fund Program, 10/01/23 – 09/30/25

“fMRI studies of the reward system in persons with AD/ABD and their caregivers”

The goal of this project is to investigate the neurobiological underpinnings of pre-death grief (PDG) and examine the changes in neurobiological functioning following BA and MBCT, in care partners of individuals with AD/ABD and who report high PDG.

PI, Jonathan Singer (TTU)

MPI, Boris Decourt

Co-I, Volker Neugebauer

Total costs: \$30,000

Sabinsa Corporation, NJ, 04/01/23 - 03/31/25

“Curcumin and Retinal Amyloid-beta Pilot Study”

The goal of this pilot study is to test if curcumin (found in tumeric) supplemented for two weeks would cross the blood brain barrier (BBB) and attach to retinal amyloid beta proteins and affect amyloid beta deposits, to assess feasibility (safety and bioavailability).

PI: Leslie Shen

Co-I, Volker Neugebauer

Total costs: \$94,991

R01 NS129552 – NIH/NINDS, 09/20/22 – 07/31/27

“Brain Circuits of Migraine Pain”

The goal of this study is to determine the potential relevance of a central CGRP circuit from parabrachial nucleus to amygdala as a common pathway of migraine pain that can be engaged by CGRP-dependent and CGRP-independent peripheral mechanisms, which may ultimately lead to development of improved therapies.

PI (Contact), Frank Porreca (University of Arizona), MPI, Edita Navratilova (University of Arizona)

MPI, Volker Neugebauer

Total costs: \$3,118,625 (TTUHSC subcontract \$1,235,720)

R01 NS038261 - NIH/NINDS, 12/15/21 - 11/30/26

“Amygdala Pain Mechanisms”

The overall goal of this project funded since 1999 is to determine role and mechanisms of amygdala plasticity in pain and its interactions with cortical-cognitive control centers, using electrophysiology, pharmacology, behavioral assays, gene transfer and optogenetic strategies. The focus of this project period is on neuroimmune signaling as a mechanism of neuroplasticity and neuropathic pain.

PI, Volker Neugebauer

MPI, Igor Ponomarev

Total costs: \$3,278,187

R01 NS120395 – NIH/NINDS Impact score: 10, Percentile: 1.0, 08/01/21 – 07/31/26

“A prolactin-mediated neuroendocrine link between stress-induced latent sensitization and female-selective pain”

The goal of this study is to identify a previously unknown stress-related neuroendocrine link between hypothalamic kappa opioid receptors and prolactin/prolactin receptor signaling in nociceptors as a basis for female selective pain syndromes.

PI (Contact), Frank Porreca (University of Arizona), MPI, Edita Navratilova (University of Arizona)
MPI, Volker Neugebauer

Total costs: \$2,297,350 (TTUHSC subcontract \$ 921,815)

2021-67017-34026 - USDA/NIFA, 01/01/21 - 12/31/24

“Ginger root extract for neuropathic pain”

The goal of this study is to evaluate the effects of ginger root extract on neuropathic pain-associated sensory and affective behaviors, gut health, and neuroinflammation in animals.

PI (Contact), Chwan-Li (Leslie) Shen (TTUHSC)

MPI, Volker Neugebauer

Total costs: \$500,000

R01 NS118731 – NIH/NINDS, 08/01/20 – 07/31/25

“Trans-Synaptic Signaling Complex in Amygdala Pain Mechanisms”

The goal of this project is to determine the role of the trans-synaptic signaling complex centered on cerebellin 1 and glutamate delta 1 receptor in the regulation of amygdala plasticity and pain mechanisms.

PI (Contact), Shashank Dravid (Creighton University)

MPI, Volker Neugebauer

Total costs: \$2,674,615 (TTUHSC Subcontract \$733,450)

R01 NS109255 – NIH/NINDS, 08/15/19 – 06/30/25

“Pronociceptive and Antinociceptive Opioid Mechanisms in the Central Nucleus of the Amygdala”

The goal of this project is to determine cellular mechanisms and behavioral consequences of differential functions of mu and kappa opioid systems in the amygdala in neuropathic pain.

PI (Contact), Edita Navratilova (University of Arizona), PI, Guangchen Ji

Co-I, Volker Neugebauer

Total costs: \$2,544,148 (TTUHSC subcontract \$ 1,253,415)

Davis Foundation, 11/10/22 – 10/31/24

“Ginger extract in anxio-depressive disorders: gut-brain-axis”

The goal of this study is to test candidate genes associated with neuroinflammation-, neuroimmune-, neuroplasticity-, neurotransmitters-, and neurotoxicity in anxio-depressive disorders on brain samples from GEG-supplemented animals and to use gut microbiome analysis to explore the association between gut microbiome and anxio-depressive disorder-related gene expression.

PI (Contact), Chwan-Li (Leslie) Shen (TTUHSC)

MPI, Volker Neugebauer

Total costs: \$10,000

R01 AA027096 – NIH/NIAAA, 07/01/19 - 06/30/24

“The Neuroimmune Model of Excessive Alcohol Consumption: Transition to Alcohol Use Disorder”

The goal of this project is to determine cell type-specific molecular mechanisms of immune activation, its role and effects on the brain in the development of alcohol use disorder (AUD).

PI, Igor Ponomarev (TTUHSC)

Co-I, Volker Neugebauer

Total costs: \$2,868,750 (original start date, 09/10/2018; transferred to TTUHSC on 07/01/19)

R01 NS106902 – NIH/NINDS, 04/01/18 - 03/31/24

“Stress-Induced Descending Facilitation from Amygdala Kappa Opioid Receptors in Functional Pain”

The overall goal of this project is to determine the role of KOR in amygdala plasticity and behaviors in a functional pain model. A key hypothesis is that blockade of stress-induced endogenous amygdala KOR signaling reduces pain responses following priming-induced latent sensitization.

PI (Contact), Frank Porreca (University of Arizona)

MPI, Volker Neugebauer

Total costs: \$ 2,740,180 (TTUHSC subcontract \$ 1,295,245)

Honors, awards, recognition

- Grover E. Murray Professorship, TTU System, 2024 -
- Included on Stanford University/Elsevier Sixth Edition of the World's Top 2% of Scientists List (Ioannidis, John P.A. (2023) Elsevier Data Repository, V6, doi: 10.17632/btchxktzyw.6
- Susan G. Talkmitt Science Motivator Award, TTU Center for the Integration of STEM Education & Research (CISER), 2024
- Douglas M. Stocco Scholarship/Research Award, SOM, TTUHSC, 2024
- Organizing Committee Member, 11th International Meeting on Metabotropic Glutamate Receptors, 2024
- Organizing Committee Member, Pain Mechanisms and Therapeutics Conference, 2024
- Grant Reviewer (ad-hoc), NIH, ZRG1 ICN-T (02), 2024
- SOM Dean's Executive Leadership Team, Member, 2024 -

Oldewage, Wilna

Publications:

1. MKHIZE X, OLDEWAGE-THERON W, NAPIER C & DUFFY K. 2024. An exploration of applied plant-based protein formulations to shift farmers towards sustainable diets: A South African Perspective. *Journal of Agriculture and Food Research*, <https://doi.org/10.1016/j.jafr.2024.101521>.
2. CHALWE JM, GROBLER CJ & OLDEWAGE-THERON WH. 2024. Correlation of eight (8) polymorphisms and their genotypes with the risk factors of cardiovascular disease in a black elderly population. *Current Issues in Molecular Biology*, 46: 12694-12703. <https://www.mdpi.com/1467-3045/46/11/753>
3. SOSA-HOLWERDA A & OLDEWAGE-THERON W. 2024. Discovering the benefits of soybean: an informative half-day nutrition experience among low income women in Vaal region of South Africa. *Journal of Consumer Sciences*, 7: 12-23. Discovering the benefits of soybean: an informative half-day nutrition experience among low-income women in Vaal region of South Africa | *Journal of Consumer Sciences* (ajol.info)
4. SOSA-HOLWERDA A, PARK OH, ALBRACHT-SCHULTE K, NIRLAULA S, THOMPSON L & OLDEWAGE-THERON W. 2024. The role of Artificial Intelligence in nutrition research: A scoping review. *Nutrients*, 16: 2066. <https://www.mdpi.com/2072-6643/16/13/2066>
5. KORIR J, OLDEWAGE-THERON W, SAMUEL A & GICHOHI-WAINAINA WN. 2024. Multisectoral approaches for sustainable food and nutrition security actions in Ethiopia. *African Journal of Food, Agriculture, Nutrition and Development*, 24(5): 26351-26376. <https://doi.org/10.18697/ajfand.130.24180>.

6. IBIYEMI T, NAJAM W & OLDEWAGE-THERON W. 2024. Hungry, Stressed, and Away from “Home”: Predictors of Food Security and Perceived Stress among International Students. *American Journal of Health Promotion*. <https://doi.org/10.1177/08901171241257092>
7. RANA ZH, REED DB, OLDEWAGE-THERON W, ISLAM S, AKHTARUZZAMAN M, LYFORD C, COLWELL M & JD DAWSON. 2024. Societal, economic, behavioural predictors of stunting among children aged 24-59 months: Evidence from the National Survey of Bangladesh. *Asia Pacific Journal of Rural Development*, 1-20. <https://journals.sagepub.com/doi/epdf/10.1177/24551333241232795>
8. KORIR J, OLDEWAGE-THERON W, MUGAMBI G & GICHOHI-WAINAINA WH. 2024. Utilizing Emerging Perspectives at the Global and Regional Level to Frame Multisectoral Nutrition Governance Landscape in Kenya. *Public Health Nutrition*, 27(e99): 1-12. doi:10.1017/S1368980024000727
9. MKHIZE X, OLDEWAGE-THERON W, NAPIER C & DUFFY KJ. 2024. Associations between cardiometabolic risk factors and increased consumption of diverse legumes: A South African food and nutrition security programme case study. *Nutrients*, 16: 354. <https://doi.org/10.3390/nu16030354>

Abstracts:

1. KORIR J & OLDEWAGE-THERON W. 2024. Status of Policy Coherence and Coordination for Enhanced Multisectoral Nutrition Programming in Kenya. *Journal of the Academy of Nutrition and Dietetics*, 124 (10): A94. [https://www.jandonline.org/article/S2212-2672\(24\)00511-2/fulltext](https://www.jandonline.org/article/S2212-2672(24)00511-2/fulltext)

Presentations:

1. *Academy of Nutrition and Dietetics Food & Nutrition Conference & Expo (FNCE) 5-8 October 2024, Minneapolis, MN*: KORIR J & OLDEWAGE-THERON W. Status of Policy Coherence and Coordination for Enhanced Multisectoral Nutrition Programming in Kenya (poster).
2. *American Society of Nutrition Conference 29 June – 2 July 2024, Chicago, IL*: SOSA-HOLWERDA A, PARK OH, THOMPSON L, NIRLAULA S, ALBRACHT-SCHULTE K & OLDEWAGE-THERON W. The role of Artificial Intelligence in nutritional dietary assessment: An article review (poster).

Palmer, Ty

Publications:

1. **Palmer, T. B.**, Palmer, B. M. (2024). Influence of body mass normalization on the correlations between muscle cross-sectional area and physical performance outcomes in older women. *Medical Ultrasonography*, 26(2), 153-159.
2. Dunn, R. A.*, Tinsley, G. M., **Palmer, T. B.**, Benjamin, C. L., Sekiguchi, Y. (2024). The efficacy of nutritional strategies and ergogenic aids on acute responses and chronic adaptations to exertional-heat exposure: a narrative review. *Nutrients*, 16(22), 3792.
3. Blinch, J., Trovinger, C.†, DeWinne, C. R.†, de Cellio Martins, G.*, Ifediora, C. N.†, Nourollahimoghadam, M.*, Harry, J. R., **Palmer, T. B.** (2024). Tradeoffs of estimating reaction time with absolute and relative thresholds. *Behavior Research Methods*, 56(5), 4695-4715.
4. Wohlgemuth, K. J.*, Conner, M. J., Tinsley, G. M., **Palmer, T. B.**, Mota, J. A. (2024). Strategies for improving firefighter health on-shift: a review. *Journal of Functional Morphology and Kinesiology*, 9(2), 105.
5. Johnson, E. B.†, Maurya, P. S.*, Sisneros, K. P.*, Ford, B. R.*, **Palmer, T. B.**^ (2024). Force production measurements during a supine medicine ball throw: a reliability and correlation study. *Journal of Musculoskeletal and Neuronal Interactions*, 24(2), 120-126.
6. Rodriguez, C.*, Mota, J. D., **Palmer, T. B.**, Heymsfield, S. B., Tinsley, G. M. (2024). Skeletal muscle estimation: a review of techniques and their applications. *Clinical Physiology and Functional Imaging*, 44(4), 261-284.

Presentations:

1. **Palmer, T. B.**, Texas Society for Hand Therapy Annual Conference, "Handgrip strength and asymmetry measurements are associated with lower-limb muscle power in older women," TSHT, Fort Worth, TX. (April 2024).
2. Johnson, E. B.†, Sisneros, K. P.*, **Palmer, T. B.**^, Texas Tech University Undergraduate Research Conference, "Influence of age on the reliability and production of muscle power during a sit-to-stand task," TTU URC, Lubbock, TX. (April 2024).
3. Frans, L. M.†, Sisneros, K. P.*, Johnson, E. B.†, Cole, T. R.†, **Palmer, T. B.**^, Texas American College of Sports Medicine Annual Meeting, "The acute effects of carrying a heavy grocery bag on handgrip rapid strength in young and older women," TACSM, Waco, TX. (February 2024).
4. Cole, T. R.†, Sisneros, K. P.*, Johnson, E. B.†, Frans, L. M.†, **Palmer, T. B.**^, Texas American College of Sports Medicine Annual Meeting, "The influence of age on hip extension strength characteristics and vertical jump power," TACSM, Waco, TX. (February 2024).

Honors:

1. Best Research Poster Award, **Palmer, T. B.**, Texas Society for Hand Therapy Annual Conference, TSHT, Fort Worth, TX. (April 2024).

Current Research:

1. 2024, *Acute effects of static stretching on wrist flexibility and handgrip strength in older adults*. Texas Society for Hand Therapy, \$500, PI: **Palmer, T.B.**
2. *Relationships between muscle strength and various performance-based outcomes* (non-funded)
3. *Measuring muscle strength with Dynamo Torque Analyzer* (non-funded)

Park, Oak Hee

Publications:

1. Korir J, Gichohi-Wainaina WN, Park OH, Kwon SW, Colwell MJ, Oldewage-Theron W. Mapping the Drivers of Multisectoral Nutrition Governance and Its Link to Nutrition Outcomes in Kenya: A Qualitative Inquiry. *Nutrients*. 2025 Jan 8;17(2):209. doi: 10.3390/nu17020209. PMID: 39861339; PMCID: PMC11767728.
2. Sosa-Holwerda, A., Park, O. H., Albracht-Schulte, K., Niraula, S., Thompson, L., & Oldewage-Theron, W. (2024). The role of artificial intelligence in nutrition research: a scoping review. *Nutrients*, 16(13), 2066.

Grants:

1. From Bytes to Bites: Understanding How Exemplification in an Online Community Improves Healthy Diet and Family Mealtime Interactions, \$50,000, College of Human Sciences, TTU. Role: PI.

Punyanunt, Narissra

Publications:

1. Herman, A., Brammer, S.E., & Punyanunt-Carter, N. M. (In Press). Face Off: Exploring College Students' Perceptions Regarding Face Filters on TikTok. *Media Watch*, <https://doi.org/10.1177/09760911241291950>
2. Punyanunt, N. M., Brammer, S.E., & Martinez, R. J. (In Press). Rethinking the Reach of the Basic Course: Diversity and Interdisciplinarity as Catalysts for Reinvigorating the Foundations of the Discipline. *Journal of Communication Pedagogy*.
3. Brammer, S. E., Martinez, R. J., & Punyanunt-Carter, N.M. (2024). Maintaining the Complex Personal and Professional: Elements of Our Lives in Academe. *Journal of Communication Pedagogy*, 8 (1) 136-139. <https://doi.org/10.31446/JCP.2024.1.10>

- Martinez, R. J., Brammer, S. E., & Punyanunt-Carter, N. M. (2024). "I can spend forever on it without getting bored": Analyzing what college students like and dislike about TikTok." *Media Watch*, 15(1), 1-18. <https://doi/abs/10.1177/09760911231211835>
- Punyanunt-Carter, N. M., Arias, V. S., Dibble, J., Drouin, M., Van Ouytsel, J., Martinez, R. J., & Wagner, T.R. (2024). Identifying motivations for relationship alternatives: Analyzing college students' back burner relationships. *Journal of Social Psychology Research*, 3(1). <https://doi.org/10.37256/jspr.3120243256>

Book chapters:

- Herman, A., Punyanunt-Carter, N.M., & Wagner, T. R. (In Press). "Maybe it's time for more women to be in charge": Breaking stereotypes of political leadership in Parks and Recreation. In Gwen Nisbett. *Women Portrayals of Leadership in Media*. Lexington Press.
- Herman, A.A., Mickavicz, M., & Punyanunt-Carter, N.M. (In Press). Social media influence. *The Research Handbook of Public Communication*. Edward Elgar.
- Herman, A.A., Punyanunt-Carter, N.M., & Wagner, T.R. (In Press). (Chapter Proposal Accepted). Examining communication apprehension among graduate teaching assistants. *Communication Anxiety and Apprehension*. Publisher TBD.
- Punyanunt-Carter, N.M. (2024). Chapter 10: Unheard Voices: Exploring Asian Podcasting and Podcasters. In Alexis Walker & Tegan Bratcher (Eds). *Diversifying the Space of Podcasting: Access, Identity, and Reflective Practices*. Lexington Books.
- Akdilek, S., Akdilek, I., & Punyanunt-Carter, N.M. (2024). The Influence of Generative AI on Interpersonal Communication Dynamics. In Sanae Elmouden & Jason S. Wrench (Eds). *The Role of Generative AI in the Communication*. IGI Publishing.

