

Natalia Palacios, ScD

**Associate Professor, with Tenure
Department of Public Health, Zuckerberg College of Health Sciences
University of Massachusetts, Lowell**

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A. EDUCATION

Nov 2008	Sc.D., Nutrition, Harvard University, Cambridge, MA
June 2005	M.S., Epidemiology, with minor in Biostatistics, Harvard University, Cambridge, MA
May 2003	B.A., Biochemistry (Magna cum Laude), Rice University. Houston, TX

B. ACADEMIC APPOINTMENTS

Sep. 2022 - Present	Associate Professor with Tenure, Department of Public Health, University of Massachusetts, Lowell, MA
June 2024 - Present	Visiting Scientist, Department of Biostatistics, Harvard T.H. Chan School of Public Health, Boston, MA
Nov. 2019 - Present	Scientist, Department of Veterans Affairs, Edith Nourse Rogers Memorial Veterans Hospital, Bedford, MA
Sep. 2016 - Aug. 2022	Assistant Professor, Department of Public Health, University of Massachusetts, Lowell, MA
Sep. 2012 - Aug. 2016	Instructor in Medicine, Harvard Medical School, Boston, MA
Jan. 2014 - Aug. 2016	Research Scientist, Harvard T.H. Chan School of Public Health, Boston, MA
Nov. 2008 - Dec. 2013	Research Associate, Harvard T.H. Chan School of Public Health, Boston, MA

C. PROFESSIONAL SERVICE AND LEADERSHIP

2026	Session Chair, Systemic Microbial and Metabolomic Pathways Linking Peripheral Physiology to AD/ADRD Pathology. Alzheimer's Association International Conference (AAIC). July 13, 2026.
2025-Present	AAIC Executive Committee. Elected Leadership Position within the Nutrition Metabolism and Dementia Professional Interest Area (PIA), International Society to Advance Alzheimer's Research and Treatment. Leading the organization of a research session focused on the gut microbiome and Alzheimer's Disease at the 2025 Alzheimer's Association International Conference.

- 2025, Sep Symposium co-organizer: ***“Gut Microbiome and Brain Health: From Depression to Dementia and Beyond”*** at the 17th World Congress of Biological Psychiatry, 9-12 September 2025 in Berlin, Germany at the Estrel Berlin Hotel & Convention Center.
- 2024, May Harvard Microbiome in Public Health Center Annual Symposium, May 2024 – **Session Chair** (introducing plenary speaker and other speakers, member of planning committee)
- 2019 - Present Founding Scientific Team Member - Harvard Microbiome in Public Health Center
- 2021 - Present Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE) Consortium - Microbiome Working Group Member. Part of international group of collaborators to coordinate and optimize use of microbiome data for aging-related research.
- 2020 – Present Advisory Board for NIH R24, Resource-Related Research Project (R24 PI: Prof. Curtis Huttenhower, Harvard T.H. Chan School of Public Health). Responsibilities: advise project PI and his team on how to make data resources generated in R24 project useful to the scientific community. Annual meeting with overall advisory board and quarterly meetings with R24 PI and his team.

D. REVIEW OF EXTRAMURAL GRANT APPLICATIONS (Invited)

National Institutes of Health (NIH):

- 2026, January, 2024, December 2022 December. Reviewer. NIH Director’s New Innovator Award
- 2025, October-December. Reviewer. Aging Systems and Geriatrics study section.
- 2025, July. Reviewer. PAR Panel Maximizing Investigators’ Research Award (R35).
- 2025, March, 2024, July, 2023, November. Reviewer Special Emphasis Panel on neurodegenerative disease.
- 2024, April. Reviewer. U01 “A Consortium for Gut Brain Communication in Parkinson’s Disease”.
- 2019, February. Reviewer. U19 Alzheimer’s Disease Panel.

United States Department of Defense (DOD):

- 2025 October. **Chair (Ad-Hoc)** and Scientist Reviewer. Transforming Research Panel.
- 2024, October. **Chair (Ad-Hoc)** and Scientist Reviewer. Biomarker and Mechanism Panel.
- 2023, December. Scientist Reviewer, Toxic Exposures Research Program Panel.
- 2019, October. Scientist Reviewer. Directed Medical Research Programs (CDMRP).
- 2017, October. Scientist Reviewer. Directed Medical Research Programs (CDMRP).

Private Foundation

2021, May. French Multiple Sclerosis Research Society, International Reviewer. Reviewing funding proposals focused on microbiome and Multiple Sclerosis.

2016, October. The Michael J Fox Foundation Scientist Reviewer, Data Challenge Grant Reviewer

E. ACADEMIC JOURNAL EDITORIAL BOARD SERVICE (ELECTED)

2024 - present *BMC Medicine*, Associate Editor

2024 - present *Journal of Alzheimer's Disease*, Associate Editor

2015 - 2016 *Advances in Epidemiology*, Associate Editor

F. PROFESSIONAL SOCIETY MEMBERSHIP

2025 - Present Executive Committee (elected), Nutrition, Metabolism and Dementia Professional Interest Area.

2020-Present Member, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART)

Executive Committee (elected), Nutrition, Metabolism and Dementia Professional Interest Area (PIA).

2016-Present Member, American Academy of Nutrition

2010-Present Member, American Academy of Neurology

2016-Present Member, Society for Epidemiological Research
-Annual Conference Abstract Reviewer

G. PROFESSIONAL TRAINING AND WORKSHOPS

2018, Oct "Using Metabolomics Data in Network Medicine" Harvard Catalyst Workshop, October 2018, *One day workshop in novel techniques for metabolomics data analysis.*

2018, August "Strategies and Techniques for Analyzing Microbial Population Structures." Marine Biological Laboratory Summer Course, Woods Hole MA, *Ten-day intensive workshop focused on state-of-the-art techniques for microbiome data analysis.*

H. PROFESSIONAL HONORS AND AWARDS

a. University of Massachusetts, Lowell, Department of Public Health Teaching Award, April 2021

b. NIH K01 Mentored Research Scientist Award

- c. Ruth L. Kirschstein National Research Service Award (NRSA) for Pre-doctoral and Post-Doctoral Training in Epidemiology.
- d. Phi Beta Kappa (as undergraduate at Rice University)
- e. Golden Key National Honor Society
- f. National Society of Collegiate Scholars

I. MANUSCRIPT PEER REVIEW (as requested).

Annals of Neurology, Journal of Alzheimer’s Disease, American Journal of Epidemiology, , Movement Disorders, Neurology, Parkinsonism and Related Disorders, Pharmacogenomics and Personalized Medicine, PLoS One, European Journal of Neurology, Epilepsy, Annals of Clinical and Translational Neurology, Environmental Research, Journal of Nutrition Journal of Alzheimer’s Disease, Environmental Health Perspectives
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J. CONSULTING AND OTHER PROFESSIONALLY - RELATED WORK

2024-2025	University of Massachusetts, Lowell Institutional Review Board, Consultant/Scientific Reviewer
2012-2016	Chief Operating Officer, Cambridge Electronics (now Finwave Semiconductor), a semiconductor startup out of MIT. Jan 2012-Aug 2016. Part Time.
2008-2009	MIT, Media Laboratory, July 2008 – May 2009. Cambridge, MA. <i>Epidemiology Consultant</i> , New Media Medicine Group. Consulted on study design to aid with the implementation of online community for patients affected by rare diseases, such as Lymphangioleiomyomatosis (LAM).
2001	Microsoft Corporation, June-September 2001, Seattle, WA <i>Software Test Engineer Intern</i> , Development of a C++ program to perform run-time translation of text in menus and dialogs of foreign versions of Microsoft Outlook.®

K. RESEARCH

i. ACTIVE/FUNDED RESEARCH GRANTS

National Institutes of Health (NIH):

2023-2028	NIH R01AG075922. Role: PI. “Microbiome Multi-Omics and Cognitive Decline in Latinos” National Institutes of Health/National Institute of Aging (NIA). Budget: 3,280,719 (5 years)
2025-2030	NIH 1R01AG085320. Role: PI. “Microbiome and AD/ADRD Risk in SOL” National Institute of Health/National Institute of Aging (NIH/NIA). Budget: \$3,906,380 (5 years).

