

CURRICULUM VITAE

Kosaku Aoyagi, PT, MSc, PhD

Department of Physical Therapy and Movement Sciences and
Interdisciplinary Health Science PhD Program
The University of Texas at El Paso
500 West University Avenue, El Paso, Texas 79968
Office Location: 3333 N Mesa, #115D
Office Phone: 915-747-8215
Email: kaoyagi@utep.edu; k825a789@gmail.com

EDUCATION

Sep 2019-Aug 2022	Postdoctoral Fellow	Boston University School of Medicine Boston, MA, USA	Rheumatology (Focus: Epidemiology)
Aug 2015-Jul 2019	Ph.D	University of Kansas Medical Center (KUMC), Kansas City, KS, USA	Rehab. Science
Aug 2013-Jul 2015	MSc	University of Illinois at Chicago (UIC), Chicago, IL, USA	Rehab. Science
Feb 2010	BSc	National Institution for Academic Degrees and Quality Enhancement of Higher Education, Tokyo, Japan	Physical Therapy
Apr 2001-Mar 2005	Associate	National Hospital Organization Sendai Medical Center Rehab School Miyagi, Japan	Physical Therapy

EMPLOYMENT AND POSITIONS HELD

2022-Present	Tenure-Track Assistant Professor, The University of Texas at El Paso (UTEP)
2019-2022	Postdoctoral Associate, Boston University School of Medicine, MA, USA
2015-2019	Graduate Research Assistant, KUMC, KS, USA
2015-2019	Graduate Teaching Assistant, KUMC, KS, USA
2005-2013	Physical Therapist, Nishi-Fukuoka Hospital, FK, Japan

LICENSURE INFORMATION/REGISTRATION NUMBER

2022 – Present	Physical Therapist, Texas, USA, #PT 1369128
2020 – Present	Physical Therapist, Florida, USA, #PT 35978
2010 – Present	Certified Manual Therapist (German Society for Musculoskeletal Medicine), Germany, #07G00788
2005 – Present	Physical Therapist, Japan, #53875
2009 – 2019	Respiratory Therapist, Japan, #090564

RESEARCH

Research Interests

- Multiple Aspects of Chronic Pain Experience
- Knee Osteoarthritis and Chronic Low Back Pain
- Physical Therapy

- Quantitative Sensory Testing, Biopsychosocial, Behavioral, and Contextual Factors for Pain
- Clinical Trials Targeting Multiple Pain Mechanisms Using Vagus Nerve Stimulation and Exercise
- Epidemiology/Biostatistics using Large Databases