Instructional Publication:

- Wrench, J. S., Punyanunt-Carter, N.M., & Wei, C.J.. (2024). *Innovative Business Communication: Strategies for a Globalized World*. University of Arizona - Global Campus.
- Herman, A.A., Abel, G.J., & Punyanunt-Carter, N.M.. (Under Review). *Voices unveiled: A Mural of life and death in Gaza*. *The Kentucky Journal of Communication*

Presentations:

- Martinez, R. J., & Punyanunt-Carter, N. M. (2024, November 21). Understanding Father-Daughter Communication Research Trends and Findings. Paper presented at the annual meeting of the National Communication Association, New Orleans, LA.
- Herman, A., Brammer, S. E., & Punyanunt-Carter, N. M. (2024, April 6). TOP PAPER in the Mass Communication Division: Face off: Exploring college students' perceptions regarding face filters on TikTok. Paper presented at the annual meeting of the Southern States Communication Association, Frisco, TX.
- Siripi, V., & Punyanunt-Carter, N.M. (2024, April 5). TOP PAPER in the Instructional Communication Division: College Students' Perceptions Regarding Relationships Maintenance Behaviors with Professors. Paper presented at the annual meeting of the Southern States Communication Association, Frisco, TX.
- Punyanunt-Carter, N. M. (2024, April 5). Incorporating Intersectionality into Communication Studies Research and Scholarship. Paper panel presented at the annual meeting of the Southern States Communication Association, Frisco, TX.
- Hasque, A., & Punyanunt-Carter, N. M. (2024, April 6). Exploring Communication Research on African Americans and Asian Americans: An Overview 2001-2022. Paper presented at the annual meeting of the Southern States Communication Association, Frisco, TX.
- Punyanunt-Carter, N.M., Dibble, J. Drouin, M., Chambless, C., & Lariore, K. (2024, April 7). Female and Male College Students' Perceptions for Benefits and Drawbacks of Maintaining Back Burner Relationships Online. Paper presented at the annual meeting of the Southern States Communication Association, Frisco, TX.

7. Punyanunt-Carter, N.M. (2024, March 15). Understanding the connection of loneliness and social media. Paper panel was presented at the Positive Communication Network Conference on YouTube (online).

GRANTS (Texas Tech University, Internal Funding Opportunities) N= 5

1. 2024 MACRO TRU Funding, Internal, Texas Tech University \$10,000

Shen, Chwan-Li (Leslie) (natural products, chronic disease management, pain, gut-brain axis)

Publications:

1. Appell CR, Jiwan NC, Wang R, **Shen CL**, Luk HY. Ginger Supplementation Attenuated Mitochondrial Fusion and Improved Skeletal Muscle Size in Type 2 Diabetic Rats. *In Vivo*. 2024; 38(1): 73 - 81. doi: 10.21873/invivo.13412.
2. Stephens E, Dhanasekara CS, Montalvan V, Zhang B, Bassett A, Hall R, Rodaniche A, Robohm-Leavitt C, **Shen CL**, Kahatuduwa CN. Utility of Repetitive Transcranial Magnetic Stimulation for Chronic Daily Headache Prophylaxis: A Systematic Review and Meta-Analysis. *Current Pain and Headache Reports*. 2024; 28(4): 149 - 167.
3. Watkins BA, Smith BJ, Volpe SL, **Shen CL**. Exerkines, nutrition, and systemic metabolism. *Nutrients*. Section *Nutrition and Metabolism*. Special Issue: Effects of dietary patterns and exercise on exerkine/endocrine responses. *Nutrients*. 2024; 16(3):410. <https://doi.org/10.3390/nu16030410>
4. **Shen CL**, Wang R, Santos JM, Elmasy MM, Stephens E, Neugebauer V. Ginger alleviates mechanical hypersensitivity and anxio-depressive behavior in rats with diabetic neuropathy through beneficial actions on gut microbiome composition, mitochondria and neuroimmune cells of colon and spinal cord. *Nutrition Research*. 2024; 124, 73 - 84. Doi: 10.1016/j.nutres.2024.01.014.
5. **Shen CL**, Santos JM, Elmasy MM, Bhakta V, Driver Z, Ji G, Yakhnitsa V, Kiritoshi T, Lovett J, Hamood AN, Sang S, Neugebauer V. Ginger polyphenols reverse molecular signature of amygdala neuroimmune signaling and modulate microbiome in male rats with neuropathic pain: Evidence for microbiota-gut-brain axis. *Antioxidants*, 2024, 13, 502. <https://doi.org/10.3390/antiox13050502>
6. **Shen CL**, Wankhade UD, Shankar K, Najjar RS, Feresin RG, Elmasy MM, Dufour JM, Kaur G, Chintapalli SV, Piccolo BD, Dunn DM, Cao JJ. Effects of Statin and Annatto-extracted Tocotrienol Supplementation on Glucose Homeostasis, Bone Microstructure, and Gut Microbiota Composition in Obese Mice. *In Vivo*. 2024; 38(4): 1557 - 1570.
7. Deshmukh H, Santos JM, Bender M, Dufour JM, Lovett J, **Shen CL (corresponding author)**. Peanut shell extract improves mitochondrial function in db/db mice via suppression of oxidative stress and inflammation. *Nutrients*. 2024; 16(13): 1977. doi: 10.3390/nu16131977.
8. **Shen CL**, Deshmukh H, Santos JM, Elmasy MM, Presto P, Driver D, Bhakta V, Yakhnitsa V, Kiritoshi T, Ji G, Lovett J, Hamood A, Neugebauer V. Fecal microbiota transplantation modulates gut microbiome composition and glial signaling in brain and colon of rats with neuropathic pain: evidence for microbiota-gut-brain axis. *Journal of Frailty & Aging*, 2024. <https://doi.org/10.14283/jfa.2024.65>
9. Santos JM, Deshmukh H, Elmasy MM, Yakhnitsa V, Ji G, Kiritoshi T, Presto P, Antenucci N, Liu X, Neugebauer V, **Shen CL (corresponding author)**. Beneficial effects of ginger extract on pain behaviors, inflammation and mitochondrial function in the colon and different brain regions of male and female neuropathic rats: a gut-brain axis. *Nutrients*. 2024; 16(20): 3563. doi: 10.3390/nu16203563.
10. Jiwan N, Appell C, **Shen CL**, Luk HY. The effect of geranylgeraniol and ginger on satellite cells myogenic state in type 2 diabetic rats. *Current Issues in Molecular Biology*. 2024; 46(11), 12299 - 12310; <https://doi.org/10.3390/cimb46110730>.
11. Appell C, Jiwan NC, **Shen CL**, Luk HY. Curcumin mitigates muscle atrophy potentially by attenuating calcium signaling and inflammation in a spinal nerve ligation model. *Current Issues in Molecular Biology*. 2024; 46(11), 12497 - 12511; <https://doi.org/10.3390/cimb46110742>
12. Bender M, Santos JM, Dufour JM, Deshmukh H, Trasti S, Elmasy MM, **Shen CL**. Peanut shell extract improves markers of glucose homeostasis in diabetic mice by modulating gut dysbiosis and suppressing inflammatory immune response. *Nutrients* 2024. 16(23), 4158; <https://doi.org/10.3390/nu16234158>

Abstracts: for internal or external conferences: * peer-reviewed

1. **Shen CL**, Deshmukh H, Santos JM, Elmassry MM, Presto P, Driver Z, Bhakta V, Yakhnitsa V, Kiritoshi T, Ji G, Lovett J, Hamood A, Neugebauer V. Fecal microbiota transplantation modulated gut microbiome composition and suppressed microglial activation in brain and colon of neuropathic rats: microbiota-gut-brain axis. *International Conference on Frailty and Sarcopenia Research (ICFSR) 2024*, 1-17-24.
2. Pham P, Santos JM, Deshmukh H, Sivaprakasam S, Driver D, Bender M, Lovett J, **Shen CL**. Effects of peanut shell extract and luteolin on the kidneys of diabetic mice. 2024 TTU Undergraduate Research Conference, 4/9/24-4/11/24. Lubbock, TX.
3. Driver D, Santos JM, Deshmukh H, Sivaprakasam S, Bender M, Lovett J, **Shen CL**. Modulation of oxidative stress, inflammation, and mitochondrial genes by peanut shell extract and luteolin in type II diabetes-prone mice. 2024 TTU Undergraduate Research Conference, 4/9/24-4/11/24. Lubbock, TX.
4. Watkins BA, Newman JW, Snodgrass IR, Chyu MC, Lee J, Luk HY, Appell C, Neugebauer V, **Shen CL**. Tai Chi exercise of short duration alters circulating oxylipins in post-menopausal women with knee osteoarthritis. *Nutrition 2024*. 7/1/24. Chicago, IL. Poster.
5. **Shen CL**, Newman JW, Snodgrass IR, Chyu MC, Lee J, Luk HY, Appel C, Neugebauer V, Watkins BA. Effects of short-term Tai Chi on circulating oxylipins and endocannabinoids in post-menopausal women. 2024 Annual Meeting of American College of Sports Medicine, 5/28/24-5/31/24. Boston, MA. E-Poster.
6. **Shen CL**, Santos JM, Kiritoshi T, Ji G, Presto P, Yakhnitsa V, Antenucci N, Lovett J, Neugebauer V. Effects of ginger supplementation on neuroinflammation and mitochondrial function in spinal cords of rats with neuropathic pain: evidence for sex differences. *Nutrition 2024*. 7/1/24. Chicago, IL. Poster.
7. Deshmukh H, Santos JM, Bender M, Dufour JM, Lovett J, **Shen CL**. Peanut shell extract improves mitochondrial function in db/db mice via suppression of oxidative stress and inflammation. *Nutrition 2024*. 7/1/24. Chicago, IL. Poster.
8. **Shen CL**, Santos JM, Deshmukh H, Elmassry MM, Chen F, Presto P, Lovett J, Neugebauer V. Effects of ginger supplementation in a rat model of neuropathic pain: sex differences in spontaneous pain, intestinal integrity, fecal metabolites, and neuroinflammation gene expression. Submitted to International Association for the Study of Pain (IASP) 2024. 8/5/24-8/9/24, Amsterdam, Netherlands. Poster.
9. **Shen CL**, Deshmukh H, Santos JM, Bender M, Elmassry MM, Driver Z, Sivaprakasam S, Miranda JM, Dufour JM. Peanut shell extract and luteolin improve glucose homeostasis and modify gut microbiome composition in type 2 diabetes-prone mice. 13th Annual Conference of American Council for Medicinally Active Plants. Prairie View A&M University, Prairie View, TX. 10/3/24-10/6/24.

Presentations:

1. Ginger supplementation mitigates spontaneous pain in neuropathic male rats via gut-brain-interaction. CTNT annual meeting, 4/17/24, Lubbock, TX.

Grants:

“Medication Development for the Treatment of Alcohol Use Disorder”.

Bergeson S (PI-contact), **Shen CL (MPI)**.

Funding agency: NIH/NIAAA. U01-AA028957. \$7,404,680.00. 9/20/2020 - 8/31/2025.

The goal of this study is to complete studies to prepare the chemically modified minocycline analogs for completion of investigational new drug (IND) enabling approval by the FDA and to begin a Phase I clinical trial.

“Ginger root extract for neuropathic pain”.

Shen CL (PI-contact), Neugebauer, Volker (MPI).

Funding agency: USDA/NIFA. Award no: 2021-67017-34026. \$500,000. 1/1/2021 - 12/31/2024.

The goal of this study is to evaluate the effects of ginger root extract on neuropathic pain-associated sensory and affective behaviors, gut health, and neuroinflammation in animals.

“Effect of annatto-derived geranylgeraniol (GG) on statin-associated myopathy”.

Shen CL (PI). Mohammad (Mac) Ansari (Co-I), Dale Dunn (Co-I), Scott Shurmur (consultant), Jaehoon Lee (Co-I), Hui-Ying Luk (Co-I).

Funding agency: American River Nutrition, LLC. \$266,294. 1/1/2022 - 12/31/2024.

The goal of this study is to evaluate the effects of 3-months annatto-derived geranylgeraniol (GG) supplementation on statin-associated skeletal muscle health.

“Curcumin and Retinal Amyloid-beta Pilot Study”.

Shen CL (PI). Kelly Mitchell (Co-I), Dale Dunn (Co-I), Jaehoon Lee (Co-I), Johnathan Singer (Co-I), Volker Neugebauer (Co-I).

Funding agency: Sabinsa Corporation, East Windsor, NJ. 1/1/2022 - 12/31/2024. \$94,991.

The goal of this study is to test how two weeks of curcumin supplementation would cross the blood brain barrier (BBB) and attach to amyloid beta proteins, to assess the feasibility (safety and bioavailability), and to explore the resulting abundance/composition of gut microbiota.

“Ginger and the microbiota-gut-brain connection in sciatic pain individuals”

Shen CL (PI), Neugebauer V (Co-PI), Elmassy M (consultant).

Funding agency: USDA-NIFA: 2024-67018-42457. 6/1/2024 - 5/31/2027. \$607,561.

The goal of this study is to test how 2 months of ginger root extract supplementation would mitigate pain and explore the molecular mechanisms in individuals with and without sciatic pain.

“The Future of Rural Health: Accelerating Biomedical Excellence at TTUHSC”.

McMahon L (PI), **Shen CL (Faculty)**.

Funding agency: NIH. 1UC2MD019638-01. 7/1/2024 - 6/30/2027. \$1,162,500.

The goal of this study is to translate this grant into increased extramural funding that leads to a sustained doubling of our NIH funding to >\$25M.

“Glycemic control and frailty risk in older people at risk for type 2 diabetes: Impact of local heat therapy”.

Luk HY (PI). **Shen (consultant)**.

Funding agency: NIH/NIA 1R01AG084597-01. 8/1/2024 - 7/31/2029. \$3,505,732. The goal of this study is to examine whether local heat therapy can improve muscle architecture, glycemic control, and subsequent exercise adaptations, and decreases frailty risk in prediabetic older adults.