US Department of Agriculture:

2024-2025	United States Department of Agriculture and Research Food Research Initiative. Foundational and Applied Science Program. Role PI. Budget: \$142,733 (one year).
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Foundation, Private and Internal Funding:

2021 - Present	Eisai Pharmaceuticals. Role. Co-I. (PI Dr. Weiming Xia, Boston University). “Natural History, Care Pathways and Resource Utilization in Alzheimer’s Disease.” Budget: \$50,000
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- 2023 - 2024 UML Internal Grant, **Role: PI.** “*The Gut Microbiome, VOC and Alzheimer’s Dementia in Veterans.*” Budget: \$20,000.
- 2024 - 2025 UML Internal Grant, **Role: Co-I** (PI Dr. Natalie Steinel, UML) - *Multi-omic network analysis of the gut-brain-immune axis.* Budget: \$15,000

ii. COMPLETED RESEARCH GRANTS

National Institutes of Health:

- 2016-2024 **NIH R01NS097723. Role:PI.** “*The Gut Microbiome and Parkinson Disease*”, National Institute of Neurological Disease and Stroke. **Budget: \$2,814,693.**
- 2010-2016 **NIH K01 Mentored Research Scientist Award. Role: PI.** Agency: “Air Pollution and Parkinson’s Disease”. National Institute of Environmental Health Sciences. **Budget: \$595,786.**

Foundation, Private and Internal Funding:

- 2019 - 2020 UML Internal Grant. **Role: PI.** *The Gut Microbiome and Cognition.* Budget: \$10,000.
- 2020 Eisai Pharmaceuticals. **Role: Co-I** (PI Donald Miller, Dept. of Veterans Affairs). “Epidemiology of Alzheimer’s Disease”. Subcontract to UML. Budget: \$60,000.
- 2020 - 2021 Intergovernmental Personnel Act (IPA) agreement, Department of Veterans Affairs. **Role: PI.** Budget: \$16,429.
- 2020 UML Internal Grant. **Role: PI.** *Epidemiology and risk factors for COVID-19 Infections and outcomes in U.S. Veterans* Budget: \$10,000.
- 2018 - 2020 UMass Center for Clinical and Translational Science Pilot Program. **Role: PI.** “*Parkinson’s Microbiome Biorepository*” Budget: \$50,000.
- 2015 - 2016 National Multiple Sclerosis Society Research Grant. **Role: PI.** Budget: \$76,554
- 2010 - 2012 Chronic Fatigue (CFS) Initiative Foundation Grant. **Role: PI** 2010-2012, Budget: \$241,581

iii. PENDING RESEARCH GRANTS (under review or preparing re-submission)

National Institutes of Health:

- 2025 - Present NIH R21.** Gut Virome and Alzheimer in Latinos. Under Review, Submitted March 2024. Impact Score 36. 19%. Status: Under Review.
- 2025 - Present NIA R01.** Role: Co-I. PI: Hadi Amiri UML. “AI for Cognitive Decline”. Submitted June 2025. Status: Under Review.
- 2025 - Present NIA A2 Pilot Award.** Role: Co-I. PI: Hadi Amiri UML. Multimodal AI for Cognitive Decline: Robust Detection and Adaptive Cognitive Coaching. Status: Under Review.

National Science Foundation:

2025 - Present **Smart and Connected Health Program. Role: Co-PI.** Collaborative Research: SCH: BreathDX: AI-Powered 2D Materials Platform for Non-Invasive Biomarker Detection. Budget: \$442,088.

2025 - Present **Smart and Connected Health Program. Role: Co-PI.** Interpretable and Low-Latency Unlearning for Robust Detection of Cognitive Decline. Budget: 762,920.

Pending Re-Submission:

NIH U01 “Multiplex Sensor System for Fast Diagnosis of Disease Breath” Role: co-PI with Prof. Tomas Palacios, Massachusetts Institute of Technology. Submitted June 2021. Application selected as the one submission permitted from MIT. Pending re-submission.

NIH R21, “The Gut Microbiome and Depression in a Cohort of Puerto Ricans”. NIH, National Institute of Minority Health, \$273,569, **Scored 18% (impact score 32) on first submission, (pending re-submission); PI**

NIH R01 “Alzheimer in 3D: cloud, spheroid, and blood”. NIH/National Institute of Aging. \$250,000 subcontract to UML. PI: Weiming Xia, Boston University. **(Impact score 56, pending re-submission). Co-I**

NIH SCENT Program “Multiplex Sensor System for Fast Diagnosis of COVID-19 from Patient’s Breath” PI: Tomas Palacios, Massachusetts Institute of Technology. Submitted September 2020. Role: Co-I. Grant selected as the one submission permitted from MIT. (pending re-submission)

NIH R01 “COVID-19 and ADRD in Veterans.” NIH/National Institute of Aging. Total Budget: 1,127,202 over 3 years (modular R01). Submitted: November 2020. Role: PI. (pending re-submission)

iv. PUBLICATIONS

Published and/or Accepted Manuscripts:

^ authored by UML doctoral or masters student working directly under my mentorship.

1. Merrill LC, Noel SE, Martínez RL, Mattei J, **Palacios N**, Wang Y, Tucker KL, Mangano K. Performance of Cohort Adapted Dietary and Lifestyle Inflammation Scores Among Hispanic Adults. Accepted at *Frontiers in Nutrition*.
2. Dinesh D., Pakalapati T., Gordon S., Morgan X., Mangano KM., Noel S., Lee J.S., Scott T.M., Huttenhower C., Tucker K.L., **Palacios N**. Gut Microbial Variations Associated with Proton Pump Inhibitor Use in the Boston Puerto Rican Health Study. Accepted, *Pharmacology Research & Perspectives*. 2025
3. Merrill, L, Noel, S, Wang, Y; Dawson-H, Bess; **Palacios, N**; Tucker, K; Mangano, K. " Gut microbes related to the Dietary Approaches to Stop Hypertension index are associated with bone quantity but not with measures of bone quality in older Puerto Rican adults." Accepted, *American Journal of Clinical Nutrition*. Impact Factor: 6.77.
4. **Palacios N.**, Gordon S, Wang T, Burk R, Qi Q, Huttenhower C, Gonzalez HM, Knight R, De Carli C, M Daviglius M, Lamar M, Telavera G, Tarraf W, Kosciolk T, Cai J, Kaplan R.C. "Gut Microbiome Multi-Omics and Cognitive Function in a Large Latino Cohort." *Journal of Alzheimer's Disease*. 2025
5. Dinesh D, Tucker K.L, Scott T, **Palacios N**. "*Bowel Frequency, Laxative Use and Cognition in Boston-Area Puerto Rican Adults.*" *Journal of Aging Research*. 2025.
6. ^Gordon S, Lee JS, Scott TM, Bhupathiraju S, Ordovas J, Kelly RS, Bhadelia R, Koo BB, Bigornia S, Tucker KL, **Palacios N**. Metabolites and MRI-Derived Markers of AD/ADRD Risk in a Puerto Rican Cohort. *Metabolomics*. 2025.