Peer-Reviewed Publications

§: Corresponding author

1. §Sakamoto J, Parrish D, Rivas E, Mandal A, Siengsukon C, **Aoyagi K** (2025) Are There Racial and Ethnic Disparities in Sleep Problems Among People with Chronic Pain? Systematic Review and Meta-Analysis, *Pain Medicine*, In Press, pna101, <https://doi.org/10.1093/pm/pnaf101>
2. **Aoyagi K.**, Wang N., LaValley M., Frey-Law L., Lewis CE., Nevitt M., Neogi T (2025). Longitudinal Trajectories of Pain Sensitization and Its Relations to Pain and Function in People with or at Risk of Knee Osteoarthritis: The Multicenter Osteoarthritis Study, *Arthritis Care & Research*, 2025 Aug 12. doi: 10.1002/acr.25626. PMID: 40790991; PMCID: PMC12346155.
3. §**Aoyagi K**, Rivas E, Shababi R, LaValley M, Edwards R, Lechuga J, Napadow V, Neogi T (2025) Safety and Preliminary Efficacy of Transcutaneous Auricular Vagus Nerve Stimulation on Chronic Knee Pain: A Pilot Study, *Osteoarthritis and Cartilage Open*, doi: 10.1016/j.ocarto.2024.100545. PMID: 39687279; PMCID: PMC11647485.
4. **Aoyagi K** and Neogi T. (2024) Reply to" Calculation of the effect of pain sensitization on opioid-induced hyperalgesia in knee osteoarthritis" *Arthritis Care & Research*, doi: 10.1002/acr.25384. PMID: 38922766.
5. Lee S, Neogi T, McGinley B, Wang N, Frey Law L, Torabian KA, **Aoyagi K**, Stefanik JJ, Carlesso LC, Hausdorff JM, Gazit E, Segal NA, Lewis CE, Nevitt MC, Kumar D. (2024) Associations of pain sensitivity and conditioned pain modulation with physical activity: findings from the Multicenter Osteoarthritis Study (MOST). *Osteoarthritis and Cartilage*. 2024 Aug;32(8):982-989. PMID: 38763431; PMCID: PMC11254545
6. Sharma N, Haiyin L, **Aoyagi K**, Ritchey S, Mohr E, Burton D, Arnold P, and Colgrove Y. (2024) Tailored Yoga Intervention for Postlumbal Spine Surgical Pain Management: A Feasibility Study. *Journal of Integrative and Complementary Medicine*
7. **Aoyagi K.**, Jafarzadeh RS., Carlesso L., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2024) Mediating Effect of Pain Sensitization on the Paradoxical Relation of Opioid Use to Pain Severity in Knee Osteoarthritis: The MOST Study, *Arthritis Care and Research*, 2024 Mar;76(3):403-408. doi: 10.1002/acr.25244. Epub 2023 Dec 28. PMID: 37750238; PMCID: PMC10922135.
8. Kumar D, Neogi T, Peloquin C, Marinko L, Camarinos J, **Aoyagi K**, Felson DT, Dubreuil M. (2023). Delayed timing of physical therapy initiation increases the risk of future opioid use in individuals with knee osteoarthritis: a real-world cohort study. *British Journal of Sports Medicine*, doi: 10.1136/bjsports-2022-106044. Epub ahead of print. PMID: 36822841.
9. **Aoyagi, K.** (2023). Roles of physical therapists in interdisciplinary teams for chronic pain management. *The Journal of Manual Physical Therapy*, 23(1), 19-25.
10. **Aoyagi K.**, Wang N., Carlesso L., Frey-Law L., Lewis CE., Nevitt M., Neogi T (2023). Post-surgical contributors to persistent knee pain following knee replacement: The Multicenter Osteoarthritis Study (MOST), *Osteoarthritis and Cartilage Open*, 2023 Jan 18;5(1):100335 PMID: 36798734; PMCID: PMC9926203.
11. **Aoyagi K.**, Liew JW., Farrar JT., Wang N., Carlesso L., Kumar D., Frey Law L., Lewis CE., Nevitt M., Neogi T.(2022) Does weight-bearing versus non-weight-bearing pain reflect different pain mechanisms in knee osteoarthritis?: the Multicenter Osteoarthritis Study (MOST). *Osteoarthritis and Cartilage*. 2022 Apr;30(4):545-550. PMID: 34801670; PMCID: PMC8940656.
12. **Aoyagi, K.**, He, J., Clauw, D. J., & Sharma, N. K. (2022). Sleep quality in individuals with chronic low back pain and central sensitization. *Physiotherapy Research International*, e1968. PMID: 35933729
13. **Aoyagi K.**, Neogi T., Peloquin C., Marinko L., Camarinos J., Stokes A., Felson DT., Dubreuil M., Kumar D. (2021), Relation of Physical Therapy to Chronic Opioid Use Following Total Knee

Replacement, *JAMA Network Open* JAMA 2021;4(10):e2131271. PMID: 34705013; PMCID: PMC8552057.

14. Sharma, N. K, **Aoyagi, K**, Crouch Young, M. K, Parrish, A., Smith, C, Burton, D. C., ... & Colgrove, Y. (2021), Protocol for Testing Yoga to Reduce Post–Lumbar Spine Surgery Pain: A Methodology Article. *International Journal of Yoga Therapy*. PMID: 34280297.
15. **Aoyagi, K**, Sharma, N. K. (2021), Correlation between central sensitization and remote muscle performance in individuals with chronic low back pain. *Journal of Manipulative and Physiological Therapeutics*, 44(1), 14-24. PMID: 33248751.
16. Mehryar F, Wilson SE, Staggs VS, **Aoyagi K**, Sharma NK. (2020), Quantifying Lumbar Mobilization With Inertial Measurement Unit. *J Manipulative Physiol Ther*. Feb;43(2):114-122. PMID: 32482432
17. Courtney, C. A., **Aoyagi, K.**, Fernández-de-Las-Peñas, C., Madeleine, P. (2020), Bilateral sensory deficits and widespread hyperalgesia occur following induced delayed onset muscle soreness of the quadriceps. *International Journal of Sports Physical Therapy*, 15(1), 12. PMID: 32089954; PubMed Central PMCID: PMC7015021.
18. **Aoyagi K**, He J, Simpson M, Melton B, Waitman R, Chandaka S, Sharma NK, (2019), Association between Opioid Dose, Acute Post-operative Pain and Walking Distance Following Lumbar Spine Surgery, *Journal of Clinical Pharmacy and Therapeutics*, PMID: 31587355.
19. **Aoyagi K**, He J, Clauw DJ, Nicol AL, Kluding PM, Jernigan S, Sharma NK, (2019), A Subgroup of Chronic Low Back Pain Patients with Central Sensitization, *Clinical Journal of Pain*, 35 (11), 869-879. PMID: 31408011; PMCID: PMC7197191.
20. **Aoyagi, K.**, Heller, D., Hazlewood, D., Sharma, N., & Dos Santos, M (2019), Is spinal mobilization effective for low back pain?: A systematic review. *Complementary therapies in clinical practice*, 34, 51. PMID: 30712746.