Shin, Andrew

Publications:

1. McCready R, Morris C, Antwi-Adjei P, Pourghaed M, Sarangi A, Boles A, Ramirez-Velandia F, Kopel J, Culberson J, Singer J, Ashworth G, Sabbagh MN, Neugebauer V, Decourt B, **Shin AC**, Lawrence JJ. Relationships between diabetes, vitamin D status, depression, and Hispanic ethnicity: A project FRONTIER study. *Nutrition & Diabetes – Nature*, 2024 (under review)
2. Bose C, Hindle A, Smith SC, Strickland J, Zhang C, Guzman I, Baker A, Ponomarev I, Manczak M, **Shin AC**, Pal R, Singh S, Lawrence JJ. Low-dose dietary vorinostat increases brain histone acetylation levels and reduces oxidative stress in an AD mouse model. *Journal of Alzheimer's disease*, 2024 (under review)
3. Ramezan M, Arzhang P, **Shin AC**. Milk-derived bioactive peptides in insulin resistance and Type 2 diabetes. *Journal of Nutritional Biochemistry*, 2024 (under review)
4. Watkins BA, Mitchell AE, **Shin AC**, Dehghani F, Shen CL. Dietary flavonoid actions on aging, senescence, and applications for health. *Journal of Nutritional Biochemistry*, 2024 (under review)
5. Shah H, Gannaban RB, Haque ZF, Dehghani F, Kramer A, Bowers F, Maniates A, **Shin AC**. BCAAs acutely drive dysregulation and insulin resistance: Role of AgRP neurons. *Nutrition & Diabetes – Nature*, 2024 Jun 6; 14: 40

6. Della Guardia L, **Shin AC**. Obesity-induced tissue alterations resist weight loss: A mechanistic review. *Diabetes, Obesity and Metabolism*, 2024 May 8; Online ahead of print

Grants:

1. AHA Institutional Research Enhancement Award, American Heart Association
The role of BCAAs in the brain reward system and food appetite, Jan 2025 – Dec 2026
(PI: Andrew C. Shin) \$199,976 (10% effort)
2. Diabetes Action Foundation
The acute effects of BCAAs on glycemic control, insulin sensitivity, and their underlying mechanisms, Jan 2025 – Dec 2025
(PI: Andrew C. Shin) \$50,000 (10% effort)
3. National Institutes of Health (NIH) NIA R01 AG071560-01A1
Serotonin-modulated mitochondrial dysfunction in dementia, depression and diabetes, Feb 2022 – Jan 2027
Co-I: Andrew C. Shin (PI: Arubala Reddy) \$2,428,686 (10% effort)
4. National Institutes of Health (NIH) NIA R01 1R01AG073826-01A1
The hippocampal dentate gyrus in aging and Alzheimer's disease: boosting transcription of retinoic acid-sensitive genes through vitamin A supplementation and HDAC inhibition, Aug 2022 – Apr 2027
Co-I: Andrew C. Shin (PI: John J. Lawrence) \$3,140,235 (10% effort)
5. Cross-Disciplinary Research Excellence Award, Office of the Provost, TTU
Transcranial ultrasound neuromodulation for obesity treatment, Apr 2024 – April 2025
PIs: Andrew C. Shin; Jingfei Liu \$6,000
6. National Research Foundation, South Korea
Identifying multi-dimensional druggable targets for obesity treatment, Apr 2024 – Mar 2029
External Investigator: Andrew C. Shin (PI: Hyung Jin Choi) \$1,200,000
7. College of Human Sciences, TTU
Semaglutide impact assessment: Exploring health and wellness outcomes, Mar 2024 – Mar 2025
PIs: Melissa Chernoff; Andrew C. Shin et al. \$10,000
8. College of Human Sciences, TTU
The role of BCAAs in food reward, April 2024 – April 2025
PI: Andrew C. Shin \$20,000
9. Alzheimer's Association, Alzheimer's Association Research Grant (AARG)
A BCAA-lowering compound as a novel approach to delay the onset of AD, Sep 2023 – Sep 2026
PI: Andrew C. Shin \$199,918 (25% effort)
10. Travel Incentive Funding, College of Human Sciences, TTU
To attend Society for the Study of Ingestive Behavior (SSIB) Conference, July 2024
PI: Andrew C. Shin \$1,000

Awards:

1. Travel Incentive Award, College of Health & Human Sciences, TTU, 2024

2. Certificate, Faculty Mentorship Academy, TTU, 2024
3. Member of President's STEM Mentoring Academy, TTU, 2024
4. Open Access Initiative Award – Office of Research & Innovation, TTU, 2024
5. Cross-Disciplinary Research Excellence Award, Institute for the Studies of Pragmatism, TTU, 2024

Scholarly Activities:

1. Associate Editor
Nutrition & Diabetes (2023 – Present)
Frontiers in Nutrition (2022 – Present)
Frontiers in Psychology (2022 – Present)
2. Editorial Board member
Frontiers in Endocrinology (2021 – Present)
Nutrition & Diabetes – Nature (2019 – Present)
3. One Health Neurological Research Workshop, TTU
Moderator, 2024
4. American Society for Nutrition (ASN), 2024
Abstract Reviewer, 2024
5. European Science Foundation
College of Expert Reviewers – Member and Reviewer, 2020 – Present
6. Research Foundation Flanders (FWO)
Review College – Member and Reviewer, 2020 – Present
7. The Netherlands Organization for Scientific Research (NWO)
Grant Reviewer, 2021 – Present
8. Alzheimer's Association
Alzheimer's Association Research Grant (AARG) reviewer, 2023 – Present

Conference talks:

1. Mullins CA, Shah H, Siddik MAB, Reddy PH, MohanKumar PS, **Shin AC**. Therapeutic effects of BT2 in the hippocampus of Alzheimer's disease mouse model. American Society for Nutrition (online conference), Jun 2022
2. Gannaban RB, Shah H, **Shin AC**. Acute exposure to branched-chain amino acids (BCAAs) impairs glucose homeostasis by promoting insulin resistance in mice. American Society for Nutrition (online conference), Jun 2022
3. Mullins CA, Shah H, Reddy PH, MohanKumar S, MohanKumar PS, **Shin AC**. A BCAA-lowering agent BT2 alleviates Alzheimer's disease-related pathology and delays cognitive decline in 5xFAD mouse model. Cold Spring Harbor Laboratory (CSHL) Conference, New York, Nov 2022
4. Mullins CA, Kramer A, Siddik MAB, Shah H, MohanKumar PS, **Shin AC**. BT2 alleviates brain pathology and improves neurotransmitter status in Alzheimer's disease mouse model. Center of Excellence for Translational Neuroscience and Therapeutics (CTNT) Annual Symposium, TTUHSC, Apr 2022

Conference posters:

1. Halbgewachs K, Buxton M, Zabet-Moghaddam M, Lawrence JJ, **Shin AC**. Blood-based lipidomic analyses in Alzheimer's disease: Investigating relationships between dysregulated lipid species and molecular mechanisms of oxidative stress. Center of Excellence for Translational Neuroscience and Therapeutics (CTNT) Annual Symposium, TTUHSC, Apr 2022
2. Kramer A, Shah H, Mattern M, Gannaban RB, Berthoud HR, **Shin AC**. FGF21 mediates restored BCAA metabolism following Roux-en-Y gastric bypass (RYGB) surgery in mice. Undergraduate Research Conference, TTU, Mar 2022

- Mullins CA, Kramer A, Siddik MAB, Shah H, MohanKumar PS, **Shin AC**. BT2 alleviates brain pathology and improves neurotransmitter status in Alzheimer's disease mouse model. 21st Graduate Student Research Poster Competition, Mar 2022

Singh, Sharda

Publications and Abstracts:

- Bose C, Kshirsagar S, Vijayan M, Kumar S, **Singh SP**, Hindle A, Reddy PH (2024). The role of RLIP76 in oxidative stress and mitochondrial dysfunction: Evidence based on autopsy brains from Alzheimer's disease patients. *Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease* 1870(2): 166932. (Published)
- Reddy PH, Kshirsagar S, Bose C, Pradeepkiran JA, Hindle A, **Singh SP**, Reddy AP. Rlip overexpression reduces oxidative stress and mitochondrial dysfunction in Alzheimer's disease: Mechanistic insights. *Biochim Biophys Acta Mol Basis Dis*. 2023;1869(7):166759. Epub 20230522. doi: 10.1016/j.bbadis.2023.166759. PubMed PMID: 37225106.
- Nemec-Bakk AS, Sridharan V, Seawright JW, Nelson GA, Cao M, **Singh SP**, Cheema AK, Singh B, Li Y, Koturbash I, Miousse IR, Ewing LE, Skinner CM, Landes RD, Lowery JD, Mao X-W, Singh SP, Boerma M. Effects of proton and oxygen ion irradiation on cardiovascular function and structure in a rabbit model. *Life Sciences in Space Research*. 2023;37:78-87. doi: 10.1016/j.lssr.2023.03.008.
- Sardela de Miranda F, Castro M, Remmert N, **Singh SP**, Layeequr Rahman R, Melkus MW. Leveraging cryoablation and checkpoint inhibitors for high-risk triple negative breast cancer. *Front Immunol*. 2023;14. doi: 10.3389/fimmu.2023.1258873.

Presentations

Talks

- Dakota E. Robison; Flávia Sardela de Miranda; Dalia Martinez-Marin; Geetha Priya Boligala; Nicholas Wagner; Kevin Pruitt, Ph.D.; Karla Daniele, M.D.; Rakhshanda Layeequr Rahman, M.D.; Michael W. Melkus, Ph.D.; **Sharda P. Singh**, Ph.D. *The ELISPOT assay to evaluate anti-tumor specific T-cell responses post-cryoablation for triple negative breast cancer*. Lubbock Christian University Scholars Colloquium, Lubbock TX. April 11, 2024.
- Dakota Robison, Flávia Sardela de Miranda, Dalia Martinez-Marin, Geetha Priya Boligala, Nicholas Wagner, Kevin Pruitt, Ph.D., Karla Daniele, M.D., Rakhshanda Layeequr Rahman, M.D., Michael W. Melkus, Ph.D., **Sharda P. Singh**, Ph.D. *Evaluating anti-tumor specific T cell responses following breast cancer cryoablation using ELISPOT assays*. TTUHSC, Abilene Research Symposium Oct. 12-13, 2023.

🏆 Awarded Podium Presentation.

Posters

- Sardela de Miranda F, Martinez-Marin D, Babcock RL, Boligala GP, Castro M, Robison D, Wagner N, Khan SY, Daniele K, **Sharda P. Singh**, Pruitt K, Melkus MW, and Layeequr Rahman R. *Cryoablation of primary triple-negative breast cancer alters the tumor immune micro-environment in distant tumors*. Immunology 2024: Annual Meeting of the American Association of Immunologists. McCormick Place, Chicago, IL, 3-7 May 2024.
- Dakota Robison; Flávia Sardela De Miranda; Dalia Martinez-Marin; Geetha Priya Boligala; Nicholas Wagner; Kevin Pruitt, Ph.D.; Karla Daniele, M.D.; Rakhshanda Layeequr Rahman, M.D.; Michael W. Melkus, Ph.D.; **Sharda P. Singh**, Ph.D. *The ELISpot assay to evaluate abscopal effect post-breast cancer cryoablation for Triple Negative Breast Cancer*. TTUHSC Student Research Week. GSBS. Feb 29th, 2024.
- Dakota Robison, Flávia Sardela de Miranda, Dalia Martinez-Marin, Geetha Priya Boligala, Nicholas Wagner, Kevin Pruitt, Ph.D., Karla Daniele, M.D., Rakhshanda Layeequr Rahman, M.D., Michael W.

Melkus, Ph.D., **Sharda P. Singh**, Ph.D. *Evaluating anti-tumor specific T cell responses following breast cancer cryoablation using ELISPOT assays.* TTUHSC, Abilene Research Symposium Oct. 12-13, 2023.

Abstracts Submitted

1. Flavia Sardela de Miranda, Dalia Marin-Martinez, Rachel Babcock, Geetha Pryia Boligala, Nicholas Wagner, Elizabeth Jeffery, Becky Joseph, Omar Barakat, Reshad S. Ghafouri, Maria F. Mahecha, Karla Daniele¹, Kevin Pruitt, **Sharda P. Singh**, Michael W. Melkus, Rakhshanda Layeequr Rahman. *Tumor Immune Micro-Environment (TIME) Effect of Cryoablation in Triple-Negative Breast Cancer - It was the best of TIMES...* San Antonio Breast Cancer Symposium. AACR. Dec. 10-13, 2024
2. **Sharda P. Singh**, Chathurika Samudani Dhanasekara, Michael W. Melkus, Reshad S. Ghafouri, Soroush Shahrokh, Flavia Sardela de Miranda, Maria F. Mahecha, Adam Brufsky, Joyce O'Shaugnessy, VK Gadi, Cathy Graham, Mehran Habibi, William Audeh; Sahra Uygun, Lavanya Samraj, Rakshanda Layeequr Rahman. *Correlation between risk groups and molecular subtype of breast cancer with metabolic syndrome and ethnicity.* San Antonio Breast Cancer Symposium. AACR. Dec. 10-13, 2024
3. S.R. Ghafouri, R. Horn, A. Kamat, J. Sekhon, D. Pawar, S. Shahrokh, L. Tijani, M.W. Melkus, **Sharda P. Singh**. *Targeting RLIP76 with a novel small molecule for lung cancer therapy.* 2024 World Conference on Lung Cancer. San Diego, Ca. Sept. 7-10, 2024.
4. **Sharda P. Singh**, R. Rahman. Relevance of RalBP1 (Rlip) in Breast Cancer Genomic Profiles and its correlation with metabolic syndrome and ethnicity. Presented in FLEX Investigators' Summit 2024 - May 6th New Orleans Marriott.

Grants

Pending:

1. National Institutes of Health (NIH), 1 R01 HL159303-01, 2024, **Singh SP (Principal Investigator)**, Maximizing Added Gains of Immunotherapy and Cryoablation (MAGIC) for the treatment of TNBC, 25% effort, \$3,521,872 (Total Amount). **(Currently Under Review)**
2. National Institutes of Health (NIH), 1 R03 GRANT14279964, 2024, **Singh SP (Co-Investigator)**, Leveraging cryoablation for Triple-Negative Breast Cancer with combinational immune checkpoint inhibitor therapy, 5% effort, \$155,000 (Total Amount). **(Currently Under Review)**

In preparation:

1. NIH RO1, Profiling genetic and metabolomic biomarkers predictive of breast cancer at diagnosis, **PI: Sharda Singh**, Co-I: Melkus 25%, Amount. \$2,500,000 – 3,500,000 for 5 years. Target submission date: 06/2025
2. NIH R01 - National Cancer Institute – NCI (PI: Rahman), Local Therapy Optimization by Grouping Immune-modulation with Cryoablation (LOGIC) for Triple Negative Breast Cancers, Clinical Trial. Role: Co-Investigator, Amount. \$426,250, Re-Submission as an R01 Grant: Target submission date 06/2025

Extramural Service

1. National Institutes of Health/National Cancer Institute (*Also see Public Service), Ad-Hoc, Member of Research Grant Study Session, 2018 - Present.
2. NIH Director's Early Independence Award (DP5), Internet assisted reviewer, SRO Weijia Ni, Ph.D. (code: ZRG1 RPHB-W 53 R) (*Also see Public Service), Member of Research Grant Study Session, 2015 - Present.
3. Department of Defense (DOD) Congressionally Directed Medical Research Programs (CDMRP), Cell and Molecular Biology 3 Panel from the Kidney Cancer Research Program (KCRP), 2024-Present
4. 2017-Present **Director of Basic Research**, Texas Tech Health Sciences Center, **Division of Hematology/Oncology**, Lubbock, TX
5. LBB24-051, 2023-Present, **Singh SP (Principal Investigator)**, Profiling genetic and metabolomic biomarkers predictive of breast cancer at diagnosis.

6. L18-089, 2019 - Present, **Singh SP (Principal Investigator)**, Phase II trial of effects of the Nutritional Supplement Sulforaphane on Doxorubicin-Associated Cardiac Dysfunction. We obtained Investigational New Drug (IND) Approval from FDA (IND #141682) and our study registered at *clinical trials.gov* (NCT03934905)
7. L22-024, 2022 - Present, **Singh SP (Principal Investigator)**, Prevention of Age-associated cardiac and vascular dysfunction through Nrf2 signaling using the nutritional supplement Sulforaphane. We obtained Investigational New Drug (IND) Approval from FDA (IND #1614782) and our study registered at *clinical trials.gov* (NCT05408559)
8. L21-076, 2023 - Present, **Singh SP (Co-Investigator)**, Rahman RL (Principal Investigator) Local Therapy Optimization by Grouping Immune-modulation with Cryoablation (LOGIC) for High-Risk Breast Cancers. Our study registered at *clinical trials.gov* (NCT05806385)
9. A22-4295, 2019-present, **Singh SP (Co-Investigator)**, Shabnam Rehman. (Principal Investigator), S2013, IMMUNE CHECKPOINT INHIBITOR TOXICITY (I-CHECKIT): A PROSPECTIVE OBSERVATIONAL STUDY.
10. L08-064, 2019 - Present, **Singh SP (Co-Investigator)**, Reynolds CP (Principal Investigator), Banking of Tissue and Establishing Continuous Cell Lines and Xenografts from Neoplasia.
11. LBB18-174, 2019 - Present, **Singh SP (Co-Investigator)**, Sethi P (Principal Investigator), Treating Vitamin D insufficiency in community-dwelling elderly to improve arterial stiffness.
12. L19-164, 2019-present, **Singh SP (Co-Investigator)**, Lukman Tijani. (Principal Investigator), Rlip antibodies in patients on immune checkpoint inhibitor therapy for cancer.
13. SOM - Admissions Committee, Interview Sub-committee, TTUHSC-SOM, 2017 – Present. ommittee Member.

Sizer, Phil

Publication:

1. Sherwin R, Henricksen J, Kapila J, Adams L, Likness A, Hooper TL, Sizer P. The effect of tongue-to-palate on deep neck flexor activity. *J Electromyogr Kinesiol.* 2024 Dec;79:102938. doi: 10.1016/j.jelekin.2024.102938. Epub 2024 Oct 10. PMID: 39418928.
2. Vintimilla A, Hooper T, James CR, Lu HC, Natesan K, Kapila J, Sizer P. The Effect of Exercise-Induced Central Fatigue on Cervical Spine Joint Position Error, Strength, and Endurance. *Int J Sports Phys Ther.* 2024 Mar 2;19(3):290-300. doi: 10.26603/001c.92703. PMID: 38439782; PMCID: PMC10909308.