7. Essien-Aleksi, E. I., Zhang, Y., Koren, A., **Palacios, N.**, Falcon, L. M., & Tucker, L. T.. The Mediating Effect of Depression on the Relation Between Perceived Discrimination and Persistent Prescription Opioid Use Among Puerto Rican Adults. Accepted for Publication *Journal of Addictions Nursing*, Oct-Dec. 2024.
8. **Palacios N**, Lee J.S., Scott T.⁴, Kelly R.S., Bhupathiraju S.N., Tucker K.L. "Carnitines Associated with Lower Depressive Symptomatology in a Mainland Puerto Rican Cohort". *Metabolomics*. July 2024.
9. Byron J. Aguilar, PhD, Guneet K. Jasuja, PhD, Xuyang Li, BS, Ekaterina Shishova, PhD, **Natalia Palacios**, Dan Berlowitz, MPH, MD, Peter Morin, MD, PhD, Maureen K O'Connor, PsyD, Andrew Nguyen, BS, Joel Reisman, BS, Yue Leng, PhD, Raymond Zhang, MS, Amir Abbas Tahami Monfared, MD, PhD, Quanwu Zhang, PhD, Weiming Xia, PhD, "Prevalence of Mild Cognitive Impairment and Alzheimer's Disease Identified in Veterans in the United States." Accepted: *Journal of Alzheimer's Disease*. April 2024.
10. ^Gordon S, Lee JS, Scott TM, Bhupathiraju S, Ordovas J, Kelly RS, Bhadelia R, Koo BB, Bigornia S, Tucker KL, **Palacios N**. Metabolites and Cognitive Decline in a Puerto Rican Cohort. *Journal Alzheimer's Disease*. Feb. 2024.
11. **Palacios N**, Wilkinson J, Bjornevik K, Schwarzschild MA, McIver L, Ascherio A, Huttenhower C. Metagenomics of the Gut Microbiome in Parkinson's Disease: Prodromal Changes. *Annals of Neurology*. 2023 Jun 14. doi: 10.1002/ana.26719. PMID: 37314861. Impact Factor: 11.27.
12. **Palacios, N**; Molsberry S., Fitzgerald K.C, Komaroff A.; "Different Risk Factors Distinguish Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome from Severe Fatigue Mononucleosis a Strong and Durable Risk Factor for ME/CFS." *Scientific Reports*. 2023 Feb 11;13(1):2469. doi: 10.1038/s41598-023-29329-x.
13. Essien-Aleksi, E. I., Zhang, Y., Koren, A., **Palacios, N.**, Falcon, L. M., & Tucker, L. T. (2023). Sociocultural Factors Affecting Persistent Prescription Opioid Use Among Puerto Rican PLOS one. 2023. Aug 22;18(8):e0290104
14. Prince N, Stav M, Cote M, Chu SH, Vyas CM, Okereke OI, **Palacios N**, Litonjua AA, Vokonas P, Sparrow D, Spiro A 3rd, Lasky-Su JA, Kelly RS. Metabolomics and Self-Reported Depression, Anxiety, and Phobic Symptoms in the VA Normative Aging Study. *Metabolites*. 2023 Jul 15;13(7):851. doi: 10.3390/metabo13070851 PMID: 37512558
15. Dinesh D, Lee JS, Scott TM, Tucker KL, **Palacios N**. "Association between Acid-Lowering Agents Metformin, and Vitamin B12 among Boston-area Puerto Ricans." *Journal of Nutrition*. 2023 Jun 9:S0022-3166(23)72410-3. doi: 10.1016/j.tjnut.2023.05.031
16. Dinesh D, Lee J.S., Scott T.M, Tucker K.L, **Palacios N**. "Proton Pump Inhibitor Use and Cognitive Function in the Boston Puerto Rican Health Study." *The Journals of Gerontology: Series A.Biol Sci Med Sci*. 2023. Aug 2: 78 (8): 1461-1470, <https://doi.org/10.1093/gerona/glac231> PMID: 36420642 PMCID: PMC10395560.
17. Dinesh D , Shao Q, Palnati M, McDannold, S, Zhang Q, Monfared A, Jasuja G, Davila H, Xia W, Moo L.R, MD^{9,10}, Miller D*, **Palacios N*** *co-senior authors "The Epidemiology of Alzheimer's Disease and Related Dementia in U.S. Veterans." *Alzheimer's and Dementia, Journal of the Alzheimer's Association*. 2023 Sep; 19 (9): 3977-3284. PMID: 37114952. doi: [10.1002/alz.13071](https://doi.org/10.1002/alz.13071). Impact Factor: 16.655.
18. Sahasrabudhe N. Lee J.S., Scott T, Zhang X., Scott T., Punnett L., Tucker K.L>, **Palacios N**. "The Mediterranean Diet and Depression in the Boston Area Puerto Rican Study." Annotation: CES-D score was consistently lower in those with higher MeD adherence over 5 years of follow up. Role: Senior Author. *Journal of Gerontology: Series A*. 2022. Impact Factor: 4.59.
19. ^Kuehl L., Lee, JS, Dinesh D., Na. M., Tucker K., **Palacios N**. "Food Insecurity and Physical Functioning in Boston Area Puerto Ricans". Public Health Nutrition Volume 25 , Issue 12 , December 2022 , pp. 3520 - 3526 (mentored UML MPH student project). Annotation: Food insecure participants had higher physical function scores over time, compared to those who were food secure. Role: Senior Author. 2022. Impact Factor: 3.18.
20. Guan Y, Ebrahimzadeh Y, Cheng C, Chen C, Leung T, Sherman Bigornia S. **Palacios N**, Garelnabi M.O, Scott T., Bhadelia R, Tucker K.L., Koo B *for the *Alzheimer's Disease Neuroimaging Initiative**. "Association of Type 2 Diabetes and Hypertension Comorbidity with Brain Structural Integrity. and Cognitive Capacity in Community-Dwelling Puerto Rican Adults." Annotation: Among Boston Area Puerto Ricans, those with concurrent diabetes and hypertension demonstrated significantly reduced hippocampal volume and accelerated brain aging compared to controls. *Neurology*. 2022 Apr 12; 98 (15). Impact Factor: 8.055.