Manuscripts Under Revision/Review

- **Aoyagi K**, Rivas E, Shababi R, Edwards R, Neogi T, Lechuga J: Sociocultural Influence on Pain in Hispanic People with Knee Osteoarthritis, *Pain Medicine*
- Okusaga O, Robles-Granda P, **Aoyagi K**, Singh T, Rinker D, Simpson U, Xavier R, Powell-Roach K: Prevalence and Sociodemographic Correlates of Psychiatric Diagnoses Among Individuals with Chronic Pain in the All of Us Cohort, *The Lancet Psychiatry*

Manuscripts In Preparation

- **Aoyagi K.**, Jafarzadeh RS., LaValley M., Wang N., Carlesso L., Frey-Law L., Lewis CE., Nevitt M., Neogi T.: Development of a Pain Sensitivity Index to Examine the Transition from Intermittent to Constant Pain, Pain Severity, Function, and Neuropathic-like Symptoms in Knee Osteoarthritis: The Multicenter Osteoarthritis Study (MOST)

International/National Conference Presentations/Published Abstracts

*: Oral presentation;

Mentored Student Presentation

1. Wang Z, McGinley B, **Aoyagi K**, Frey-Law L, Lewis CE, Nevitt M, Ding C, Neogi T (2025) Relation of Measures of Pain Sensitization to Widespread Pain, *American College of Rheumatology Convergence 2025*
2. Wang Z, McGinley B, **Aoyagi K**, LaValley M, Clancy M, Frey-Law L, Lewis CE, Nevitt M, Ding C, Neogi T (2025) Relation of Different Antidepressants Use to Pain Severity and Measures of Pain Sensitization in Knee Osteoarthritis, *2025 OARSI World Congress on Osteoarthritis*
3. Barajas L, Lares A, Macias-Esplana N, Acosta LA, Lopez E, **Aoyagi K** (2025) The Association of Social Support with Response to Leg Cycling Ergometer Exercise in Knee Osteoarthritis Pain in a Hispanic Dominant Community, *National Conference on Undergraduate Research (NCUR) 2025*