St-John, Julie

Publications:

1. Rosenthal, E. L., Menking, P., Lee, L. K., Redondo, F.** , & Fox, D. J.** , & St. John, J. A. (2024). Commentary: Already Here: It's Time to Stop Re-Inventing the CHW Workforce. *Journal of Ambulatory Care Management.*
https://journals.lww.com/ambulatorycaremanagement/fulltext/2024/10000/commentary__sustaining_community_health.5.aspx
2. Lee, L., St. John JA, Brownstein, N., Jewell, P.** , & Holderby-Fox, L.R.** (2024). Chapter 23: Research, Evaluation and Dissemination of Findings. In *Foundations for Community Health Workers*, 3rd ed. Editors Tim Berthold & Darouny Somsanith. Jossey-Bass, A Wiley Brand, Hoboken, New Jersey. ISBN: 978-1-394-19979-2
3. Hernandez, D. & St. John, J. (2024, August). Report: 2024 Landscape of the Texas Community Health Worker (CHW) workforce and implications for sustainability. The University of Texas at Arlington. https://www.episcopalhealth.org/research_report/community-health-worker-workforce-and-implications-for-sustainability-a-texas-landscape-scan/
4. Ardon , X.* , Harper, Y.* , & St. John, J. (2024). Global burden of disease: Competency 1C. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), *Global Health Education Competencies Tool-kit*, 3rd Edition (pp

- 11, 20-22). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
5. Dumas, E.* , Ritchie, L.* & St. John, J. (2024). Collaboration, Partnering and Communication: Competency 5A. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 87, 93-96). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 6. Ferrer, N.* , Price, L.* , & St. John, J. (2024). Program Management: Competency 9A. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 212-220). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 7. Heller, A.* , Leeah, B., & St. John, J. (2024). Collaboration, Partnering and Communication: Competency 5B, . In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 88, 96-100). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 8. Hernandez, E.* , Brendan, P.* & St. John, J. (2024). Collaboration, Partnering and Communication: Competency 5D. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 90, 102-104). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 9. Kinnare, N.* , Lawal, S.* & St. John, J. (2024). Collaboration, Partnering and Communication: Competency 5E. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 91, 104-106). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 10. Le, D.* , Castro, L. F.* & St. John, J. (2024). Collaboration, Partnering and Communication: Competency 5F. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 92, 107-112). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 11. Maddaford, Y.* , Patel, P.* & St. John, J. (2024). Global burden of disease: Competency 1B. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 10, 16-20). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 12. Matherne, A.* , Zarecky, A.* , & St. John, J. (2024). Global burden of disease: Competency 1A. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 9, 11-16). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 13. Moreno, S.* , Sang, J.* , & St. John, J. (2024). Strategic Analysis: Competency 11C. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 232, 237-241). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 14. Onwudiwe, I.* , Okeke, O.* , & St. John, J. (2024). Sociocultural and Political Awareness: Competency 10A. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 225-228). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>
 15. Rose, R.* , Cabrera, S.* & St. John, J. (2024). Program Management: Competency 9A. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp

219-222). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>

16. Steward, V.* , Yosief, D.* & St. John, J. (2024). Strategic Analysis: Competency 11D. In A. Moore, B. Astle, S. Chowdhury, S., et al. (Eds), Global Health Education Competencies Tool-kit, 3rd Edition (pp 233, 241-245). Consortium of Universities for Global Health. <https://www.cugh.org/wp-content/uploads/sites/95/2024/04/Global-Health-Competencies-Tool-Kit-3rd-Ed.pdf>

Presentations:

1. Building support for a full scope of practice: The national council on community health worker core competency (C3) standards (oral presentation). Lee Rosenthal, Paige Menking, Julie St. John, Durrell Fox, Lily Lee, Floribella Redondo. American Public Health Association Annual Meeting, October 29, 2024, Minneapolis, Minnesota.
2. Application of the consolidated framework for implementation research 2.0 for planning implementation of preeclampsia screening and prevention strategies in six Texas panhandle counties: The phase I vibrant MOMS study (oral presentation). Christine Garner, Julie St. John, Stephanie Stroever, Casie Stoughton, Theresa Baker. American Public Health Association Annual Meeting, October 29, 2024, Minneapolis, Minnesota.
3. Prevalence of preeclampsia and eclampsia in six counties of the Texas panhandle with variable access to maternity care services (oral presentation). Stephanie Stroever, Christine Garner, Julie St. John, Theresa Baker. American Public Health Association Annual Meeting, October 27, 2024, Minneapolis, Minnesota.
4. Unveiling Parkinson's: Empowering Our Community Through Awareness (presentation). Spindler, L., Wilson, L., Jumper, J., Walls, D., Bane, A., Wyatt, P., and St. John, J. Christian Society for Kinesiology, Leisure, and Sports Studies Annual Conference, June 5-8, 2024. Letourneau University, Longview, Texas. <https://cskls.org/annual-conferences-opportunity-to-learn-network-collaborate/>
5. Use of an implementation science framework for planning implementation of preeclampsia screening and prevention interventions in six Texas Panhandle counties: VIBRANT MOMS Phase I. (poster). Christine D. Garner, Stephanie Stroever, Casie Stoughton, Teresa Baker, Julie A. St. John. Texas Academy of Medicine, Engineering, Science & Technology (TAMEST) 2024 Annual Conference: Artificial Intelligence and Machine Learning, February 5–7, 2024, Austin, TX.

Grant awards:

1. Centering Pregnancy Grant. Funded by: Centering pregnancy. Investigators: Garner C., St. John J., Baker T. Role: Advisory Board member, trainee. \$38,000 (in-kind training and certification as a Centering Pregnancy program) (April 2024 – December 2026).^
2. ACTION for Big Country. Cancer Prevention Research Institute of Texas. Grant ID: PP230030. Role: Principal Investigator. \$997,266 (August 31, 2023 – August 30, 2026).^+
3. C3P2: C3 CHW Curriculum for Prepared Populations. Funded by: Texas Epidemic Public Health Institute (TEPHI), UTHealth Houston, University of Texas School of Public Health. Role: Principal Investigator, \$250,000. Professional Contract, January 2025 – August 2026).^
4. PROJECT CLEAR: Propagating Resilience Outwardly & Jointly Elevating CHWs and Community Lead Engagement And Research. Funded by: Texas Epidemic Public Health Institute (TEPHI), UTHealth Houston, University of Texas School of Public Health. Role: Principal Investigator. Co-Investigator: Garner C. \$250,000. Professional Contract, January 2025 – August 2026).^
5. Validation of a Performance-Based Assessment to Assess Readiness for Occupational Therapy Fieldwork. Funded by: Seed grant, Office of Research and Innovations, School of Health Professions. PI: Sandra Whisner. Role: Mentor. \$5,000. (January 2024 – August 2025). ^+
6. VIBRANT MOMS: Verifying & Implementing evidence-Based pRograms Addressing Needed Transformations for Maternal health Outcomes, Measures, & Support. National Institutes of Health,

National Heart, Lung, and Blood Institute: IMPROVE Community Implementation Program (IMPROVE-CIP), Grant #: OTA-20-014-C. Westat Sub-OTA No.: 6922-05-IMPROVE-S003: NIH Implementing a Maternal Health and PRenancy Outcomes Vision for Everyone (IMPROVE) – Community Implementation Project. PI: Garner C. Role: Co-PI. \$1,385,989.65. (August 15, 2023 – August 15, 2025).+

7. *The Future of Rural Health: Accelerating Biomedical Excellence at Texas Tech University Health Sciences Center (TTUHSC)*. Grant ID: 1UC2MD019638-01. Funded by: National Institute on Minority Health and Health Disparities (NIMHD/NIH). Award amount: \$1,162,500. PI: McMahon L.; Co-Is: Kang M.; Sizer P., Garner C.; **St. John J.** Role: Co-investigator; key personnel. (August 20, 2024 – February 28, 2027).

Other scholarly activity (oral invitation, poster presentation, etc.):

1. Faculty Representative and Student Advisor. (1 of 2 faculty selected). Betty Ford Center Addiction Medicine Experience, Rancho Mirage, CA (March 24-26, 2024). Developed as an IPE event; also developed pre/post survey tool to measure impact of the program.

Invited talks:

1. Synergizing Health Professions and Public Health: Enhancing Outcomes Through Collaboration (presenter). Julie St. John. Office of Sponsored Research. School of Health Professions, Texas Tech University Health Sciences Center, November 8, 2024, Midland, Texas.
2. Compelling Personal Case Studies Brought to Life (key note address). Julie St. John. Human Sex Trafficking Symposium: They are Not for Sale. The Laura W. Bush Women's Health Institute, Texas Tech University Health Sciences Center, October 18, 2024, Amarillo, Texas.
3. Session 1: Panel - Centering on the Communities Affected by the Maternal Morbidity and Mortality Crisis (panelist). Julie St. John. Cassandra Querdibitt, Zainab Jahy; Moderators: Juanita Chinn and Balkissa Ouattara. National institutes of Health. IMPROVE 5th Anniversary, October 15, 2024, Bethesda, Maryland. <https://videocast.nih.gov/watch=55175>
4. VIBRANT MOMS Phase I: Year 1 Update (poster). Cindi Wynia, Jennifer Schiele, Julie St. John, Stephanie Stroeve, Casie Stoughton, Christine D. Garner. National institutes of Health. IMPROVE 5th Anniversary, October 15-16, 2024, Bethesda, Maryland. <https://web.cvent.com/event/cda73d50-59a7-439e-b5d2-c2ca6330f8f9/websitePage:645d57e4-75eb-4769-b2c0-f201a0bfc6ce>
5. Findings from the 2024 Landscape of the Texas CHW Workforce Survey (webinar). Denise Hernandez & Julie St. John. Texas Managed Care Organizations Non-Medical Determinants of Health (MCO NMDOH) Learning Collaborative, September 6, 2024, virtual.
6. Key Findings from Texas Community Health Worker (CHW) Workforce Study (webinar). Denise Hernandez & Julie St. John. Episcopal Health Foundation, August 26, 2024, virtual.
7. Human Trafficking through a Public Health Lens (presentation). Human Trafficking Summit on World Day Against Trafficking, Beyond Trafficking, July 30, 2024, Abilene, Texas.
8. Grant Writing 101 (presentation). Julie St. John. Northeast Texas Community Health Worker 2024 Annual Conference, July 25-26, 2024, Tyler, TX.
9. Engaging community in research (presentation). Julie St. John. Obesity Research Institution, Texas Tech University. May 1, 2024, virtual.
10. IMPROVE-CIP, VIBRANT MOMS: Verifying & Implementing evidence-Based pRograms Addressing Needed Transformations for Maternal health Outcomes, Measures, & Support (presenter). Christine Garner, Julie St. John, Casie Stoughton. 2024 Maternal Health Transformation Summit: Integrating Community Collaboration and Implementation Science to Address the Morbidity and Mortality Crisis, Westat/NIH, January 22, 2024, Atlanta, GA.

11. Human Trafficking 101: What is Human Trafficking? (1 hour training). Julie St. John. Texas Association of Promotores/Community Health Workers, Quarterly training, January 19, 2024, virtual.

Guest lectures:

1. Hardin-Simmons University, Physician Assistant Degree Program, "Introduction to public & community health," October 23, 2024.
2. TTUHSC School of Health Professions, Rehabilitation Sciences, PhD Program, Special Topics in Statistics. "Overview of Epidemiological Research" lecture. September 10, 2024.
3. TTUHSC Abilene Campus, "What is Public Health?" lecture (Red Bag high school tour), 4-19-24.
4. TTUHSC Abilene Campus, "What is Public Health?" lecture (Red Bag high school tour), 2-12-24.

Sun, Grace

Publications

1. Sun GH. Prompt Engineering for Nurse Educators. *Nurse Educ.* 2024 Nov-Dec 01;49(6):293-299. doi: 10.1097/NNE.0000000000001705. Epub 2024 Jul 5. PMID: 38968442.

Tinsley, Grant

Publications (Journal Articles):

1. Jäger, R., Sawan, S. A., Orrú, M., Tinsley, G., Purpura, M., Wells, S. D., Liao, K., Godavarthi, A. (2024). Paraxanthine enhances memory and neuroplasticity more than caffeine in rats. *Experimental brain research*, 243(1), 8. Journal Rating: 4
2. Heymsfield, S. B., Brown, J., Ramirez, S., Prado, C. M., Tinsley, G., Gonzalez, M. C. (2024). Are Lean Body Mass and Fat-Free Mass the Same or Different Body Components? A Critical Perspective. *Advances in nutrition (Bethesda, Md.)*, 15(12), 100335. Journal Rating: 5
3. Jagim, A. R., Tinsley, G., Oppliger, R. A., Horswill, C. A., Dobbs, W. C., Fields, J. B., Cushard, C., Rademacher, P. D., Jones, M. T. (2024). Collegiate women's wrestling body fat percentage and minimum wrestling weight values: time for revisiting minimal body fat percent? *Journal of the International Society of Sports Nutrition*, 21(1), 2304561. Journal Rating: 4
4. Purpura, M., Jäger, R., Godavarthi, A., Bhaskarachar, D., Tinsley, G. (2024). Liposomal delivery enhances absorption of vitamin C into plasma and leukocytes: a double-blind, placebo-controlled, randomized trial. *European journal of nutrition*, 63(8), 3037-3046. Journal Rating: 5
5. McCarthy, C., Tinsley, G., Ramirez, S., Heymsfield, S. B. (2024). Beyond Body Mass Index: Accurate Metabolic Disease-Risk Phenotyping With 3D Smartphone Application. *Obesity science & practice*, 10(6), e70025. Journal Rating: 4
6. Dunn, R., Tinsley, G., Palmer, T., Benjamin, C. L., Sekiguchi, Y. (2024). The Efficacy of Nutritional Strategies and Ergogenic Aids on Acute Responses and Chronic Adaptations to Exertional-Heat Exposure: A Narrative Review. *Nutrients*, 16(22). Journal Rating: 4
7. Florez, C., Rodriguez, C., Siedler, M., Tinoco, E., Tinsley, G. (2024). Body composition estimation from mobile phone three-dimensional imaging: evaluation of the USA army one-site method. *The British journal of nutrition*, 132(9), 1-9. Journal Rating: 5
8. Tinsley, G., Rodriguez, C., Florez, C., Siedler, M., Tinoco, E., McCarthy, C., Heymsfield, S. B. (2024). Smartphone three-dimensional imaging for body composition assessment using non-rigid avatar reconstruction. *Frontiers in medicine*, 11, 1485450. Journal Rating: 4
9. Tinsley, G., Heymsfield, S. B. (2024). Fundamental Body Composition Principles Provide Context for Fat-Free and Skeletal Muscle Loss With GLP-1 RA Treatments. *Journal of the Endocrine Society*, 8(11), bvae164. Journal Rating: 5
10. Koppold, D. A., Breinlinger, C., Hanslian, E., Kessler, C., Cramer, H., Khokhar, A. R., Peterson, C., Tinsley, G., Vernieri, C., Bloomer, R. J., Boschmann, M., Bragazzi, N. L., Brandhorst, S., Gabel, K., Goldhamer, A. C., Grajower, M. M., Harvie, M., Heilbronn, L., Horne, B. D., Karras, S. N., Langhorst, J., Lischka, E., Madeo, F., Mitchell, S. J., Papagiannopoulos-Vatopaidinos, I. E., Papagiannopoulou, M., Pijl, H., Ravussin, E., Ritzmann-Widderich, M., Varady, K., Adamidou, L., Chihoui, M., de Cabo, R., Hassanein, M., Lessan, N., Longo, V., Manoogian ENC, Mattson, M. P., Muhlestein, J. B., Panda, S.,