21. ^Boumenna T., Scott. T., Lee J.S., Zhang X., Kriebel D., Tucker K. **Palacios N.** "MIND Diet and Cognitive Function over Eight Years in Puerto Rican Older Adults". Annotation: We examined the association between adherence to MIND diet and cognitive function over eight years of follow-up in Puerto Rican elders residing in the greater Boston Area. *Journal of Gerontology: Medical Sciences*. 2021 Sep 22. Role: Senior Author, doctoral thesis primary advisor. Impact Factor: 4.59.
22. Li M, Wang Y, Ndiwane N, Orner M.B., **Palacios N**, Berlowitz D., Kazis L.E., and Xia W. Association of COVID-19 occurrence and severity with the use of angiotensin converting enzyme inhibitors or angiotensin-II receptor blockers in patients with hypertension. Annotation: This work examined the association between use of common anti-hypertension medications and risk of COVID-19 in veterans with hypertension. *PLOS ONE* 2021 Mar 18; 16(3):e0248652. Role: collaborator. Impact Factor 2.87.
23. Song M, Everett C, Li C, Wilkinson JE, Nguyen LH, Ivey K, Izard J, **Palacios N**, Eliassen AH, Willett WC, Ascherio A, Sun Q, Tworoger SS, Chan AT, Garrett WS, Huttenhower C, Rimm EB, *Prospective Characterization of the Microbiome within Cohort Studies: Overview of the Microbiome among Nurses Study (MICRO-N)*. Annotation: This manuscript provides an overview of characterization of the microbiome in epidemiological cohort studies, using the ongoing large-scale stool collection in the Nurses Health Study (Micro-N) as an example. *Nature Protocols* 16 2724-2731 (2021) Role: collaborator. Impact Factor: 10.42.
24. ^Dinesh D, Lee JS, Gao X, **Palacios N**. Skin conditions in early Parkinson's disease. *Parkinsonism & related disorders*. 2021;84:40-46. Annotation: We examined the association between skin health and Parkinson's disease in the Parkinson's Progression Markers Initiative. Role: Senior author: conceived study idea, recruited and supervised M.S. student (DC Dinesh) working on the project, revised and approved analyses and drafts. Impact Factor: 4.36.
25. §**Palacios N**; Hannoun A; Flahive J; Ward D; Goostrey K; Deb A; Smith K.M. "Effect of Levodopa Initiation on the Gut Microbiome in Parkinson's Disease." *Frontiers of Neurology* 2021 Mar 4; 12:574529. Annotation: We conducted a longitudinal study in de novo PD patients to examine the impact of Levodopa initiation on the gut microbiome. Role: lead author (co-, with A. Hannoun), performed data analysis and wrote the first draft. Impact Factor: 4.39.
26. Wilkinson J.E., Franzosa E.A., Everett C, Li C, HCMPH Investigators (including **Palacios N**), Hu F.B., Wirth D, Song M, Chan A, Rimm E, Garrett W.S., Huttenhower C. "A framework for microbiome science in public health." *Nature Medicine* 2021 May; 27(5):766-774. Annotation: We outline best practices for conducting microbiome studies, particularly within epidemiological cohorts. Role: Collaborator. Impact Factor: 36.13.
27. ^Boumenna T; Scott T; Lee JS; **Palacios N**, Tucker KL, Ph.D. Folic acid, vitamin B12 and cognitive function in The Boston Puerto Rican Health Study. *Am.J. Clin Nutr.* 2020. Nov 12. Annotation We examined the association between dietary and plasma folate and vitamin B-12 status and their interaction, in relation to cognitive function in a cohort of older Puerto Rican adults. Role: collaborator, and primary advisor to doctoral student, Tahani Boumenna. Impact factor: 6.77.
28. ^Sahasrabudhe N. Scott T., Tucker K., **Palacios N**. "Vitamin D and Depression in the Boston Area Puerto Rican Study." *J. Nutr.* 2020. Dec 10; 150(12)3231-3240. Annotation: we examined longitudinally the association between 25(OH)D and depression in a cohort of Boston Area Puerto Ricans. No significant association was observed between 25(OH)D level and depression over 5 years of follow-up. Role: senior author, conceived idea, obtained funding and mentored the doctoral student (N. Sahasrabudhe), revised and approved analyses and drafts. Manuscript authored by UML student working directly under my mentorship. Impact Factor: 4.15. **Manuscript selected by journal for press release.**
29. Dou N, Xie D, Gao X, **Palacios N**, Falcon LM, Tucker KM, Na M. "Psychosocial risk factors for food insecurity in Puerto Ricans living in the US from baseline to 5-year follow-up." *J. Nutr.* 2020. Aug 1; 150(8): 2199-2203. Annotation: In a cohort of PR adults, depressive symptoms at baseline, and worsened depression and perceived stress over 5y were associated with higher risk of FI. Psychosocial health and environmental factors seem to play an important role in predicting risk of FI in PR adults. Role: collaborator – contributed to study design and critiqued manuscript drafts. Impact Factor: 4.15.
30. §**Palacios N**, Lee J.S., Scott T., Kelly R.S., Bhupathiraju S.N., Bigornia S.J., Tucker K.L. "Circulating Plasma Metabolites and Cognitive Function in a Puerto Rican Cohort." *J. Alzheimer's Dis.* 2020; 76(4); 1276-1280. Annotation: We performed a comprehensive analysis of circulating plasma metabolites in relation cognitive function in 638 participants the Boston Puerto Rican Health Study (BPRHS) who underwent untargeted metabolomics analysis (Metabolon, Inc) and had undergone in-person cognitive

- testing at baseline. This untargeted metabolomics study identified potential biomarkers for good cognitive function in a cohort of Puerto Rican descent. Role: lead author – conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact factor: 3.51
31. §**Palacios N.** É.J. O'Reilly ScD, M. A. Schwarzschild, A. Ascherio. "Long-term use of antibiotics and risk of Parkinson's disease in the Nurses' Health Study." *Parkinson's Disease*. 2020 Jan 20. Annotation: We conducted a prospective study of 59,637 women in the Nurses' Health Study who reported total duration of antibiotic use at age 20-39, 40-59, 60+ or during the past 4 years. In this cohort study, we did not observe a significant association between antibiotic use and incidence PD. Role: lead author - conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact Factor: 1.72.
 32. §**Palacios N,** Scott T, Sahasrabudhe N, Gao X, Tucker KL. "Serum vitamin D and cognition in the Boston Puerto Rican Study." *Nutr Neurosci*. 2019 Mar 7:1-8. Annotation: We examined the association between serum 25(OH)D, cognitive function and cognitive decline in a longitudinal study of 967 Boston Area Puerto Rican adults. We observed no significant association between serum 25(OH)D and cognition in this cohort of Boston Area Puerto Ricans. Role: lead author-conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact Factor: 3.77.
 33. §**Palacios N,** Scott T, Sahasrabudhe N, Gao X, Tucker KL. "Lower plasma vitamin B-6 is associated with two-year cognitive decline in the Boston Puerto Rican Health Study". *Journal of Nutrition*. 2019 Apr 1;149(4):635-641. Annotation: We investigated whether plasma pyridoxal-5'-phosphate (PLP, vitamin B-6) concentrations were associated with cognitive function and subsequent cognitive decline. Lower baseline plasma PLP was associated with increased odds of 2-y cognitive decline in a cohort of Boston area Puerto Ricans. The association was stronger among older participants and among ever smokers. Role: lead author - conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact Factor: 4.15.
 34. §**Palacios N,** Hughes KC, Cereda E, Schwarzschild MA, Ascherio A. "Appendectomy and Risk of Parkinson's Disease in two large prospective cohorts of men and women." *Movement Disorders*. 2018 Sep 14. PMID: 30218460. PubMed Central PMCID: Pending. Annotation: In pooled analyses, self-report of any appendectomy was not related to Parkinson's disease risk: the hazard ratio of Parkinson's disease comparing participants who reported any appendectomy with those who did not was 1.08 (95% confidence interval, 0.94-1.23). In women, appendectomy for appendicitis, but not incidental appendectomy, was associated with a modestly elevated risk of Parkinson's disease. Role: lead author - conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact Factor: 7.07.
 35. §**Palacios N,** Munger KL, Fitzgerald KC, Hart JE, Chitnis T, Ascherio A, Laden F. "Exposure to particulate matter air pollution and risk of multiple sclerosis in two large cohorts of US nurses." *Environment International*. 2017 Dec;109:64-72. doi:10.1016/j.envint.2017.07.013. Epub 2017 Sep 20. PubMed PMID: 28938101. Role: lead author. Annotation: Cumulative average exposure to different size fractions of PM up to the onset of MS was estimated using spatio-temporal models. We did not observe significant associations between air pollution and MS risk in our cohorts. Role: lead author – obtained funding, conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact Factor: 7.08.
 36. §**Palacios N.** "Air pollution and Parkinson's disease - evidence and future directions." *Rev Environ Health*. 2017 Dec 20;32(4):303-313. doi: 10.1515/reveh-2017-0009. Review. PubMed PMID: 28731859. Annotation: This review summarizes the evidence around air pollution and Parkinson's disease and outlines promising opportunities for future research are outlined, including: (1) studies of smaller particle sizes that cross the blood-brain barrier, (2) studies of the effects of air pollution on PD mortality and/or progression; (3) studies of interactions of air pollution with gene environment and other environmental factors. Role: lead author - conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact Factor: 1.29.
 37. Kelly RS, Giorgio RT, Chawes BL, **Palacios N**, Gray KJ, Mirzakhani H, Wu A, Blighe K, Weiss ST, Lasky-Su J. "Applications of Metabolomics in the Study and Management of Preeclampsia; A Review of the Literature." *Metabolomics*. 2017 Jul;13(7). pii: 86. doi: 10.1007/s11306-017-1225-8. Epub 2017 Jun 12. PubMed PMID: 30473646; PubMed Central PMCID: PMC6247796. Annotation: we conducted a review of the literature on the relationship between metabolomics and Preeclampsia. Role: collaborator – contributed to study design and interpretation and reviewed drafts of the manuscript. Impact factor: 3.51.