4. ***Aoyagi K**, LaValley M, Rivas E, Shababi R, Lopez E, Barajas L, Macias-Esplana N, Edwards R, Frey-Law L, Kumar D, Johnson L, Neogi T. (2025). Preliminary Effects of Arm Versus Knee Exercise on Knee Pain in People with Knee Osteoarthritis, *American Physical Therapy Association, 2025 Combined Section Meeting (CSM)*
5. Wang Z, Mcginley B, **Aoyagi K**, LaValley M, Clancy M, Frey-Law L, Lewis CE, Nevitt M, Domg C, Neogi T. (2024): Relation of analgesic antidepressants use to pain severity and measures of pain sensitization in knee osteoarthritis, *American College of Rheumatology Convergence 2024*
6. **Aoyagi K**, LaValley M, Johnson L, Rivas E, Shababi R, Edwards R, Lechuga J, Wagler A, Neogi T. (2024): Feasibility of Transcutaneous Auricular Vagus Nerve Stimulation for Knee Osteoarthritis Pain, *IASP 2024 World Congress on Pain*
7. **Aoyagi K**, LaValley M, Edwards R, Lechuga J, Rivas E, Wagler A, Neogi T. (2024): Preliminary Effects of Transcutaneous Auricular Vagus Nerve Stimulation in People with Knee Osteoarthritis, *2024 OARSI World Congress on Osteoarthritis*
8. ***Aoyagi K**, LaValley M, Edwards R, Rivas E, Gomez A, Martinez C, Lechuga J, Neogi T (2024) Effects of Transcutaneous Auricular Vagus Nerve Stimulation on Chronic Knee Pain: A Pilot Study, *American Physical Therapy Association, 2024 Combined Section Meeting (CSM)*
9. **Aoyagi K**, Shababi R, Aviles N, Solis A, Perez E, Manriquez G, Rodriguez L, Neogi T, LaValley M, Edwards R, Lechuga J (2024) Sociocultural Influences on Central Pain Mechanisms and Knee Pain in People with Knee Osteoarthritis, *American Physical Therapy Association, 2024 Combined Section Meeting (CSM)*
10. Takano, Y., Hamachi, N., Matsuda, K., Shimoda. T., Okoba. R., Shimoi. T., and **Aoyagi K**. (2023) The Effect of Aerobic Exercise on Pressure Pain Thresholds in People with Chronic Low Back Pain *World Physiotherapy Congress 2023*
11. ***Aoyagi, K.**, L. Carlesso, N. Wang, L. Frey-Law, C. Lewis, M. Nevitt, and T. Neogi. (2023) Longitudinal Relation of Central Pain Sensitization to Development of Inefficient Descending Pain Inhibition in Knee Osteoarthritis: The Multicenter Osteoarthritis Study. *Osteoarthritis and Cartilage* 30, *2023 OARSI World Congress on Osteoarthritis*
12. ***Aoyagi K.**, Wang N., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2023). Longitudinal Trajectories of Pain Sensitization in People with or at Risk of Knee Osteoarthritis, *American Physical Therapy Association, 2023 Combined Section Meeting (CSM)*
13. Kumar K, Wang N, Frey Law L, Torabian K, **Aoyagi K**, Stefanik J, Carlesso L, Hausdorff J, Gazit E, Segal N, Lewis C, Nevitt M, Neogi T, Physical Activity and Nociceptive Dysfunction in Knee Osteoarthritis: The Multicenter Osteoarthritis Study, *2023 Combined Sections Meeting (CSM)*
14. ***Aoyagi K.**, Wang N., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2022). Longitudinal Trajectories of Central Pain Sensitization in People with or at Risk of Knee Osteoarthritis, *American College of Rheumatology Convergence 2022*
15. **Aoyagi K.**, Wang N., Frey-Law L., Rabasa G., Lewis CE., Nevitt M., Neogi T. (2022). Relation of PainDETECT to Unpredictable Pain in People with or at Risk of Knee Osteoarthritis, *American College of Rheumatology Convergence 2022*
16. Kumar D., Wang N., Torabian K., **Aoyagi K.**, Stefanik J., Frey-Law L., Carlesso L., Hausdorff J., Gazit E., Segal N., Lewis CE., Nevitt M., Neogi T. Associations of Nociceptive Dysfunction with Physical Activity in Knee Osteoarthritis: The Multicenter Osteoarthritis Study, *American College of Rheumatology Convergence 2022*
17. Torabian K., Neogi T., Wang N., **Aoyagi K.**, Lee S., Stefanik J., Frey-Law L., Carlesso L., Hausdorff J., Gazit E., Segal N., Lewis C., Nevitt M., Kumar. D. (2022) Associations of Central Pain Sensitization with Wearable Sensor-Derived Gait Complexity and Dynamic Stability in Knee Osteoarthritis: The Multicenter Osteoarthritis Study, *IASP World Congress 2022*
18. Lee, S., T. Neogi, K. E. Costello, N. Shah, M. J. Rose, B. Friscia, **Aoyagi K**. Torabian, et al. "Association of Conditioned Pain Modulation with Exercise-Induced Hypoalgesia in Knee

Osteoarthritis." *Osteoarthritis and Cartilage* 30 (2022): S383.

<https://doi.org/10.1016/j.joca.2022.02.515>. <https://doi.org/10.1016/j.joca.2022.02.515>