- Papadopoulou, S. K., Rodopaios, N. E., Stange, R., Michalsen, A. (2024). International consensus on fasting terminology. *Cell metabolism*, 36(8), 1779-1794.e4. Journal Rating: 5
11. Stratton, M., Siedler, M., Rodriguez, C., Harty, P., Boykin, J., Keith, D., Green, J. J., White, S. J., Tinoco, E., DeHaven, B., VanDusseldorp, T. A., Tinsley, G. (2024). No Effect of Breakfast Consumption Observed for Afternoon Resistance Training Performance in Habitual Breakfast Consumers and Nonconsumers: A Randomized Crossover Trial. *Journal of the Academy of Nutrition and Dietetics*, 124(8), 995-1013. Journal Rating: 5
 12. Rodriguez, C., Mota, J., Palmer, T., Heymsfield, S. B., Tinsley, G. (2024). Skeletal muscle estimation: A review of techniques and their applications. *Clinical physiology and functional imaging*, 44(4), 261-284. Journal Rating: 4
 13. Nassar, B., Tinsley, G., Park, K., Czerwinski, S. A., Nickerson, B. S. (2024). Comparisons between dual-energy X-ray absorptiometry and bioimpedance devices for appendicular lean mass and muscle quality in Hispanic adults. *The British journal of nutrition*, 131(12), 2031-2038. Journal Rating: 5
 14. Wohlgemuth, K., Conner, M. J., Tinsley, G., Palmer, T., Mota, J. (2024). Strategies for Improving Firefighter Health On-Shift: A Review. *Journal of functional morphology and kinesiology*, 9(2). Journal Rating: 3
 15. Tinsley, G., Rodriguez, C., Siedler, M., Tinoco, E., White, S. J., Lavalley, C., Brojanac, A., DeHaven, B., Rasco, J. L., Florez, C., Graybeal, A. (2024). Mobile phone applications for 3-dimensional scanning and digital anthropometry: a precision comparison with traditional scanners. *European journal of clinical nutrition*, 78(6), 509-514. Journal Rating: 5
 16. Marazzato, F., McCarthy, C., Field, R. H., Nguyen, H., Nguyen, T., Shepherd, J. A., Tinsley, G., Heymsfield, S. B. (2024). Advances in digital anthropometric body composition assessment: neural network algorithm prediction of appendicular lean mass. *European journal of clinical nutrition*, 78(5), 452-454. Journal Rating: 5
 17. Jäger, R., Purpura, M., Davis, J., Keratsopoulos, N., Parra, M. E., Secret, A. H., Tinsley, G., Taylor, L. (2024). Glycoprotein Matrix Zinc Exhibits Improved Absorption: A Randomized Crossover Trial. *Nutrients*, 16(7). Journal Rating: 4
 18. Bongiovanni, T., Lacome, M., Rodriguez, C., Tinsley, G. (2024). Tracking Body Composition Over a Competitive Season in Elite Soccer Players Using Laboratory- and Field-Based Assessment Methods. *Journal of strength and conditioning research*, 38(3), e104-e115. Journal Rating: 4
 19. Florez, C., Prather, J., Miller, D., Vargas, A., Soto, B., Harrison, A., Tinsley, G., Taylor, L. (2024). The Effects of Two Servings of a Thermogenic Supplement on Metabolism, Hemodynamic Variables, and Mood State Outcomes in Young Overweight Adults. *Cureus*, 16(2), e54484. Journal Rating: 3
 20. Tinsley, G., Jagim, A. R., Potter GDM, Garner, D., Galpin, A. J. (2024). Rhodiola rosea as an adaptogen to enhance exercise performance: a review of the literature. *The British journal of nutrition*, 131(3), 461-473. Journal Rating: 5
 21. Paoli, A., Tinsley, G., Mattson, M. P., De Vivo, I., Dhawan, R., Moro, T. (2024). Common and divergent molecular mechanisms of fasting and ketogenic diets. *Trends in endocrinology and metabolism: TEM*, 35(2), 125-141. Journal Rating: 5
 22. Santos, H. O., Tinsley, G. (2024). Is breakfast consumption detrimental, unnecessary, or an opportunity for health promotion? A review of cardiometabolic outcomes and functional food choices. *Diabetes/metabolism research and reviews*, 40(2), e3684. Journal Rating: 3

Abstracts:

1. Lavalley, C., Rodriguez, C., Tinoco, E., Siedler, M., Florez, C., Wohlgemuth, K., Velasquez, C., Southall, K., Hare, M., Mota, J., Tinsley, G. (2024). *Body Composition and Anthropometric Changes During a 10-week Training Academy in Police Recruits* (16th ed., vol. 2, pp. 18). International journal of exercise science: conference proceedings. <https://digitalcommons.wku.edu/ijesab/vol2/iss16/18>
2. Florez, C., Rodriguez, C., Siedler, M., Tinoco, E., Tinsley, G. (2024). *Body Fat Percentage Estimation from Smartphone Three-Dimensional Optical Imaging* (16th ed., vol. 2, pp. 13). International journal of exercise science: conference proceedings. <https://digitalcommons.wku.edu/ijesab/vol2/iss16/13>
3. Siedler, M., Rodriguez, C., Florez, C., Lavalley, C., Tinoco, E., A Brojanac, Rasco, J. L., Tinsley, G. (2024). *Comparing the Validity of Five Different Resting Metabolic Rate Prediction Equations in Active*

- Women (16th ed., vol. 2, pp. 17). International journal of exercise science: conference proceedings. <https://digitalcommons.wku.edu/ijesab/vol2/iss16/17>
4. Rasco, J. L., Siedler, M., Rodriguez, C., Florez, C., Lavalle, C., Tinoco, E., A Brojanac, Tinsley, G. (2024). *Correlations Between Measured-to-Predicted Resting Metabolic Rate Ratio and Psychological Variables in Active Women* (16th ed., vol. 2, pp. 76). International journal of exercise science: conference proceedings. <https://digitalcommons.wku.edu/ijesab/vol2/iss16/76>
 5. A Jagim, Tinsley, G., Opplinger, R., Horswill, C., Dobbs, W. C., Fields, J., Bloomfield, S., Jones, M. (2024). *Differences In Body Fat Percentage And Minimum Wrestling Weight Values Between NCAA And NAIA Women's Wrestlers* (10S ed., vol. 56, pp. 818). *Medicine & Science in Sports & Exercise*.
 6. Hays, H., Kang, M., Andre, T., O Virden, Tinsley, G., Mann, G., Wijayatunga, N. (2024). *Effects of Early Time-Restricted Eating in Healthy Resistance-Trained Adults* (S1 ed., vol. 32). *Obesity*.
 7. Siedler, M., Rodriguez, C., Florez, C., Tinoco, E., Lavalle, C., A Brojanac, Rasco, J. L., Tinsley, G. (2024). *In Active Women, Correlation Between Measured-to-Predicted Resting Metabolic Rate Ratio and Cognitive Restraint Varies Based on Contraceptive Use*. *Journal of Strength and Conditioning Research*.
 8. A Brojanac, Moya, R., Tinoco, E., Arrazola, C., Rodriguez, C., Sekiguchi, Y., Tinsley, G. (2024). *Relationships between Body Composition and Game Day Training Load in Ice Hockey Players* (16th ed., vol. 2, pp. 119). International journal of exercise science: conference proceedings. <https://digitalcommons.wku.edu/ijesab/vol2/iss16/119>
 9. Rodriguez, C., Siedler, M., Florez, C., Tinsley, G. (2024). *Technical and Biological Error of Skeletal Muscle Mass and Total Body Water Estimation from Multi-frequency Bioelectrical Impedance Analysis*. *Journal of Strength and Conditioning Research*.
 10. Rodriguez, C., Siedler, M., Florez, C., Tinsley, G. (2024). *Technical and Biological Error of Skeletal Muscle Mass Estimation from Dual-energy X-ray Absorptiometry* (16th ed., vol. 2, pp. 7). International journal of exercise science: conference proceedings. <https://digitalcommons.wku.edu/ijesab/vol2/iss16/7>
 11. Sophonsakulrat, K., Wohlgemuth, K., Velasquez, C., Hare, M., Southall, K., Tinsley, G., Harry, J., Mota, J. (2024). *The Hamstring to Quadricep Strength Ratio Across a Police Training Academy*. *Journal of Strength and Conditioning Research*.
 12. Tinoco, E., Rodriguez, C., Siedler, M., Lavalle, C., Florez, C., White, S., A Brojanac, Rasco, J. L., DeHaven, G., Tinsley, G. (2024). *Validity of Body Volume Estimates from a Smartphone 3-Dimensional Scanning Application* (16th ed., vol. 2, pp. 58). International journal of exercise science: conference proceedings. <https://digitalcommons.wku.edu/ijesab/vol2/iss16/58>

Presentations:

1. Tinsley, G. (Presenter & Author), International Society of Sports Nutrition Colombia Annual Conference, International Society of Sports Nutrition, Medellin, Colombia, "Masterclass: Body Composition Assessment," International. (October 2024).
2. Tinsley, G. (Presenter & Author), International Society of Sports Nutrition Colombia Annual Conference, International Society of Sports Nutrition, Medellin, Colombia, "Not So Fast: Exploring the Diversity of Fasting Strategies and Their Application to Exercise," International. (October 2024).
3. Tinsley, G. (Presenter & Author), International Society of Sports Nutrition Colombia Annual Conference, International Society of Sports Nutrition, Medellin, Colombia, "Resting Metabolic Rate Assessment: Methods, Challenges and Opportunities," International. (October 2024).
4. Tinsley, G. (Presenter & Author), Harvard Medical School Blackburn Course in Obesity Medicine: Treating Obesity 2024, Harvard Medical School, Boston, MA (Virtual Presentation), "Obesity Treatment and Body Composition," National. (June 2024).
5. Tinsley, G. (Presenter & Author), Sports Performance Research Institute New Zealand (SPRINZ) Professional Development ResearchForum, Sports Performance Research Institute New Zealand (SPRINZ), Auckland, New Zealand (virtual presentation), "Body Composition Assessment: Techniques, Metrics, and Implementation," National. (September 2024).
6. Tinsley, G. (Presenter & Author), Texas Chapter of the American College of Sports Medicine Distinguished Speaker Lecture Tour - Baylor University, Texas Chapter of the American College of

Sports Medicine, Waco, TX, "Intermittent Fasting and Exercise: Influence on Body Composition and Performance," Regional. (April 2024).

7. Tinsley, G. (Presenter & Author), Texas Chapter of the American College of Sports Medicine Distinguished Speaker Lecture Tour - MidWestern State University, Texas Chapter of the American College of Sports Medicine, Wichita Falls, TX, "Intermittent Fasting and Exercise: Influence on Body Composition and Performance," Regional. (April 2024).
8. Tinsley, G. (Presenter & Author), Texas Chapter of the American College of Sports Medicine Distinguished Speaker Lecture Tour - Sam Houston State University, Texas Chapter of the American College of Sports Medicine, Huntsville, TX, "Body Composition Monitoring: Sources of Error and Best Practices," Regional. (April 2024).
9. Tinsley, G. (Presenter & Author), Texas Chapter of the American College of Sports Medicine Distinguished Speaker Lecture Tour - West Texas A&M University, Texas Chapter of the American College of Sports Medicine, Canyon, TX, "Three-Dimensional Imaging for Digital Anthropometry, Advanced Body Phenotyping, and Beyond," Regional. (April 2024).

External Grants:

Year	Title of Current Research or Grant	Granting Agency	Amount \$	Chief Investigators & Faculty Members in order	Percent Contribution
2024 - present	Influence of Structured Medium- and Long-Chain Triglycerides on Muscular Recovery Following Damaging Resistance Exercise	Bunge Loders Croklaan USA LLC	\$80,241	Tinsley, G. (Lead Principal Investigator), Mota, J. (Principal Investigator)	50%
2023 - present	Smartphone-based Digital Anthropometry and Body Composition Estimation using 3-Dimensional Optical Imaging	Greyscale Holdings Inc	\$35,000	Tinsley, G. (Lead Principal Investigator)	100%
2022 – 2024	Chronic Thermogenic Dietary Supplement Consumption: Effects on Body Composition, Anthropometrics, Metabolism, and Subjective Variables	EHP Labs	\$85,378	Tinsley, G. (Lead Principal Investigator)	100%

2022 - 2024	Digital Anthropometry and Body Composition Estimation Using a Generation 2 Prototype 3-Dimensional Optical Scanner	Greyscale Holdings Inc (DBA Prism Labs)	\$32,756	Tinsley, G. (Lead Principal Investigator)	100%
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Internal Grants:

Year	Title of Current Research or Grant	Granting Agency	Amount \$	Chief Investigators & Faculty Members in order	Percent Contribution
2024	TUF Investment Opportunity: KSM Musculoskeletal and Body Composition Imaging: Acquiring Advanced Capabilities	Texas Tech University	\$220,000	Mota, J. (Lead Principal Investigator), Tinsley, G. (Principal Investigator), Lumpkin, A. (Principal Investigator)	

Vellers, HeatherPublication:

1. Dobson NL, Levitt DE, Luk HY, Vellers HL. Adverse Skeletal Muscle Adaptations in Individuals Born Preterm-A Comprehensive Review. *Curr Issues Mol Biol.* 2024 May 10;46(5):4551-4564. doi: 10.3390/cimb46050276. PMID: 38785544; PMCID: PMC11120075.
2. DiLeo MR, Hall RE, Vellers HL, Daniels CL, Levitt DE. Alcohol Alters Skeletal Muscle Bioenergetic Function: A Scoping Review. *Int J Mol Sci.* 2024 Nov 15;25(22):12280. doi: 10.3390/ijms252212280. PMID: 39596345; PMCID: PMC11594450.

Zu, YujiaoPublication:

1. Zu Y, Mikhael M, Andrade J, Scoggin S, Yosofvand M, Moussa H, Festuccia WT, Moustaid-Moussa N. Effects of Eicosapentaenoic Acid in Glycerol Phosphate Shuttle GPD2 Regulated Inflammatory and Thermogenic Responses. *Scientific Report.* (Under review)
2. Seifishahpar M, Kim JH, Parkman JK, Rhode A, Menikdiwela K, Zu Y, Scoggin S, Freeman L, Kalupahana NS, Moustaid-Moussa N. Mechanisms Mediating Tart Cherry and Fish Oil Metabolic Effects in Diet-Induced (C57BL/6J) and Genetically (TALYHO/Jng) Obese Mice. *Nutrients.* 2024 Dec 1;16(23):4179. <https://doi.org/10.3390/nu16234179>
3. Hao L, Khan MS, Zu Y, Liu J, Wang S. Thermoneutrality Inhibits Thermogenic Markers and Exacerbates Nonalcoholic Fatty Liver Disease in Mice. *International Journal of Molecular Sciences.* 2024 Aug 3;25(15):8482. <https://doi.org/10.3390/ijms25158482>

Abstracts:

1. Zu Y, Pahlavani M, Walker T, Scoggin S, Moustaid-Moussa N. Fluorescence-Labeled Very Low-Density Lipoproteins (VLDLs) Clearance Method for the Assessment of Dynamic VLDLs Function in Mice. *Circulation*. 2024 Nov 12;150(Suppl_1): A4143309.
2. Zu Y, Walker T, Scoggin S, Moustaid-Moussa N. Development and Characterization of Tart Cherry Juice Encapsulated Prebiotic Particles. *Current Developments in Nutrition*. 2024 Jul 1;8.

Presentations:

1. AHA24 - Scientific Sessions 2024 conference, "Fluorescence-Labeled Very Low-Density Lipoproteins (VLDLs) Clearance Method for the Assessment of Dynamic VLDLs Function in Mice", Chicago, IL, US, November 2024.
2. Nutrition 2024: American Society for Nutrition's Annual Meeting, "Development and Characterization of Tart Cherry Juice Encapsulated Prebiotic Particles", Chicago, IL, US, July 2024.
3. USDA PD Meeting, "Development and Characterization of Tart Cherry Juice Encapsulated Prebiotic Particles", Purdue University, West Lafayette, IN, US, May 2024.

Federal Grant Support (current)

USDA NIFA

Title: Novel prebiotic nanoparticles to enhance tart cherry anthocyanin bioavailability and improve gut health in obesity. The goal of this project is to develop novel nanoparticles with prebiotic compounds to enhance the bioavailability of anthocyanins in tart cherry juice while improving gut health in an obese mouse model.

Jun. 2023 - May 2025

\$285,038

Role: PI

Co-PI: Naima Moustaid-Moussa

AHA AIREA

Title: The Role of Glycolytic Beige Fat in Atherosclerotic Cardiovascular Disease. The goal of this project is to determine the role of a novel uncoupling protein 1-independent glycolytic beige fat, which enhances whole-body thermogenesis and glucose utilization, during the development of atherosclerosis.

Apr. 2023 – Mar. 2025

\$154,000

Role: PI

Co-PI: Naima Moustaid-Moussa

USDA-NIFA REEU

Title: Nutrition Bench-to-Community Scholars at Texas Tech REEU. The goal of this project is to engage underrepresented students in impactful research in nutrition, foods, and agriculture.

2021-2026

\$500,000

Role: Research Mentor

PI: Naima Moustaid-Moussa

NSF Innovation-Corps

Title: Burning fat by nanoparticles for obesity treatment (FatBuringNano™). This project is to explore the market potential of an adipose-targeted nanoparticles.