38. §**Palacios N**, Fitzgerald K, Komaroff A, Ascherio A. "Incidence of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome in a Large Prospective Cohort of US Nurses." *Fatigue Biomedicine and Behavior*. 2017 July 3; vol 3: p159-166. Annotation: we characterize the incidence of ME/CFS in the Nurses' Health Study. Role: lead author - conceived the study, contributed to obtaining funding, conducted data analysis and interpretation and wrote the first draft.
39. §**Palacios N**, Fitzgerald KC, Hart JE, Weisskopf M, Schwarzschild MA, Ascherio A, Laden F. Air Pollution and Risk of Parkinson's Disease in a Large Prospective Study of Men. *Environmental Health Perspectives*. 2017 Aug 18;125(8):087011. doi: 10.1289/EHP259. PubMed PMID: 28886605; PubMed Central PMCID: PMC5783632. Annotation: We aimed to examine whether exposure to PM air pollution is related to risk of Parkinson's disease (PD) in the Health Professionals Follow-up Study (HPFS), a large prospective cohort of U.S. men. In this study, we found no evidence that exposure to air pollution is a risk factor for PD in men. Role: obtained funding, conceived the study, conducted data analysis and interpretation and wrote the first draft. Impact factor: 9.79.
40. §**Palacios N**, Fitzgerald K, Roberts AL, Hart JE, Weisskopf MG, Schwarzschild MA, Ascherio A, Laden F. "A Prospective Analysis of Airborne Metal Exposures and Risk of Parkinson Disease in the Nurses' Health Study Cohort." *Environmental Health Perspectives*. 2014. Sep; 122(9):933-8. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 9.79.
41. *§**Palacios N**, Fitzgerald KC, Hart JE, Weisskopf MG, Schwarzschild MA, Ascherio A, Laden F. "Particulate matter and risk of Parkinson disease in a large prospective study of women." *Environ Health*. 2014 Oct 7; 13:80. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 4.43.
42. *§**Palacios N**, Gao X, Schwarzschild M, Ascherio A. "Declining Quality of Life in Parkinson Disease Before and after diagnosis." *Journal of Parkinson Disease*. 2(2). 153-160. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 1.70.
43. *§**Palacios N**, Ascherio A. "Reply to: Diabetes and risk of Parkinson's disease." *Mov Disord*. 2013 Feb;28(2):258. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 8.32.
44. *§**Palacios N**, Simon K., Ascherio A. "Smoking and Risk Of Multiple Sclerosis." *Multiple Sclerosis and Related Disorders*. 1(3) 2012 106-107. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 2.72.
45. *§**Palacios N**, Xiang Gao, Marjorie L. McCullough, Jacobs E, Patel A, Mayo T, Schwarzschild M.A., Ascherio A. "Obesity, Diabetes and Risk of Parkinson Disease." *Mov Disord*. 2011 October; 26(12): 2253-2259. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 8.32.
46. *§**Palacios N**, Gao X, McCullough ML, Schwarzschild MA, Shah R, Gapstur S, Ascherio A. "Caffeine and risk of Parkinson's disease in a large cohort of men and women." *Mov Disord*. 2012 Sep 1;27(10):1276-82. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 8.32.
47. *§**Palacios N**, Gao X, O'Reilly E, Schwarzschild M, McCullough ML, Mayo T, Gapstur SM, Ascherio AA. "Alcohol and risk of Parkinson's disease in a large, prospective cohort of men and women." *Mov Disord*. 2012 Jul;27(8):980-7. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 8.32.
48. *Gao X, Lyall K, **Palacios N**, Walters A, Ascherio A. "RLS in middle aged women and attention deficit/hyperactivity disorder in their offspring." *Sleep Med*. Sleep Med. 2011 January; 12(1): 89-91. Role: collaborator. Impact factor: 3.04.
49. *§**Palacios N**, Alonso A, Bronnum-Hansen H, Ascherio A. "Smoking and Increased Risk of Multiple Sclerosis: Parallel Trends in the Sex Ratio Reinforce the Evidence." *Ann Epidemiol*. 2011 July; 21(7): 536-542. PMCID: PMC3124940. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 2.80.
50. *§**Palacios N**, Weisskopf M, Simon K, Gao X, Schwarzschild M, Ascherio A. "Polymorphisms of caffeine metabolism and estrogen receptor genes and risk of Parkinson's disease in men and women." *Parkinsonism Relat Disord*. *Parkinsonism Relat Disord*. 2010 July; 16(6): 370-375. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 3.93.
51. *Weisskopf MG, **Morozova N** (maiden name), O'Reilly EJ, McCullough ML, Calle EE, Thun MJ, Ascherio A. "Prospective study of chemical exposures and amyotrophic lateral sclerosis." *J Neurol Neurosurg Psychiatry*. 2009 May; 80(5): 558-561. Role: collaborator. Impact factor: 3.21.
52. *§**Morozova N** (maiden name), Weisskopf MG, McCullough ML, Munger KL, Calle EE, Thun MJ, Ascherio A. "Diet and amyotrophic lateral sclerosis." *Epidemiology*. 2008 Mar;19(2):324-37. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 4.72.