19. **Aoyagi K.**, Carlesso L., Wang N., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2022). Longitudinal Relation of Central Pain Sensitization to Development of Inefficient Descending Pain Inhibition in Knee Osteoarthritis: The Multicenter Osteoarthritis Study (MOST). *2022 OARSI World Congress on Osteoarthritis*
20. Mehta A., Costello KE., Rose MJ., Lee S., Frey-Law L., **Aoyagi K.**, Neogi T., Kumar D. (2022). Association between Impaired Exercise Induced Hypoalgesia and Physical Activity in People with Knee Osteoarthritis. *American Physical Therapy Association, 2022 Combined Section Meeting (CSM)*
21. **Aoyagi K.**, Carlesso L., Frey-Law L., G Rabasa., Lewis CE., Nevitt M., Neogi T. (2021). Relation of Depressive Symptoms to Alterations in Conditioned Pain Modulation in Knee Osteoarthritis: The Multicenter Osteoarthritis Study (MOST). *American College of Rheumatology Convergence 2021*
22. ***Aoyagi K.** (2021). Central Pain Mechanisms in Chronic Pain, A Short Review. The 32nd Japanese Society for Musculoskeletal Medicine (Annual Meeting), Fukuoka, Japan
23. **Aoyagi K.**, Jafarzadeh RS., LaValley M., Wang N., Carlesso L., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2021). Development of a Pain Sensitivity Index to Examine the Transition from Intermittent to Constant Pain in Knee Osteoarthritis: The Multicenter Osteoarthritis Study (MOST), *2021 OARSI World Congress on Osteoarthritis*
24. **Aoyagi K.**, Liew JW., Farrar JT., Wang N., Carlesso L., Kumar D., Frey-Law L., Lewis CE., Nevitt M., Neogi T. Does Weight-bearing Versus Non-weight-bearing Pain Reflect Different Pain Mechanisms in Knee Osteoarthritis?: The Multicenter Osteoarthritis Study (MOST), *2021 OARSI World Congress on Osteoarthritis*
25. ***Aoyagi K.**, Jafarzadeh RS., LaValley M., Wang N., Carlesso L., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2020). Development of a Pain Sensitivity Index to Examine the Transition from Intermittent to Constant Pain in Knee Osteoarthritis: The Multicenter Osteoarthritis Study (MOST). *American College of Rheumatology Convergence 2020*
26. ***Neogi T**, Wang N, **Aoyagi K**, Frey Law L, Lewis CE, Nevitt M, Carlesso L. Relation of Pain Mechanisms to Development of Knee Pain in Osteoarthritis: The Multicenter Osteoarthritis Study (MOST). *Arthritis Rheumatol.* 2020; 72
27. **Aoyagi K.**, Liew JW., Farrar JT., Wang N., Carlesso L., Kumar D., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2020). Does Weight-bearing Versus Non-weight-bearing Pain Reflect Different Pain Mechanisms in Knee Osteoarthritis? The Multicenter Osteoarthritis Study (MOST). *American College of Rheumatology Convergence 2020*
28. **Aoyagi K.**, Jafarzadeh SR., Carlesso L., Chen X., Frey-Law L., Lewis CE., Nevitt M., Neogi T. (2020). Can Opioid-induced Hyperalgesia Be Detected in People With or At Risk of Knee OA? The MOST Study, *2020 OARSI World Congress on Osteoarthritis* (Conference canceled due to COVID-19)
29. ***Neogi, T.**, Wang, N., **Aoyagi, K.**, Law, L. F., Lewis, C. E., Nevitt, M., & Carlesso, L. (2020). Relation of Pain Mechanisms to Development of Knee Pain in Osteoarthritis in the Multicenter Osteoarthritis Study (MOST). *Osteoarthritis and Cartilage*, 28, S43. (Conference canceled due to COVID-19)
30. ***Kumar D**, Peloquin C, **Aoyagi K**, Marinko L, Camarinos J, Felson DT, Dubreuil M, Neogi T (2020) Physical Therapy Reduces Opioid Utilization Following Knee Replacement Surgery. *2020 OARSI World Congress on Osteoarthritis* (Conference canceled due to COVID-19)
31. ***Bowlín M.L**, Deghand AN, Vaughan J, **Aoyagi K**, Sharma NK (2020), Aerobic Exercise Intervention on Central Sensitization in Chronic Low Back Pain Patients: A Case Series, *Kansas Physical Therapy Association Annual Spring Conference, Wichita, KS, USA*

32. ***Aoyagi K**, Doyle A, He J, Nicol A, Clauw D, Kluding P, Jernigan S, Sharma N, (2019), A Subgroup of Chronic Low Back Pain Patients with Central Sensitization, *Kansas Physical Therapy Association Annual Spring Conference, Wichita, KS, USA*
33. ***Aoyagi K**, He J, Clauw DJ, Nicol AL, Kluding P, Doyle A, Vaughan J, Sharma NK, (2019), Central Sensitization in Chronic Low Back Pain, *Student Research Forum, University of Kansas Medical Center, KS, USA*
34. Courtney CA, **Aoyagi K**, Fernández-de-las-Peñas C, Madeleine P, (2019), Bilateral Sensory Deficits and Widespread Hyperalgesia Following Delayed Onset Muscle Soreness of the Quadriceps, *EFIC Congress-European Pain Federation, Valencia, Spain*
35. Vaughan JB, **Aoyagi K**, Doyle A, Sharma NK, (2019), Investigating Effects of Aerobic Exercise on Central Sensitization in Chronic Low Back Pain, *Kansas Physical Therapy Association Annual Spring Conference, Wichita, KS, USA*
36. ***Vaughan J, Aoyagi K**, Sharma NK, (2019), Investigating Effects of Aerobic Exercise on Central Sensitization in Chronic Low Back Pain, *Student Research Forum, University of Kansas Medical Center, KS, USA*
37. ***Doyle A, Aoyagi K**, Sharma NK, (2019), Categorizing Chronic Back Pain with Central Sensitization, *Student Research Forum, University of Kansas Medical Center, KS, USA*
38. ***Aoyagi K**, Sharma N, (2018), Phenotyping Chronic Low Back Pain People with Central Sensitization: Clinical Application, *Kansas Physical Therapy Association Annual Spring Conference, Wichita, KS, USA*
39. ***Aoyagi K**, Sharma N, (2018), Phenotyping Chronic Low Back Pain People with Central Sensitization, *Student Research Forum, University of Kansas Medical Center, KS, USA*
40. **Aoyagi K**, He J, Clauw D, Nicol A, Sharma N (2018), Subgroup of Chronic Low Back Pain Patients with Central Sensitization, *Kansas City Musculoskeletal Diseases Consortium, 3rd annual symposium, Kansas City, MO, USA*
41. Sharma NK, Melton BL, Liu M, Kimminau K, Jernigan C, Leyland C, **Aoyagi K**, Hurley RW, Waitman RL, (2017), Opioids and Rehabilitation Following Lumbar Spine Surgery: A Cross-Sectional Study, *Greater Plains Collaborative Learning Engagement Conference, Kansas City, KS, USA*
42. Aoyagi K, (2012), Improvement Effects on Lower Back Pains of patients with Lumbar Hyperlordosis by Wearing Front (Toe) Elevated Insoles, *62nd JHA (Japan Hospital Association) Congress Fukuoka, FK, Japan*