2018 - 2019

\$50,000

Role: Entrepreneurial Lead

Technical Lead: Shu Wang

Mentor: Lena Zappia

Federal Grants (pending)

USDA NIFA

2025-2029

\$400,000

Title: Mango Tea Leaves: Bioavailability and Effects on Diabetes and Gut microbiome **Role: Co-PI**
 PI: Naima Moustaid-Moussa
 PI: Vivian Haley-Zitlin

USDA SAS

Title: SORGHUM: Innovative & Sustainable Food System Option & Climate Resilient Grain To Address Human Nutrition Insecurity & Health Disparities 2025 - 2030
 \$10,000,000.00
Role: Co-PI
 PI: Naima Moustaid-Moussa

NIH R15

Title: Thermoregulation of Beige Adipocytes via Myogenic Mechanisms \$450,852.00
Role: PI
 Statue: Resubmitting as R01

Awarded Internal Grants:

Undergraduate Research Experience grant from the College of Human Sciences TTU (2023) Mar. 2023 – Aug. 2024
 \$2,000
Role: PI

Graduate Research Assistant Funding and Seed Grant from the College of Human Sciences TTU Jan. 2024-Dec. 2024
 \$5,000 fund and 1-year Research Assistant
Role: PI

Undergraduate Research Experience grant from the College of Human Sciences TTU (2022) Mar. 2022 – Aug. 2023
 \$2,000
Role: PI

Cancer Seed Grant from the College of Human Sciences TTU Mar. 2022 – Aug. 2022
 \$7,500
Role: PI

Title: Protective effects of shogaol in obesity-related breast cancer.

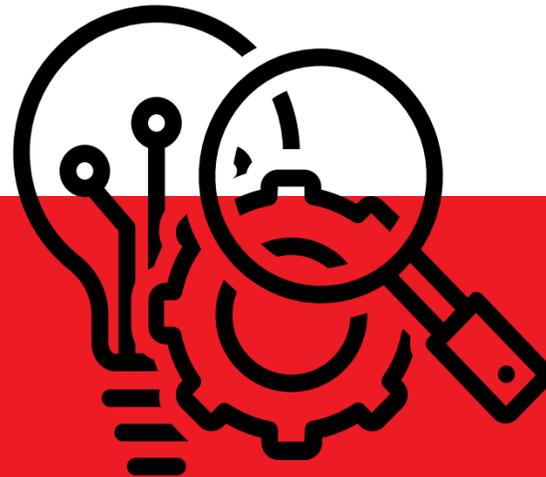
“Come N Go” Grant from the College of Human Sciences TTU Mar. 2022 – Aug. 2022
 \$5,000
Role: PI

Zumwalt, MimiPublication:

1. Cushman CJ, Ibrahim AF, Smith AD, Hernandez EJ, MacKay B, Zumwalt M. Local and Systemic Peptide Therapies for Soft Tissue Regeneration: A Narrative Review. *Yale J Biol Med.* 2024 Sep 30;97(3):399-413. doi: 10.59249/TKNM3388. PMID: 39351323; PMCID: PMC11426299.

TEXAS TECH UNIVERSITY  HEALTH SCIENCES CENTER™

Center of Excellence for Integrative Health (CEIH)



RESEARCH CONNECT:

DISCOVERING TTUHSC CENTERS &
INSTITUTES FOR COLLABORATION

CEIH: Vision & Mission

VISION:

- Improve the health of individuals through integrative health research discoveries and high-quality education.

MISSION:

- Support the strategic objectives and academic mission of School of Medicine and TTUHSC in enhancing research and research-related education.
- Foster and facilitate synergistic, interdisciplinary, trans-disciplinary, and inter-professional collaboration among researchers/colleagues committed to integrative health research and to assist the professional development of new researchers.
- Promote thoughtful and compassionate healthcare in the broad field of integrative health through innovative and rigorous research at basic, translational, clinical, and population levels, and assist and support researchers in conducting cutting edge research that will grow the empirical evidence base for integrative approaches to health.
- Promote research-associated educational opportunities for medical students.

Summary of CEIH 5-year report (2018-2023)

- Founded in 2018
- Over 45 faculty members (TTUHSC/TTU) have joined the Center
- Center website: <https://www.ttuhscc.edu/centers-institutes/integrated-health-research/default.aspx>
- Summary of Center members' scholarly activities:

Year	Publication	Oral	Poster	Grant no	Grant \$
2023	228	160	253	106	125,707,665
2022	254	121	74	70	34,384,733
2021	232	107	45	40	31,460,254
2020	192	53	87	90	56,608,340
2019	138	35	70	61	23,465,622
Total	1044	476	529	367	271,626,614

CEIH: Future Plans

- Work with the Division of Research Innovation, Collaboration, and Entrepreneurship (RICE), Office of Research to promote the Center via Research Connect
- Add new CEIH Leadership to stimulate member involvement (need volunteers)
 - Director of Activity
 - Director of Recruitment
- Organize the CEIH Integrative Medicine Symposium planning committee for Symposium
- Promote the Center and elevate member visibility locally to increase scholarly interaction
- Promote integrative health/medicine in medical student education
- Provide research opportunities for students/trainees
- Provide seed funding for center members collecting preliminary data for future proposal submission
- Increase research collaboration/discussion among center members using increased collaborative grant proposal submissions and manuscript publications as metric

CEIH Members' presentations

- Leslie Shen, Pathology, TTUHSC
- John J Lawrence, Pharmacology & Neuroscience, TTUHSC
- Volker Neugebauer, Neurology, TTUHSC
- Danielle Levitt and Hui-Ying Luk, Kinesiology & Sport Management, TTU

Chwan-Li (Leslie) Shen, PhD, CCRP

**Associate Dean for Research, School of Medicine
Professor, Department of Pathology and Physiology, School of Medicine
Clinical Professor, Department of Diagnostic & Primary Care, School of Health Professions
Founding Director, Center of Excellence for Integrative Health
Texas Tech University Health Sciences Center**

**Adjunct Professor, Department of Nutritional Sciences, Texas Tech University
Lubbock, Texas, USA**

**Research Interest: Involvement of gut inflammation across
obesity, aging, and pain**

**Obesity, Aging, Pain
Share a Common
Scientific Feature**

- Oxidative Stress Damage –**
- Chronic Inflammation –**
- Mitochondrial dysfunction**

Involvement of Gut Inflammation

Actions of dietary tocotrienols on obesity

Funded by SOM/American River Nutrition, LLC, MA.

Leslie Shen (PI), Robyn Richmond, MD (Co-PI), Hui-Ying Luk (Co-I)

Study Design: 6-month double blinded, placebo-controlled, and randomized intervention with 1:1 for placebo and tocotrienols

Specific Aims:

To evaluate the effects of tocotrienols intervention on

- fat mass
- serum lipid profile and CRP, lipid-associated biomarkers, and urine oxidative stress biomarker
- lipid metabolism-related gene expression in adipose tissue
- oxylipins and endocannabinoid (eCB) in plasma and adipose tissue
- abundance and the composition of intestinal bacteria in feces

Status: Enrolled 45 subjects. Specimen collection by Oct 2024

Effect of annatto-derived geranylgeraniol (GG) on statin-associated myopathy

Funded by American River Nutrition, LLC, MA.
Leslie Shen (PI), Mac Ansari, MD (Co-PI)

Study Design: 3-month double blinded, placebo-controlled, and randomized intervention with 1:1:1 for placebo, low dose GG, and high dose GG

Specific Aims:

To study the effects of 3 months of GG intervention on

- **SAMS (statin-associated muscle symptoms)**
- **muscle performance**
- **muscle damage, muscle remodeling, inflammation, and lipid profile**

Status: Enrolled 20+ subjects. Targeted n=60+ to complete study.

Curcumin and retinal amyloid-beta: a proof-of-concept pilot study

Funded by Sabinsa Corporation, NJ.

Leslie Shen (PI), Kelly Mitchell, MD (Co-PI)

Study Design: 2-week double blinded, placebo-controlled, and randomized intervention with 1:1 for low dose curcumin and high dose curcumin

Specific Aims: Effect of two weeks of curcumin intervention on

- amyloid fluorescence intensity, deposit number, and location in retina
- bioavailability
- plasma A β 40 and 42 isoforms (a marker of amyloidosis), total tau, and phosphorylated tau 181
- safety
- abundance and composition of intestinal bacterial in feces

Status: Enrolled 5+ subjects. Targeted n=30+ to complete study.

Ginger and the microbiota-gut-brain Connection in sciatic pain individuals

Funded by USDA-NIFA A1343

Leslie Shen (PI) & Volker Neugebauer (Co-PI)

Study Design: 2-month double blinded, placebo-controlled, and randomized intervention with 1:1 for placebo and ginger extract supplement.

Specific Aims: Effect of two months of ginger intervention on

- Gut function: gut microbiota composition, intestinal permeability, untargeted metabolomics
- Neuroinflammation: neuroinflammation gene expression in whole blood
- Pain-associated outcomes: Brief-Pain Inventory (BPI), SF-MPQ
- Brain neuroplasticity: resting state-fMRI connectivity
- Safety: liver (AST, ALT), kidney (BUN, serum creatinine)

Status: FDA-IND pending for ginger supplement.

Volker Neugebauer, MD, PhD

**Chair & Professor, Department of Pharmacology and Neuroscience
University Distinguished Professor**

**Executive Director and Chief Scientific Officer, Garrison Institute on Aging
Director, Center of Excellence for Translational Neuroscience and Therapeutics**

**Mildred and Shirley L. Garrison Chair in Aging
Giles McCrary Endowed Chair in Addiction Medicine**

**Department of Neurology
Texas Tech University Health Sciences Center**

Research Interest: Neuroplasticity in health and disease

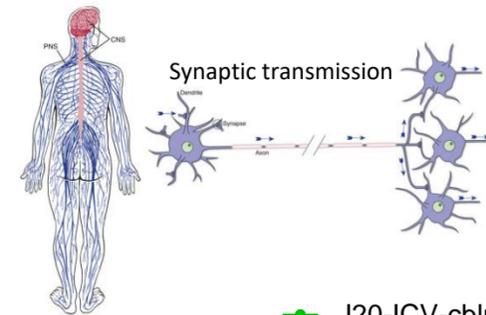


Neugebauer - Brain Health Collaborative Research Programs

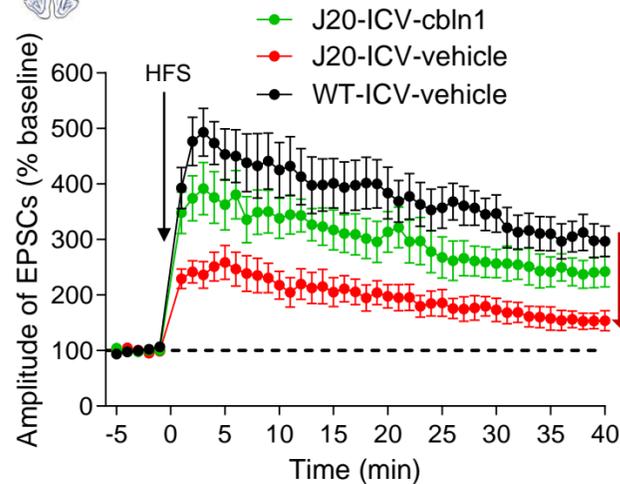


Neuroplasticity in health and disease

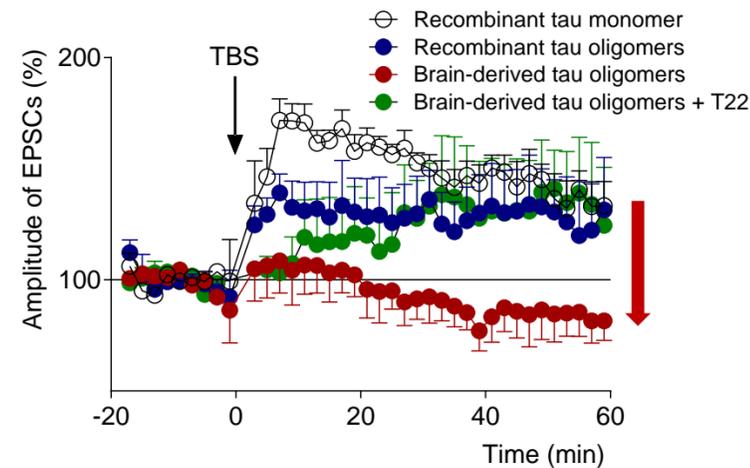
Functional or structural changes in the nervous system in response to changes in the internal external bodily environment



Alzheimer's disease Loss of synaptic plasticity

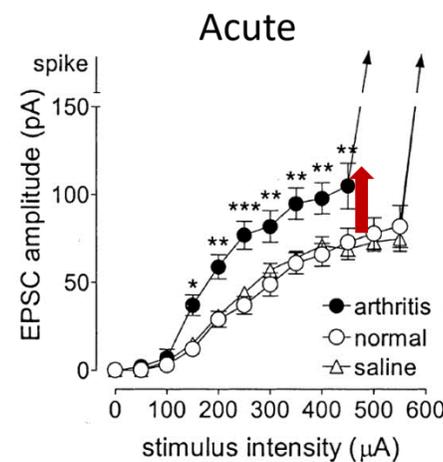


Kiritoshi T, Yin L, Chen Y, **Neugebauer V** (unpublished)

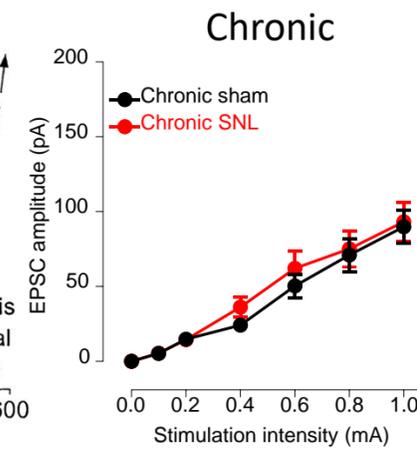


Lasagna-Reeves CA, Castillo-Carranza DL, Sengupta U, Guerrero-Munoz MJ, Kiritoshi T, **Neugebauer V**, Jackson GR, Kaye R. *Sci Rep*. 2012. PMC3463004.

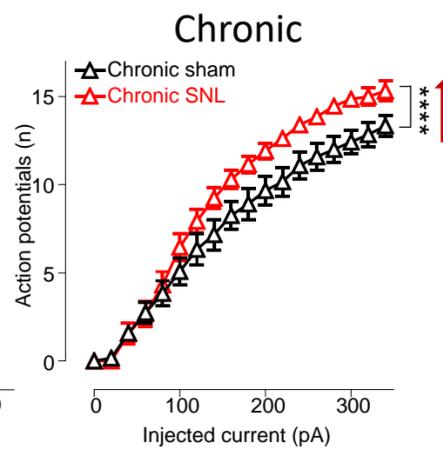
Pain chronification Switch from synaptic plasticity to hyperexcitability



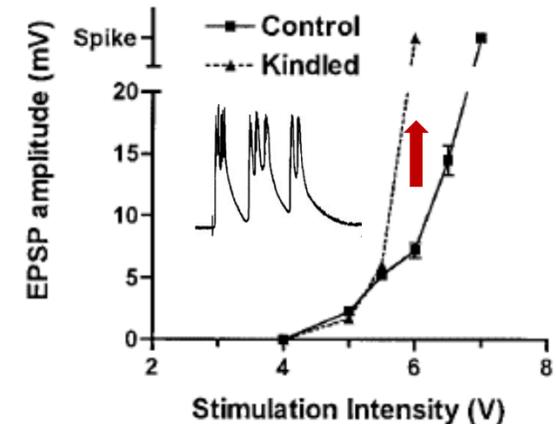
Neugebauer V, Li W, Bird GC, Bhawe G, Gereau RW. *J Neurosci*. 2003. PMC6742141



Kiritoshi T, Yakhnitsa V, Singh S, Wilson TD, Chaudhry S, **Neugebauer B**, Torres-Rodriguez JM, Lin JL, Carrasquillo Y, **Neugebauer V**. *Cell Reports*, 2024 (in press)



Epilepsy Abnormal synaptic plasticity



Neugebauer V, Keele NB, Shinnick-Gallagher P. *J Neurosci*. 1997. PMC6573184

Limbic brain functions

Learning and memory

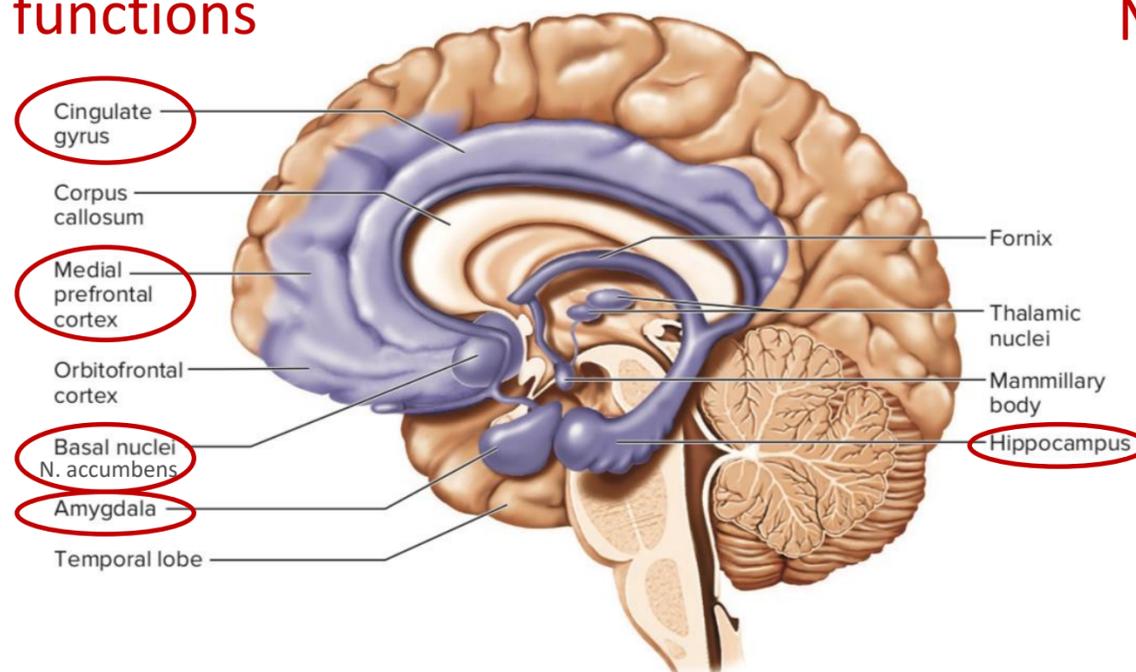
- Neurocognitive diseases / dementias (Alzheimer's disease)