53. *§**Morozova N** (maiden name), O'Reilly E., Ascherio A. "Variations in gender ratios support the connection between smoking and Parkinson disease." *Mov Disord*. 2008 Jul 30; 23(10):1414-9. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 8.32.
54. *Weisskopf MG, McCullough ML, **Morozova N** (maiden name), Calle EE, Thun MJ, Ascherio A. "Prospective study of occupation and amyotrophic lateral sclerosis mortality." *Am J Epidemiol*. 2005 Dec 15;162(12):1146-52. Role: collaborator. Impact factor: 4.47.
55. *§**Morozova N** (maiden name), Allers J, Myers J, Shamoo Y. "Protein-RNA interactions: exploring binding patterns with a three-dimensional superposition analysis of high resolution structures." *Bioinformatics*. 2006 Nov 15;22(22):2746-52. Role: lead author, analyzed the data and wrote the first draft. Impact factor: 4.43.

Manuscripts Under Review:

Dinesh D.; Morgan X.; Jensen J.; Mclver L.; Schwarzchild M.; Bjornevik K.; Ascherio A.; Huttenhower C.; **Palacios N.**; Shotgun metagenomic profiling of the gut virome in prodromal and confirmed Parkinson's disease. Under review at *Annals of Neurology*.

Patel P.; Bello A.; **Palacios N.**; Bello D.; Urinary biomarkers of oxidative stress and their association with isocyanate and epoxy exposure in industrial painters. Under review at *Science of the Total Environment*.

Merrill L.; Noel S.; Wang Y.; Dawson-Hughes B.; **Palacios N.**; Tucker K.L.; Mangano K.M.; The association between dairy intake and bone quality in Puerto Rican adults varies by dairy food and fat content. Under review at *Journal of Bone and Mineral Research*.

Dinesh D.; Shishova E.; Grinsztejn H.; Scott T.M.; Falcon L.M.; Tucker K.L.; **Palacios N.**; Social conditions and cognitive function among Boston-area Puerto Ricans. Under review at *Journal of Aging Research*.

Manuscripts in Preparation:

Baikdar M.D.*; Dinesh D.*; Kaplan R.C.; Gonzalez H.M.; Wang T.; Ma J.; **Palacios N.**; The gut microbiome in relation to MRI markers of Alzheimer's disease in a large Latino cohort. *Co-first authors. In preparation.
 Patel P.; Bello A.; **Palacios N.**; Bello D.; Urinary biomarkers of oxidative stress in metal structure coating painters and their association with occupational toxic exposures. In preparation.

Pakalapati T.; Mangano K.M.; Lee J.S.; Dinesh D.; Tucker K.L.; Morgan X.; Huttenhower C.; **Palacios N.**; Gut microbial markers associated with diabetes in a Latino cohort. In preparation.

Pakalapati T.; Mangano K.M.; Lee J.S.; Dinesh D.; Tucker K.L.; Morgan X.; Huttenhower C.; **Palacios N.**; Gut viral markers associated with diabetes in a Latino cohort. In preparation.

Pakalapati T.; Mangano K.M.; Lee J.S.; Dinesh D.; Tucker K.L.; Morgan X.; Huttenhower C.; **Palacios N.**; Mediterranean diet adherence and diabetes risk in a Latino cohort. In preparation.

Hartl H.; Lee J.S.; Scott T.M.; Tucker K.L.; **Palacios N.**; Perceived stress and cognitive decline in the Boston Puerto Rican Health Study. In preparation.

Hartl H.; Lee J.S.; Scott T.M.; Tucker K.L.; **Palacios N.**; Inflammatory markers and cognitive function in the Boston Puerto Rican Health Study. In preparation.

Hartl H.; Lee J.S.; Scott T.M.; Tucker K.L.; **Palacios N.**; Use of anti-inflammatory medications and cognitive function in the Boston Puerto Rican Health Study. In preparation.

Merrill L.C.; Martínez R.L.; **Palacios N.**; Noel S.; Dawson-Hughes B.; Wang Y.; Tucker K.L.; Mangano K.M.; Machine learning approaches identify microbial and skeletal predictors of bone health in Puerto Rican adults. In preparation.

Gordon S.; Morgan X.; Jensen J.; McIver L.; Schwarzschild M.; Bjornevik K.; Ascherio A.; Huttenhower C.; **Palacios N.**; Bacterial strain-level signatures in prodromal Parkinson's disease. In preparation.
Palacios N.; Reisman J.; Wang Y.; Aguilar B.J.; Morin P.; Berlowitz D.; Abbas Tahami Monfared A.; Zhang Q.; Xia W.; Care trajectories among U.S. veterans with Alzheimer's disease. In preparation.

Dinesh D.; Gordon S.; Morgan X.; Mangano K.M.; Noel S.; Lee J.S.; Scott T.M.; Huttenhower C.; Tucker K.L.; **Palacios N.**; Gut microbial and viral metagenomic markers associated with cognitive function and APOE $\epsilon 4$ genotype in Boston-area Puerto Ricans. In preparation.

Dinesh D.; Morgan X.; Scott T.M.; Huttenhower C.; Tucker K.L.; **Palacios N.**; Stool and blood metabolomic profiles associated with APOE $\epsilon 4$ genotype in Boston-area Puerto Ricans. In preparation.

Dinesh D.; Morgan X.; Scott T.M.; Huttenhower C.; Tucker K.L.; **Palacios N.**; Stool and blood metabolomic profiles associated with cognitive function in Boston-area Puerto Ricans. In preparation.

Sun X.; Bazzano L.; Boerwinkle E.; Carmichael O.T.; Cruchaga C.; Fornage M.; Heard-Costa N.; Hidalgo B.; Hou L.; Huang Z.; Jian X.; Kaplan R.; Kelly T.; Kooperberg C.; Levy D.; Li C.; Murabito J.; North K.; O'Connor G.; Pan Y.; Psaty B.; Raffield L.; Reiner A.; Rich S.; Rotter J.; Satizabal C.; Shade L.; Smith J.; Sung Y.J.; Tracy R.; Wang C.; Yu B.; **Palacios N.**; Metabolomic signatures of cognitive function in TOPMed. Journal TBD. In preparation.

v. PRESENTATIONS AT NATIONAL AND INTERNATIONAL CONFERENCES, REFEREED

1. Pakalapati T, Mangano KM, Lee JS, Dinesh D, Tucker KL, Xochitl Morgan X, Huttenhower C, **Palacios N.** Gut Microbiome and Virome Associated with Diabetes in Boston-Area Puerto Rican Adults. Poster Presented at as a poster at the American Public Health Association Annual Meeting.
2. Dinesh D., Green, E., Morgan, X., Jensen, J., Scott T.M., Tucker K.L, Huttenhower, C., **Palacios N.** Stool and Plasma Metabolites and APOE status in the Boston Puerto Rican Health Study. Refereed Poster Presentation. July 2025. Alzheimer's Association International Conference (AAIC), Toronto, Canada.
3. Dinesh D., Green, E., Morgan, X., Jensen, J., Scott T.M., Tucker K.L, Huttenhower, C., **Palacios N.** Stool and Plasma Metabolites and Cognitive Function in the Boston Puerto Rican Health Study. Refereed Poster Presentation. July 2025. Alzheimer's Association International Conference (AAIC), Toronto, Canada.
4. Dinesh D., Green, E., Morgan, X., Jensen, J., Scott T.M., Tucker K.L, Huttenhower, C., **Palacios N.** Variations in the Gut Bacteriome and Virome Associated with Cognitive Function in Puerto Rican Adults. Refereed Poster Presentation. July 2025. Alzheimer's Association International Conference (AAIC), Toronto, Canada.
5. Merrill L., Wright R., Dawson-Hughes B. , Noel S., **Palacios N.**, Wang Y., Tucker K. Mangano K., Performance of Cohort Adapted Dietary and Lifestyle Inflammation Scores Among Puerto Rican Adults. Refereed Poster Presentation. American Society of Nutrition Annual Meeting. *Oral Presentation.* June 2025.
6. Dinesh D., Green, E., Morgan, X., Jensen, J., Scott T.M., Tucker K.L, Huttenhower, C., **Palacios N.** Gut microbiome variations associated with depressive symptomatology in a cohort of Boston-area Puerto Rican older adults. Refereed Poster Presentation. Society for Epidemiologic Research Annual Meeting, Boston, USA, June 2025.