Institutional/Reginal Presentations

Mentored Student Presentation

43. Barajas L, Lares S, Macias-Esplana N, Acosta LA, Lopez E, **Aoyagi K**. (2025). The Association of Social Support with Response to Leg Cycling Ergometer Exercise in Knee Osteoarthritis Pain in a Hispanic Dominant Community, *National Conference on Undergraduate Research (NCUR) 2025*
44. Macias-Esplana N, Hernandez P, Arias J, **Aoyagi K**. (2024), Relations of Psychological Symptoms to Pain Experience in People with Knee Osteoarthritis in a Predominantly Hispanic Community, *UTEP, Spring 2024 COURI Symposium*
45. Lopez E, Barajas L, Acosta-Lopez LA, **Aoyagi K**. (2024), Social Support and Exercise Effects on Pain in Knee Osteoarthritis, *UTEP, Spring 2024 COURI Symposium*

Invited Talk

International

Role: Principal Investigator 2024-2025 \$2,000.00
 Title: Exercise and Knee Osteoarthritis Pain
 Purpose: Explore associations of patient characteristics with exercise effects on pain

Health Resources and Services Administration, United States Department of Health and Human Services

Role: Co-Investigator 2023-2025 \$350,000.00
 Title: I-REACH Rural Veterans
 Purpose: The purpose is to develop training to improve healthcare, education, and employment access among rural Veterans with and without disabilities and my role is to educate rural veterans to better understand chronic pain and facilitate better access to existing resources to mitigate their symptoms

UTEP Community-Academic Partnership Capacity-Building Program Award

Role: Co-Principal Investigator Nov 2022-Oct 2023 \$7,000.00
 Title: Pain Sensitivity and Central Pain Mechanisms among Older Adult Hispanic Americans and non-Hispanic Whites: The Role of Daily Activity and Sociocultural Factors
 Purpose: Compare relations of daily activity and sociocultural factors to central pain sensitivity among people with Hispanic background with those among Non-Hispanic White

University of Texas at El Paso Research Start-Up Funds

Role: Principal Investigator Sep 2022-Aug 2024 \$165,017.00
 Purpose: Develop the PI’s research program and fund preliminary studies needed to be competitive for extramural research support.

Funded Research Grant Application Contributions

2018-2019 University of Kansas Medical Center, Research Pilot Award, Role: Grant Writing
 Project: The effects of aerobic exercise on central sensitization in people with chronic low back pain.
 2017-2018 Greater Plains Collaborative Pilot Grant, Role: Preliminary Data Collection
 Project: Impact of variability in pain management and physical therapy services following lumbar spine surgery.

EDITORIAL AND PROFESSIONAL ACTIVITIES

NIH Review Service:

2025 NIH Study Section (ZRG1 CCHI-E (90)): HEAL Initiative, Understanding Individual Differences in Human Pain Conditions (Special Emphasis Panel for R01 applications)

Editorial Board:

2021-Present Frontiers in Neurology

National Conference Abstract Reviewer:

2024 American College of Rheumatology Convergence, PAIN CONDITIONS AND FIBROMYALGIA category

Ad Hoc Reviewer:

2024-Present Clinical Journal of Pain
 2023-Present Osteoarthritis and Cartilage
 2023-Present Therapeutic Advances in Musculoskeletal Disease
 2022-Present Journal of Applied Biomechanics

2022-Present	BMJ Open
2021-Present	Pain
2021-Present	Journal of Pain Research
2021-Present	Pain Medicine
2020-Present	Arthritis Care & Research

Membership:

2022-Present	American Physical Therapy Association
2019-Present	International Association for the Study of Pain
2019-Present	American College of Rheumatology
2019-Present	Osteoarthritis Research Society International
2005-2013	Japanese Physical Therapy Association