Emotions

- Pain (unpleasantness)
- Anxio-depressive disorders

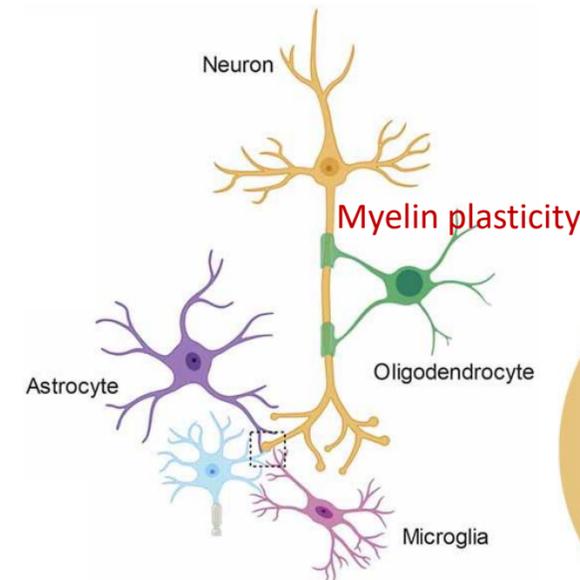
Reward

- Substance abuse (opioids)
- Alcohol use disorder



Kenneth Saladin (2023) *Anatomy & Physiology—The Unity of Form and Function*. <https://www.quora.com/Is-the-limbic-system-part-of-the-nervous-system-or-a-separate-system-on-its-own>

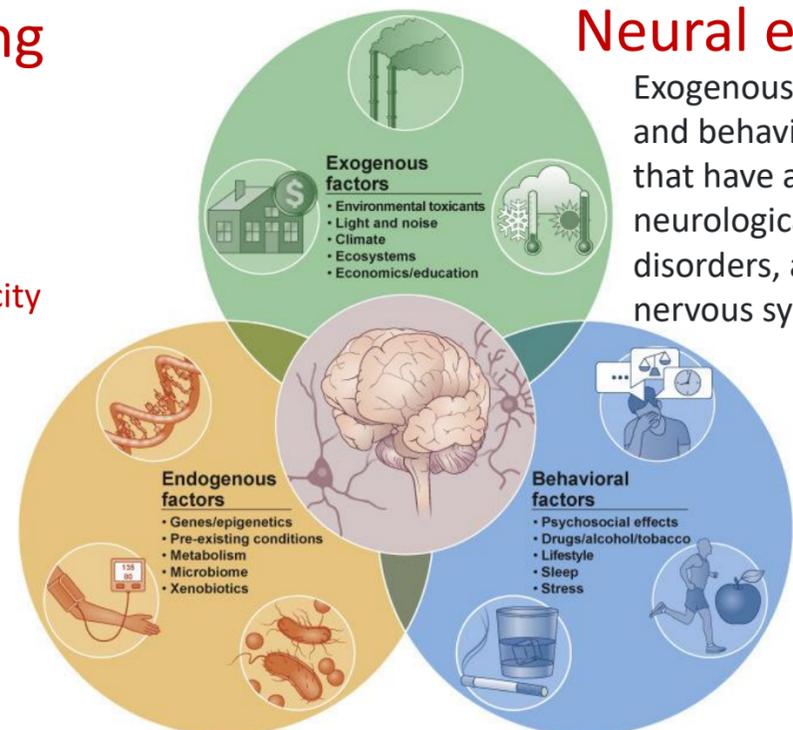
Neuroimmune signaling



Henstridge CM, Tzioras M, Paolicelli RC (2019) *Front Cell Neurosci*

Neural exposome

Exogenous, endogenous, and behavioral factors that have an impact on neurological disease and disorders, and overall nervous system health



Tamiz AP, Koroshetz WJ, Dhruv NT, Jett DA (2022) A focus on the neural exposome. *Neuron*. PMID 35349785.



Neugebauer - Brain Health Collaborative Research Programs



Chronic pain (and drugs of abuse)

Collaborators: Abbruscato, Avila, German, Guindon, Ji, Kahathuduwa, Ponomarev, Shen, Wilkerson

Brain plasticity
(Mechanisms and targets)

Transcriptomics
Molecular biology
Electrophysiology
Opto- and chemo-genetics
Behavior



Preclinical interventions

(Opto)pharmacology
(cerebellin-1, opioid receptor ligands, DAT inhibitors, ion channel and transmitter modulators, neuroimmune modulators, natural products)
Opto- and chemo-genetics
Viral vector strategies



Clinical studies
(Diagnosis, prevention, intervention)

Neuroimaging
Microbiome/metabolome
Mind-body interventions
Natural products
(Ginger, curcumin)

Aging and Alzheimer's disease

Collaborators: Al-Rahawan, Ayers, Bertelson, Bishop, Decourt, Hwang, Khanjani, Harris, Lawrence, Li, Manczak, Mitchell, Singer, Shen

Brain plasticity
(Mechanisms and targets)

Molecular biology
Electrophysiology
Behavior



Preclinical interventions

Pharmacology
(cerebellin-1, DAT inhibitors, natural products)



Clinical studies
(Diagnosis, prevention, intervention)

Brain pathology and biosamples
Neuroimaging, retinal imaging
Metabolomics
Environmental factors
Epidemiology (Project FRONTIER)
App-based screening
Neurocognitive assessment
Mental health services (DBT/MBCT)
Telemedicine
Pharmacology (naltrexone), Ab antibodies

Neurological diseases (MS, epilepsy)

Collaborators: Avila, Decourt, German, Grozdanov, Ji

Brain plasticity
(Mechanisms and targets)

Molecular biology
Electrophysiology
Behavior



Preclinical interventions

Pharmacology
(DAT inhibitors)



Clinical studies
(Diagnosis, prevention)

Microbiome



Brain Health – Goals and Needs

Goals

- Strengthen translational research from basic research to studies in humans/human tissue and clinical trials
- Expand to related areas and disciplines (“Neural Exposome”)
- Obtain externally funded center grants (e.g., NIH-funded Alzheimer's Disease Research Center, ADRC)
- Develop and strengthen telehealth programs
- Develop Biobank beyond the existing GIA Brain Bank and CSF/plasma/serum samples from Project FRONTIER

Needs

- Neuroimaging specialist and infrastructure (fMRI and PET)
- Neuropathologist
- Epidemiologist and data management infrastructure
- Neurologist specialized in cognitive disorders (dementia, Alzheimer’s disease)
- Infrastructure for clinical trials (e.g., Ab infusion therapy for Alzheimer’s disease)
- Infrastructure to collect, store, organize and share human tissues on various diseases and conditions (Biobank)

**Department of Pharmacology and Neuroscience
and
Garrison Institute on Aging
(GIA)**

**J. Josh Lawrence
Associate Professor**

**Department of Pharmacology and Neuroscience
Garrison Institute on Aging**

Texas Tech University Health Sciences Center

john.lawrence@ttuhsc.edu

5C200

**CEIH Presentation
August 21st, 2024**

Cross-disciplinary, Collaborative Neuroscience

Research projects are spread across four major areas:

- 1) Healthy aging/Alzheimer's Disease (AD; 45%, two funded NIH R01 grants)**
- 2) Machine learning, bioinformatics, new AD-related genes, and their molecular mechanisms (10%)**
- 3) Human rural health projects (10%, Project FRONTIER, focusing on nutritional deficiencies driving risk factors in AD)**
- 4) Cross-disciplinary computational neuroscience (20%, Havana syndrome and cochlear dysfunction, CIA subcontract with TTU, on NCE)**

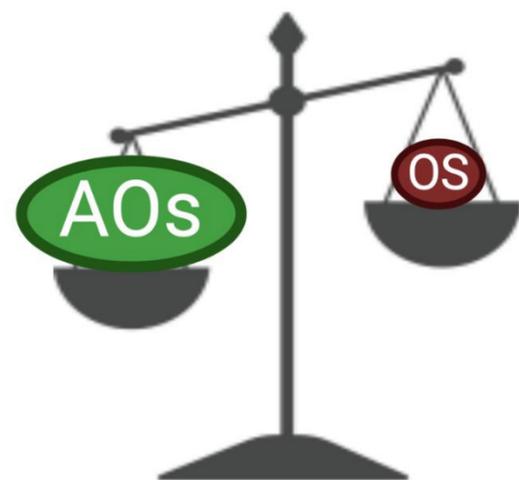
Recent OHI Seed Grant Applications (submitted 7/1):

- ***KCNIP1 at the Convergence of Alzheimer's Disease and Nutritional Deficiencies. Lawrence (lead PI), Pal (co-PI), Crasto, Castro, Pereira (Reed), Ponomarev, Bose, Shin, and Sutton (co-Is).***
- ***Exploring Dnase1L3 as a therapeutic for Alzheimer's Disease and Related Dementias. Keyel (lead PI), Sutton (co-PI), Lawrence (co-I).***
- ***Peripheral vision deficits as a biomarker for Alzheimer's disease. Scolari (lead PI), Lawrence (co-I)***
- ***Otoferlin modeling at molecular, synaptic, and systems levels. Sutton (lead PI), Ghosh (co-PI), Lawrence, Donai (co-Is).***

Unifying themes: nutritional sufficiency, redox balance, and disease prevention

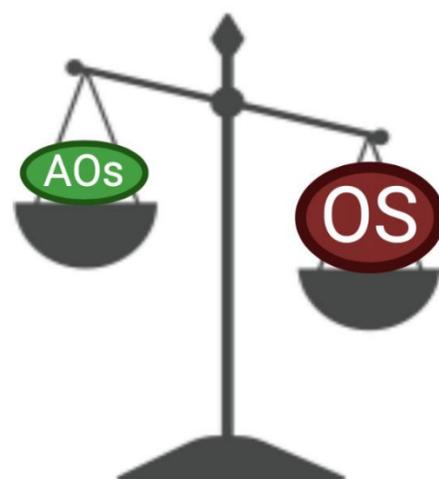
Healthy Aging

> Nutrient (AO) Sufficiency,
< Oxidative Stress (OS)

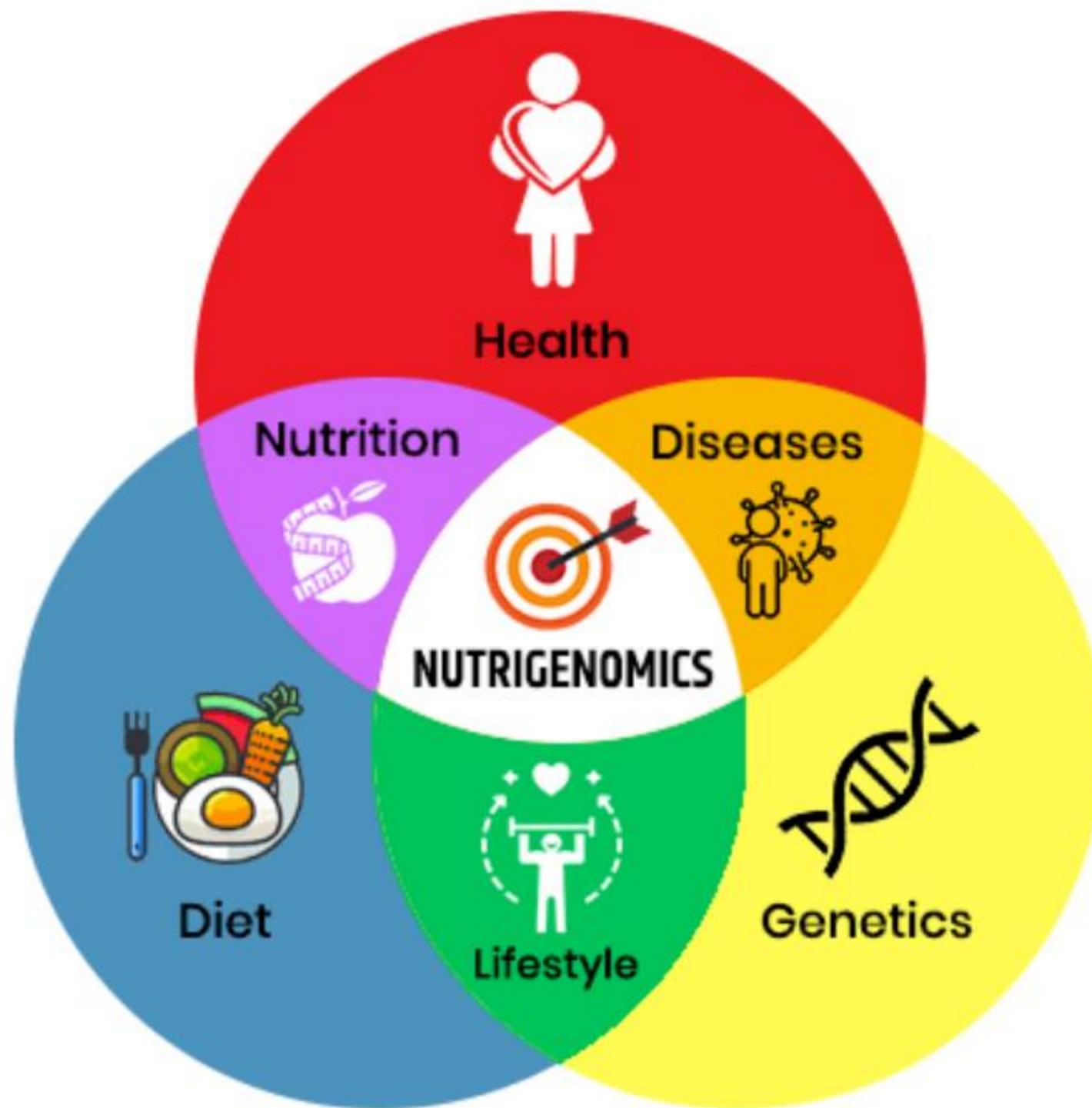


Disease/AD

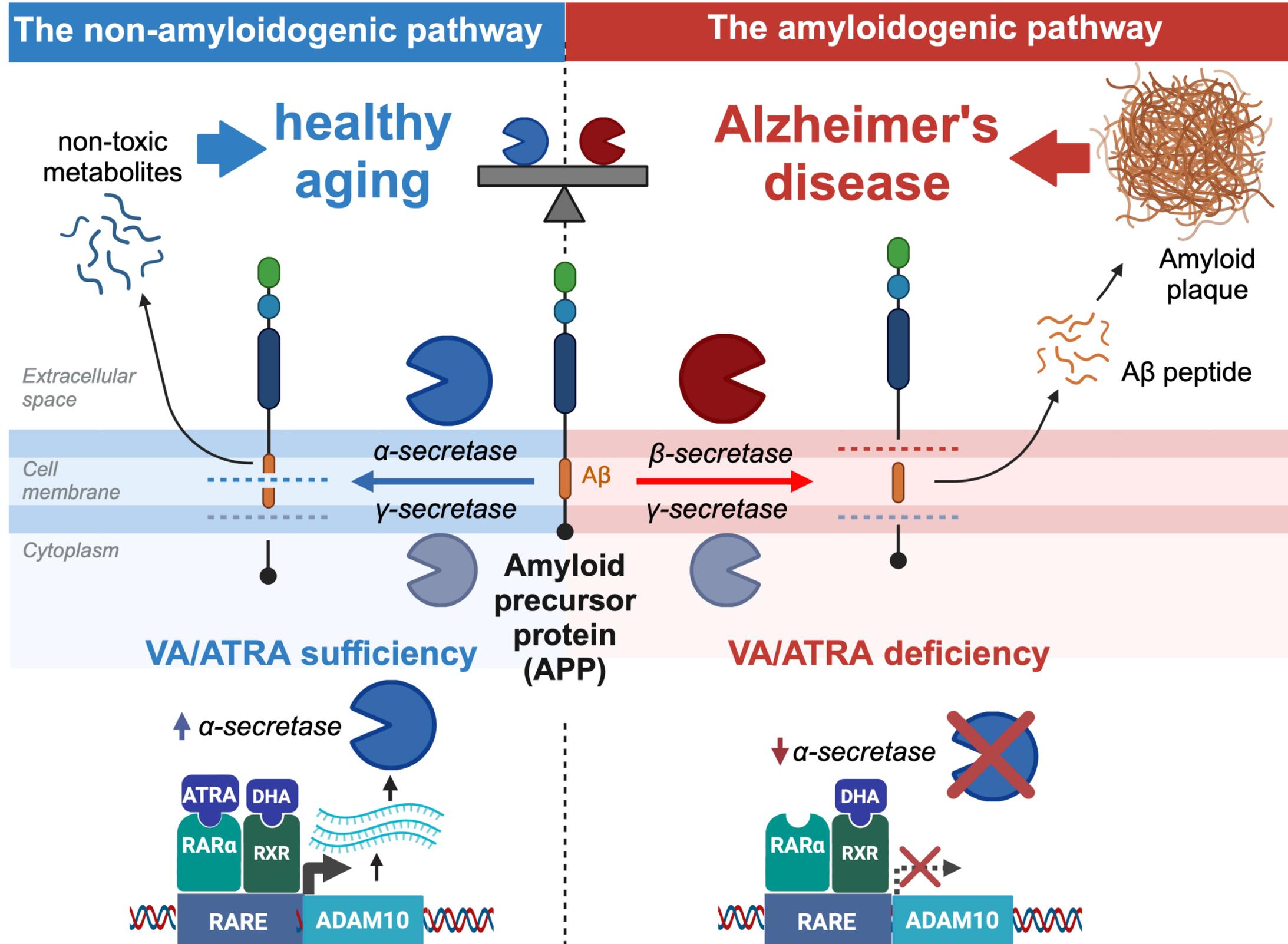
< Nutrient (AO) Sufficiency,
> Oxidative Stress (OS)