7. Pakalapati T, Mangano KM, Lee JS, Dinesh D, Tucker KL, Xochitl Morgan X, Huttenhower C, **Palacios N.** Gut Microbiome and Virome Associated with Diabetes in Boston-Area Puerto Rican Adults. Poster Presented at the 2025 Harvard Center for Microbiome in Public Health Annual Meeting. 2025.
8. Palacios N., Dinesh D, Morgan X, Jensen J, McIver L, Schwarzchild M, Bjornevik K, Ascherio A, Huttenhower C, "Shotgun metagenomic profiling of The Gut Virome in Prodromal and Confirmed Parkinson's." Poster Presentation. 3rd World Brain Disorders and Neuroscience Summit (BDNS-2025). Winner of Best Poster Award.
9. Dinesh D., Lee J.S., Scott T.M., Tucker K.L, **Palacios N.** "Microbiome and PPI Use in Boston Area Puerto Ricans." Poster Presented at Annual MIT Microbiome Conference. April 2025
10. Palacios N., Dinesh D, Morgan X, Jensen J, McIver L, Schwarzchild M, Bjornevik K, Ascherio A, Huttenhower C, "*Gut Virome and Prodromal Parkinson's Disease.*" Poster Presentation. Microbiome 2024: Cold Spring Harbor Laboratory, Nov 2024.
11. **Palacios N.**, Gordon S., Wang T., Burk R., Qi Q., Huttenhower C., Gonzalez H.M., Knight R., De Carli C., M Daviglius M., Lamar M., Telavera G., Tarraf W., Kosciolk T., Cai J., Kaplan R.C. "Gut Microbiome Multi-Omics and Cognitive Function in a Large Latino Cohort." Poster Presentation. Alzheimer's Association International Conference (AAIC). Philadelphia, PA. August 2024.
12. Shishova, E., Grinsztein H., Scott T.M., Falcon L.M., Tucker K.L., **Palacios N.** "Social Condition and Cognitive Function Among Boston Area Puerto Ricans." Poster Presentation. Alzheimer's Association International Conference (AAIC). Philadelphia, PA. August 2024.
13. **Palacios N.**, Reisman J., Wang Y., Aguilar B.J., Morin P., Berlowitz D., Zhang R., Abbas Tahami Monfared A., Zhang Q., PhD⁸, Xia W.. "Trajectories in Care Among Veterans with Alzheimer's Disease in the United States." Poster Presentation. Alzheimer's Association International Conference (AAIC). Philadelphia, PA. August 2024.
14. Dinesh D., Pakalapati T., Gordon S., Morgan X., Mangano KM., Noel S., Lee J.S., Scott T.M., Huttenhower C., Tucker K.L., **Palacios N.** *Gut Microbial Pathways Associated With Proton Pump Inhibitor Use in Boston-Area Puerto Rican Adults.*" American Society of Nutrition Annual Conference. 2024. Chicago IL. Poster Presentation. Selected for ASN's **Emerging Leaders in Nutrition Science Poster Competition** which "highlights the very best research presented by students and young investigators at NUTRITION 2024." July 2024.
15. Dinesh D., Pakalapati T., Gordon S., Morgan X., Mangano KM., Noel S., Lee J.S., Scott T.M., Huttenhower C., Tucker K.L., **Palacios N.** Gut Microbial Taxa Associated with Mediterranean Diet among Boston-Area Puerto Rican Adults. American Society of Nutrition Annual Conference. 2024. Chicago IL. Poster Presentation.
16. Merrill L., Wright R., Dawon-Hughes B. , Noel S., **Palacios N.**, Wang Y., Tucker K. Mangano K., *Dietary Intake, Plasma Fatty Acids and Bone Material Strength in Puerto Rican Adults.* American Society of Nutrition Annual Meeting. Poster Presentation. July 2024.
17. **Palacios N.**, Dinesh D, Morgan X, Jensen J, McIver L, Schwarzchild M, Bjornevik K, Ascherio A, Huttenhower C, "*Prodromal Parkinson's Disease, Gut Virome.*" Poster Presentation. International Human Microbiome Consortium. June 2024.
18. Palacios N., Gordon S., Wang T., Burk R., Qi Q., Huttenhower C., Gonzalez H.M., Knight R., De Carli C., M Daviglius M., Lamar M., Telavera G., Tarraf W., Kosciolk T., Cai J., Kaplan R.C. "Gut Microbiome and Cognition in Study of Latinos." Poster Presentation. International Human Microbiome Consortium. June 2024.