PROFESSIONAL DEVELOPMENT

May 2024 -Present	NIH All of US Biomedical Researcher Scholars Program, <u>Baylor College of Medicine</u> , TX
Sep 2022-Present	NIH P30 Boston Musculoskeletal Clinical Research Collaboratory Program (P30AR072571), <u>Boston University School of Medicine</u> , MA
Sep 2022- May 2023	<i>STAR@UTEP Program (NIH Jumpstart program), Nine-month grant writing and career development program, <u>University of Texas at El Paso</u>, TX</i>
May 2022	<i>2022 VERITY/Brigham Course in Rheumatology Clinical Research</i> , Brigham and Women's Hospital, <u>Harvard Medical School</u> , Boston, MA
Oct 2021-Aug 2022	<i>The Inclusive STEM Teaching Project, Six-week Course Regarding Diversity, Equity and Inclusion, <u>Boston University</u>, Boston, MA</i>
Jan 2021-May 2021	<i><u>Boston University Clinical and Translational Science Institute (CTSI)</u>, The Program for Early Research Career Development (PERC), Boston, MA</i>
Oct 2020-Aug 2022	<i><u>Boston University Clinical and Translational Science Institute (CTSI)</u>, Developing Your Research Career: An Interactive Seminar Series, Boston, MA</i>
Jan 2020-May 2020	<i>A graduate course, BS852 Statistical Methods in Epidemiology, Fall 2019, Boston University School of Public Health, Boston, MA</i>
Jun 2017	<i>Treating Pain Based on the Underlying Mechanism: Are We There Yet?</i> , KUMC, KS, USA, Lecturer: Daniel J Clauw, M.D

TEACHING EXPERIENCE

2022-Present **Entry-level Doctor of Physical Therapy Program (DPT Program), UTEP, USA**

Role: Course Instructor

- *PT 6216: Research Methods*
- *PT 6206: Tests and Measures*
- *PT 6407: Medical Kinesiology and Motion Analysis*
- *PT6215: Special Populations*
- *RSRC 4033: Undergraduate Research*

2015-2019 **DPT Program, KUMC, USA**

Role: Lab instructor (PT assessments and treatments), grader for practical exams/case presentations, lecturer, etc.

- *PTRS 745: Orthopedic Physical Therapy I*

- *PTRS 845: Orthopedic Physical Therapy II*
- *PTRS 846: Orthopedic Physical Therapy III*
- *PTRS 705: Physical Therapy Interventions II*
- *PTRS 746: Musculoskeletal Conditions and Management*
- *PTRS 750: Research in Evidence-Based Physical Therapy Practice*
- *PTRS 853: Neurologic Physical Therapy and Rehabilitation II*

Invited Lectures:

2024-Present DRSC 6390: Neuroscience, "Neuroanatomy of Pain", DPT/OTD Programs, UTEP
 2023-Present PT 6233: Behavioral Sciences, "Biopsychosocial, Behavioral, and Cultural Factors for Chronic Pain", DPT Program, UTEP
 2023-Present PT 6304: Evidence-Based Practice in Physical Therapy, "Fundamental Statistical Knowledge to Read Scientific Papers", DPT Program, UTEP
 2023-2024 PT 6203: Differential Diagnosis, "Pain", DPT Program, UTEP

Continuing Education Course for Physical Therapists:

2024 Multifactorial Natures of Chronic Pain and How to Incorporate the Latest Knowledge into Clinical Practice, El Paso, Texas

MENTORING AND SUPERVISING ACTIVITIES

2022-Present **Department of Physical Therapy & Movement Sciences, UTEP, USA**

PhD Students in Interdisciplinary Health Sciences

Role: Dissertation Committee Member

2024-Present Richard Petri, MD,
 Dissertation title: Integrative Chronic Pain Management among Veterans
 2025-Present Leonardo Teixeira da Silva's
 Dissertation Title: Sedentary Behaviors in Stroke Survivors

DPT Students

Role: Capstone Project Chair

28 cohort

Lauren Barajas, Erik Lopez, Acosta-Lopez Lucero
 Project title: TBD

27s cohort

Casandra Barua, Childers Kavon, Vaibhav Jaideep, Alan Medina, Chukwuemeka Ojinnaka, Elias Rivas, Melissa Santillan
 Project title: TBD

26s cohort

Sabrina Arias, Gary Carrasco, Tania Castillo-Munoz, Sarah Murillo, Kaitlyn Asato, Janelly Lugo-Martinez
 Project title: "Comparing Effects of Upper Extremity versus Lower Extremity Exercise on Exercise-Induced Hypoalgesia in People with Knee Osteoarthritis: A Pilot Cross-over Study"
Two abstracts submitted for the 2026 APTA Combined Section Meeting (CSM)