- **Depression**
 - **Diabetes**
 - **Obesity**
 - **CVD**
- (risk factors for AD)*



Failure of the non-amyloidogenic pathway in AD



The Current Team

TTUHSC Team

NIH National Institute on Aging

NIH R01 AG071859-01A1

NIH R01 AG073826-01A1



Josh Lawrence



Chhanda Bose



Jeremy Bailoo



Igor Ponomarev



Maria Manczak



Sharda Singh



Ashly Hindle



Adam Baker



Shane Smith



Jake Strickland



Charlie Zhang



Isabel Gusman



Isabella
Zambrano

Existing manuscripts

- C. Bose, A. Hindle, S. C. Smith, J. Strickland, C. Zhang, I. Guzman, A. Baker, S. Singh, and J. J. Lawrence. Low dose dietary vorinostat improves measures of oxidative stress in an AD mouse model. *In preparation for Alzheimer's & Dementia.*
- F. K. Tsurukawa, Y. Mao, C. Sanchez-Villalobos, C. Crasto, N. Khanna, **J. J. Lawrence**, and R. Pal. Multi-study transcriptomic analysis of Alzheimer's Disease brain tissue: insights and caveats. *In preparation for Nature Aging.*
- N. Khanna, F. K. Tsurukawa, C. Sanchez-Villalobos, I. Castro, E. Reed, I. Ponomarev, C. Bose, A. C. Shin, R. B. Sutton, C. Crasto, R. Pal, and **J. J. Lawrence**. KCNIP1 at the Convergence of Alzheimer's Disease and Nutritional Deficiencies. *In preparation.*

TTU Team



Ranadip Pal



Andy Shin



Chiquito
Crasto



Fernando
Tsurukawa



Nishtha Khanna



Cesar
Sanchez-Villalobos

A Productive Year for Project FRONTIER!



Max Pourghaed Nicholas Vojtkofsky Claudia Morris Riley McCready Brennon Henderson Jeanne Yang

Accepted publication

- M. Pourghaed, A. Sarangi, F. Ramirez-Velandia, J. Kopel, J. Culberson, G. Ashworth, H. Khan, A. Boles, V. Neugebauer, and **J. J. Lawrence**. Associations between Vitamin D Deficiency/Insufficiency and Depression Expose Health Disparities in Older Rural West Texans: A Project FRONTIER Study. *American Journal of Geriatric Psychiatry* 32(7): 808-820, July 2024.

Submitted

- R. McCready, C. Morris, P. Antwi-Adjei, M. Pourghaed, A. Sarangi, A. Boles, F. Ramirez-Velandia, J. Kopel, J. Culberson, J. Singer, G. Ashworth, M. N. Sabbagh, V. Neugebauer, B. Decourt, and **J. J. Lawrence**. Relationships between Diabetes, Vitamin D Status, Neuropsychological Functioning, Depression, and Hispanic Ethnicity in Older Rural West Texans: A Project FRONTIER Study. *Submitted 8/13/24 to American Journal of Geriatric Psychiatry.*

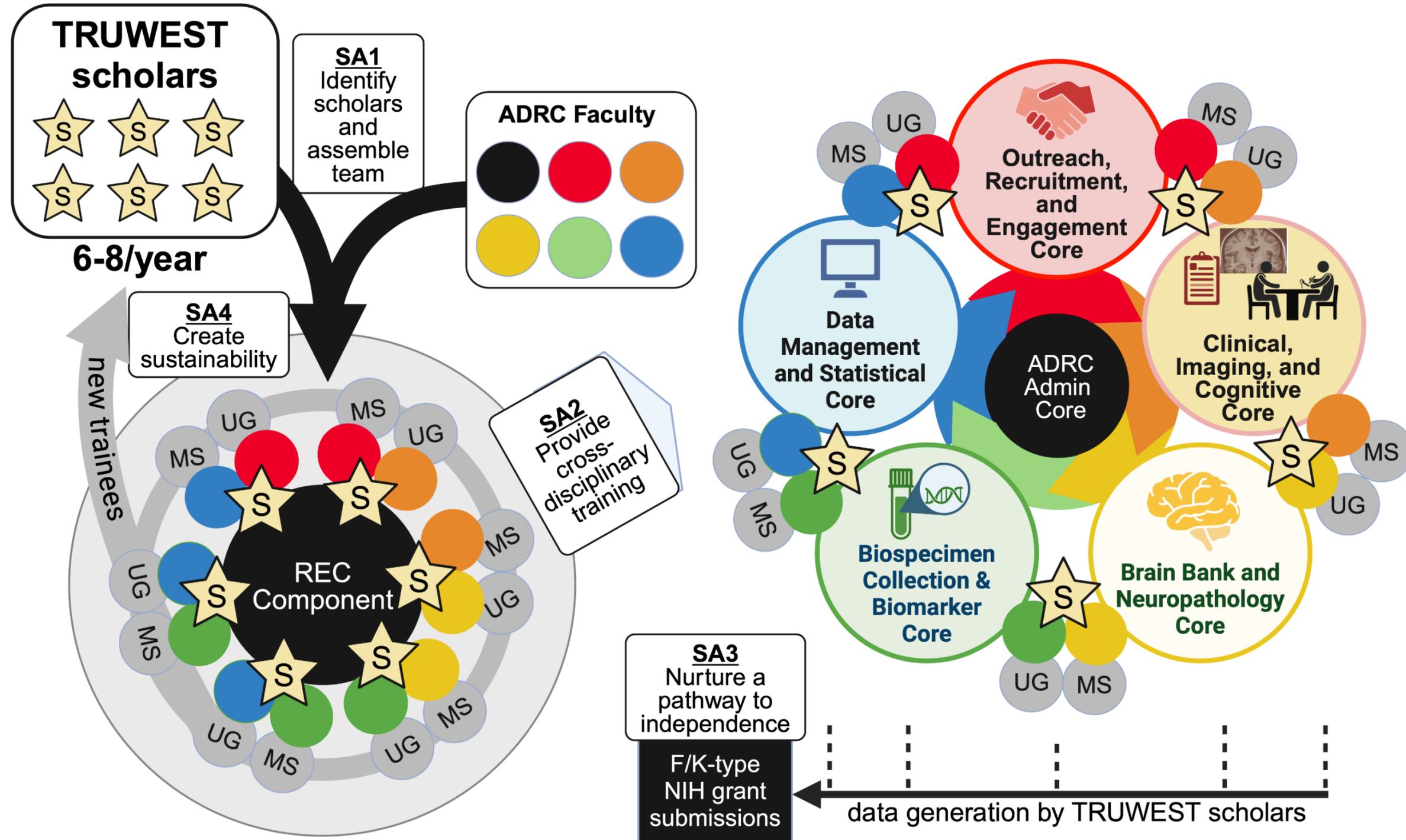
Existing manuscripts

- NAFLD, VD, and cognitive impairment (N. Vojtkofsky)
- VD and health care access (C. Morris)
- VD and general health (C. Morris, E. Keith)
- Cigarette smoking and cognitive impairment (K. Casteneda)

Emerging projects

- Vitamin B12 and depression (R. McCready, H. Hashmi)
- Cognitive domains and diabetes (R. McCready)
- Thyroid dysfunction and cognition (B. Henderson)
- CVD and ischemic risk (J. Yang)

Alzheimer's Disease Research Center Training Component



Hui Ying Luk, PhD, CSCS*D

Assistant Professor in Exercise Physiology

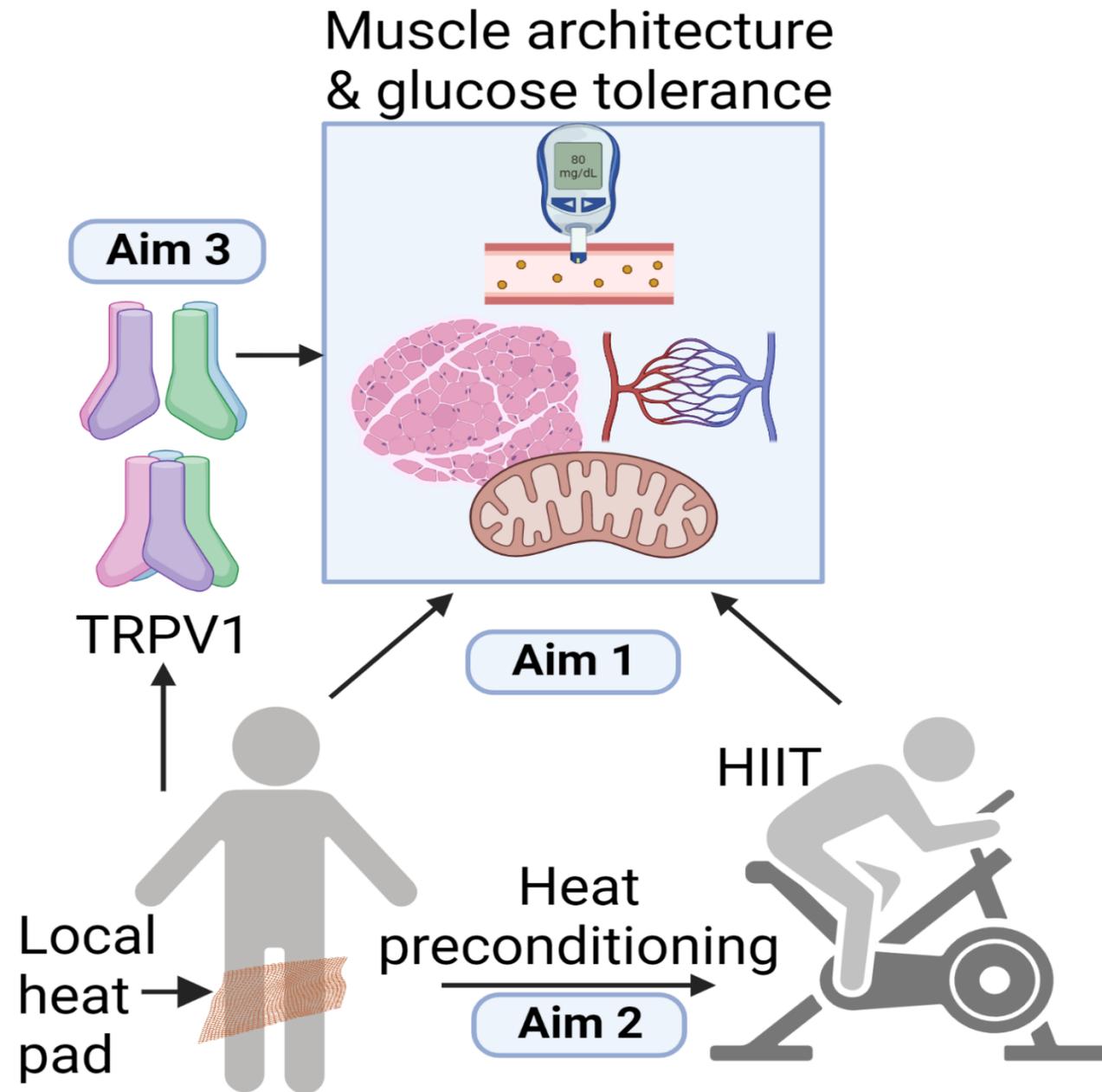
Danielle E. Levitt, PhD, CSCS*D

Assistant Professor, Kinesiology

**Department of Kinesiology & Sport Management
Texas Tech University**

Research Interest: Heat and Exercise in Aging as Therapy (HEAT)

Heat and Exercise in Aging as Therapy (HEAT)



↑ **Glycemic control** and ↓ **frailty risk** among older adults with prediabetes by:

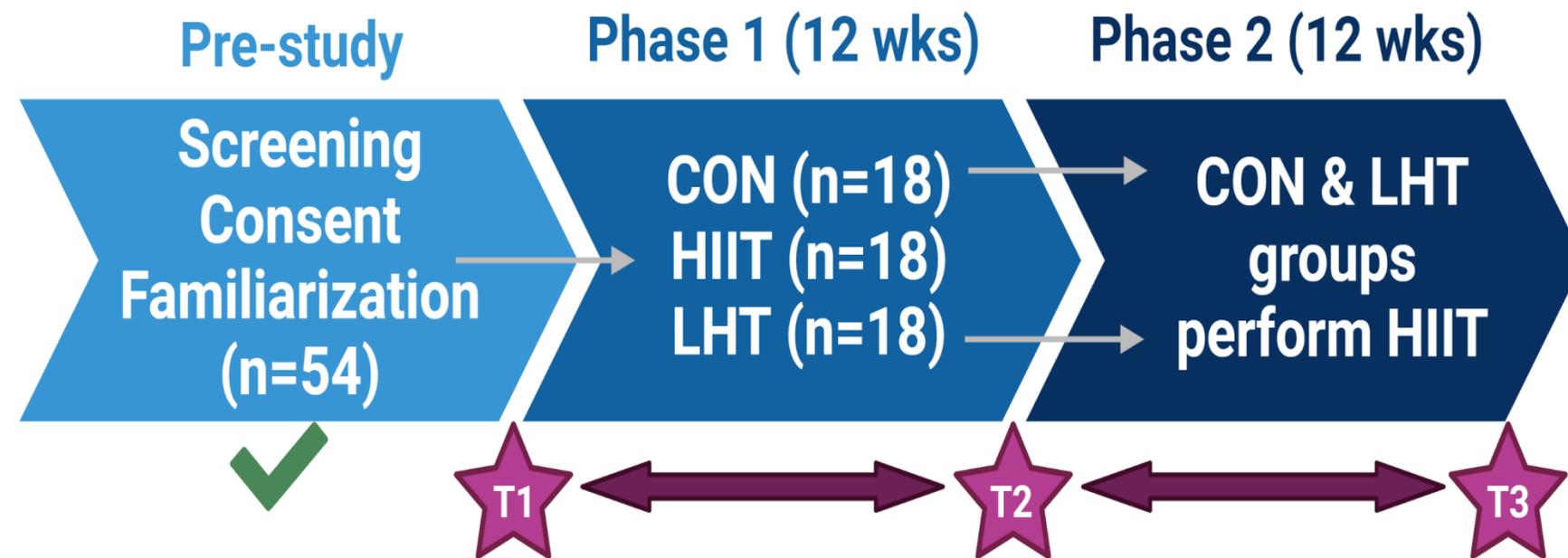
- ↑ SKM capillarization
- ↑ SKM mitochondrial function
- ↑ SKM size and function

Who are we looking for?

- Men and women
- ≥ 60 years old
- Prediabetes (known or suspected)
- Do not regularly exercise (<30 min., 3x/wk)

Heat and Exercise in Aging as Therapy (HEAT)

Clinical trial design:



Benefits of participation (varies by group assignment):

- Earn up to **\$1230** or **\$900** for completion
- DEXA scan & physical function results at 2-3 time points
- 12 weeks of guided exercise
- **All** participants who complete the study will receive heat pads

Anticipated recruitment start: January 2025



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R01AG084597 (Luk/Levitt)