25s cohort

Alicia Gomez, Natalia Aviles, Roxanna Shababi, Layla Rodriguez
 Project title "Relations of heart rate variability to central pain mechanisms and knee pain in knee osteoarthritis"
Presented at American Physical Therapy Association, 2024 Combined Section Meeting (CSM)

Alexa Solis, Eric Perez, Gage Manriquez

Project title: "Relations of sociocultural factors to central pain mechanisms and knee pain in people with knee osteoarthritis"

Presented at American Physical Therapy Association, 2024 Combined Section Meeting (CSM)

24s cohort

Amal Matthew, Zachary Mucha, Payton Wall, Timothy Worley

Project title: "The Influence of Strength and Endurance on Climbing Performance and Recovery"

Mater's Students

Role: Thesis Committee

2023-Present Klarissa Siebert, Department of Public Health Sciences

Project title: Associations Between Social Determinants of Health and Pain Outcome Changes After Exercise in Adults with Knee Osteoarthritis""

2025-Present Zahra Fatahimeiabadi, Department of Kinesiology

Project title: "The Feasibility and Impact of Self-Administered Neuromuscular Electrical Stimulation on Glycemic Control in people with Hyperglycemia"

2025-Present Veronika Lebisova, Department of Kinesiology

Project title: "Effects of AI-based visual feedback on gait mechanics in patients with chronic ankle disability"

2022-Present **Department of Rehabilitation Sciences, UTEP, USA**

Bachelor of Rehabilitation Sciences Students

Role: Undergraduate Research Mentor

Jesus Arias, David Parish, Sergio Lares

2021-2022 **Boston University School of Medicine, USA**

MS student in Medical Science

Served as a thesis committee

Kaveh Torabian

Thesis title "Associations of Central Pain Sensitization with Wearable Sensor-Derived Gait Complexity and Dynamic Stability in Knee Osteoarthritis: The Multicenter Osteoarthritis Study"

2017-2019 **Department of Physical Therapy and Rehabilitation Science, KUMC, USA**

PhD students in Rehabilitation Science

Served as a supervisor to teach following research-related activities

Batool Alkhamis, PhD student

- IRB protocol submission process
- Subject recruitment
- Data collection
- Running treatment sessions

DPT Students

Andrew Doyle

Research project title "Phenotyping Chronic Low Back Pain with Central Sensitization"

Jacquelyne Vaughan

Research project title "The Effects of Aerobic Exercise for Chronic Low Back Pain with Central Sensitization"

High School Students

Eric Terrazas

Project title "Effects of yoga on pain and gait distance following lumbar spine surgery"

Christine Ibeagi

Project title "The Effects of Yoga on anxiety and hospital length of stay following lumbar spine surgery"

India Barnett

Project title "The Pain Modulation System"

2005-2013 **Nishi-Fukuoka Hospital, FK, Japan**

Entry-level Physical Therapy Students

Clinical supervisor for 6 Japanese PT students for their clinical internships

Novice Physical Therapists, Physicians, Nurses and Outpatients

- Pain management using PT interventions
- Postural Drainage
- Bed Mobility/Transfer
- Fall Prevention
- Diabetic Symptom Management

HONORS AND AWARDS

2024-2025	NIH All of Us Biomedical Researcher Scholars Program Award, Baylor College of Medicine, USA
2022-2023	STAR@UTEP Program (NIH Jumpstart mentorship program), UTEP, USA
2022	Training in VERITY/Brigham Course and Mentorship Program in Rheumatology Clinical Research, Brigham and Women's Hospital, Harvard Medical School, Boston, USA
2016-2019	Ringle-Norton Health Professions Scholarship, KUMC, USA
2018-2019	KUMC SGC Travel Award, KUMC, USA
2019	Open Access Author Fund Award, KUMC, USA
2018	Outstanding Graduate Teaching Assistant Award, KUMC, USA
2018	Oral Presentation H, 2 nd Place, Student Research Forum, KUMC, USA
2014	The UIC Department of PT Award, UIC, USA
2014	The Van Doren Scholarship, UIC, USA
2009	Director's Award, Nishi Fukuoka Hp, Japan

SERVICES/LEADERSHIP

2025-Present	Secretary, Research Committee, College of Health Sciences, UTEP
2023-Present	Vice-chair, Research Committee, Department of Physical Therapy and Movement Sciences, UTEP
2022-2025	Member, Research Committee, College of Health Sciences, UTEP
2022-2023	Member, Research Committee, Department of Physical Therapy and Movement Sciences, UTEP
2016	President of Orthopedic Seminar Series, KUMC, USA
2011-2013	President of Respiratory Support Team, Nishi Fukuoka Hp, Japan
2008-2013	Section Leader of Outpatient PT, Nishi Fukuoka Hp, Japan
2005-2013	Founder of Rehabilitation Study Group, Nishi Fukuoka, Japan