19. Merrill L., Noel S., Dawon-Hughes B., Garelnabi M., Shore R., **Palacios N.**, Wang Y., Tucker K. Mangano K., The Gut Microbiome, Bone Material Strength, and Diet in Puerto Rican Adults. International Symposium on Nutritional Aspects of Musculoskeletal Health. *Oral Presentation*. April 2024.
20. Gordon, S., Kuehl L., Lee, JS, Tucker K., **Palacios N** "Circulating Plasma Metabolites and 8-year Cognitive Trajectories in Boston Area Puerto Ricans." Alzheimer's Association International Conference. Amsterdam, Netherlands, July 2023. *Poster Presentation*.
21. Gordon, S., Lee, JS, Tucker K., **Palacios N.** "Metabolites and MRI-Derived Markers of AD/ADRD Risk in a Puerto Rican Cohort". Alzheimer's Association International Conference. Amsterdam, Netherlands, July 2023. *Poster Presentation*.
22. Dinesh D., Lee J.S., Scott T.M., Tucker K.L, **Palacios N.** "Bowel Health and Cognition in Boston-area Puerto Ricans." American Society of Nutrition Annual Conference. 2023. *Poster Presentation*.
23. Dinesh D., Lee J.S., Scott T.M., Tucker K.L, **Palacios N.** "Microbiome and PPI Use in Boston Area Puerto Ricans." American Society of Nutrition Annual Meeting. 2023. *Poster Presentation*.
24. **Palacios, N**; Wilkinson J., McIver L., Ascherio A. Huttenhower C. "The Gut Microbiome and Prodromal Parkinson's Disease." 2022 Harvard Chan Microbiome Center Symposium. Poster, Virtual.
25. Dinesh D., Lee J.S., Scott T.M., Tucker K.L., **Palacios N.** "Proton Pump Inhibitor Use and Cognitive Function in the Boston Puerto Rican Health Study." Poster Presentation at American Society of Nutrition Meeting. 2022. Virtual.
26. Dinesh D., Lee J.S., Scott T.M., Tucker K.L, **Palacios N.** "Association between Acid Lowering Agents, Metformin, and Vitamin B12 among Boston-area Puerto Ricans." Poster Presentation at American Society of Nutrition Meeting. 2022. Virtual.
27. Essien, Inyene, Ainat K., Tucker K.L., **Palacios N.**, Zhang Y. Sociocultural factors associated with persistent prescription opioid use (PPOU) among Puerto Rican adults in Massachusetts. American Public Health Association Meeting, Boston, MA. Nov. 2022. Poster. In Person.
28. Hart. H., Lee J.S. Scott T., Tucker K.L., **Palacios N.** Perceived Stress and Cognitive Decline in the Boston Puerto Rican Health Study. American Public Health Association Meeting, Boston, MA. Nov. 2022. Poster. In Person.
29. "Epidemiology of Mild Cognitive Impairment, Alzheimer's Disease and Related Dementia in US Veterans Patients". D. Miller*, D. Dinesh, Q. Shao, M. Palnati, S. McDannold, Q. Zhang, A. Tahami, G. Jasuja, H. Davila, W. Xia, L. Moo, N. **Palacios*** ; 15th International Conference on Alzheimer's and Parkinson's Diseases. Virtual Conference March 9-14, 2021. Oral Presentation. *co-senior author with D. Miller.
30. Health System Preparedness for Alzheimer's Disease Treatment: Veteran Health Administration. D. Miller, Q. Shao, M. Palnati, S. McDannold, Q. Zhang, A. Tahami, W. Xia, **N. Palacios**, L. Moo. 15th International Conference on Alzheimer's and Parkinson's Diseases. Poster. *co-senior author with D. Miller
31. "The Mind Diet, Socioeconomic Status and Cognitive Function in The Boston Puerto Rican Health Study." Boumenna T., Scott. T., Tucker K., Lee, JS, **Palacios N.**, 2020 *Society for Epidemiological Research Meeting*. Oral/Podium. Virtual Due to COVID-19 Pandemic. December 2020.
32. "Plasma TMAO and Cognitive Function in The Boston Puerto Rican Health Study." Boumenna T., Scott. T., Tucker K., Lee, JS, **Palacios N.** 2020 *Society for Epidemiological Research Meeting*. Oral Presentation. Virtual Due to COVID-19 Pandemic. December 2020.

33. **"Vitamin D and Depression in the Boston Area Puerto Rican Study."* Sahasrabudhe N., Scott. T., Tucker K., Lee, JS, **Palacios N.** 2020 *Society for Epidemiological Research Meeting*. Poster. Virtual Due to COVID-19 Pandemic. December 2020. *Presentation by UML doctoral student (Sahasrabudhe) conducting research under my mentorship.
34. *"Association between Skin Conditions and Clinical Features in Early Parkinson's Disease."* *Dinesh DC, Lee JS, Gao X, **Palacios N.** *Grand Challenges in Parkinson's Disease*. Virtual Poster Presentation Due to COVID-19 Pandemic. *Poster by UML doctoral student (Dinesh) conducting research under my mentorship.
35. *"Effect of Levodopa Initiation on the Gut Microbiome in De Novo Parkinson's Disease."* **Palacios N**; Hannoun A; Flahive J; Ward D; Goostrey K; Deb A; Smith K.M. *Miami Winter Symposium, Linking the Microbiome and Human Health*. Poster presentation. Jan 2020. (Palacios presenting author).
36. *"Untargeted Metabolomics and Cognitive Function in the Boston Puerto Rican Health Study"* **Palacios N**, Lee JS, Scott T, Tucker K. American Academy of Nutrition Meeting, Baltimore, MD, June 2019: OR32-03-19). Oral/Podium. Abstract: Curr Dev Nutr. 2019 Jun 13;3(Suppl 1). pii: nzz052.OR32-03-19. doi: 10.1093/cdn/nzz052.OR32-03-19. eCollection 2019 Jun. PubMed PMID: 31225373;
37. *"Vitamin D and Depression in the Boston Area Puerto Rican Study."* Sahasrabudhe N. Scott T., Tucker K., **Palacios N.** *UML Student Research and Community Engagement Symposium* May 2019. UML Student Poster Presentation.
38. *"Skin Conditions and Parkinson's Disease."* Dinesh D., Lee J.S., **Palacios N.** UML Student Research and Community Engagement Symposium on May 2019. UML Student Poster Presentation.
39. *"Long-term use of antibiotics and risk of Parkinson's disease in the Nurses' Health Study."* **Palacios N.** É.J. O'Reilly ScD^{2,3}, M. A. Schwarzschild, A. Ascherio. Keystone Symposia: Microbiome, Chemical Mechanisms and Biological Consequences. Montreal, QC, Canada. March 2019. Poster Presentation.
40. *"Vitamin B12, Folate and Cognition in the Boston Area Puerto Rican Study."* Boumenna T., Scott T., **Palacios N**, Tucker K.L *American Society for Nutrition Annual Meeting*, June 9-12, 2018.Boston, MA. This poster was selected for ASN's Emerging Leaders in Nutrition Science Poster Competition, which (according to ASN) "highlights the very best research submitted by students and young investigators to Nutrition 2018." UML Student Poster Presentation.
41. *"Vitamin B12, Folate and Cognition in the Boston Area Puerto Rican Study."* Poster Presentation by Tahani Boumenna (my UML Public Health doctoral student). Authors: Boumenna T., Scott T., **Palacios N**, Tucker K.L. UML Student Research and Community Engagement Symposium on May 2, 2018. UML Student Poster Presentation.
42. *"Vitamin B6 and Cognition in the Boston Area Puerto Rican Study."* Authors: **Palacios N**, Scott T, Sahasrabudhe N, Gao X, Tucker KL. "Lower plasma vitamin B-6 is associated with two-year cognitive decline in the Boston Puerto Rican Health Study". J Nutr. 2019 Apr 1;149(4):635-641. Impact Factor: 4.15. American Society for Nutrition Annual Meeting, June 9-12, 2018, Boston, MA. Poster Presentation.
43. *"The Gut Microbiome and Parkinson's' Disease."* Authors: **Palacios N.**, Huttenhower C., Ascherio A. The 13th Annual Harvard Microbial Sciences Symposium, Cambridge MA. April 14, 2018. American Academy of Sciences Norton Woods Conference Center, Cambridge, MA. Poster Presentation.
44. *"The Gut Microbiome and Parkinson's' Disease."* Authors: **Palacios N.**, Huttenhower C., Ascherio A. The 4th Annual Translational Microbiome Conference". April 19 and 20, 2018. Boston, MA. Poster Presentation.
45. *"Air Pollution and Risk of Parkinson's Disease in a Large Prospective Study of Men."* **Palacios N**, Fitzgerald KC, Hart JE, Weisskopf M, Schwarzschild MA, Ascherio A, Laden F. Venue: *Gordon Research Conference on Parkinson's Disease*. June 26-30, 2017 in Newry ME. Poster presentation.

46. "Exposure to Particulate Matter Air Pollution and Risk of Multiple Sclerosis in Two Large Cohorts of US Nurses". **Palacios N**, Munger KL, Fitzgerald KC, Hart JE, Chitnis T, Ascherio A, Laden F. *American Academy of Neurology 69th Annual Meeting*, April 22 to April 28, 2017 in Boston, MA. Poster presentation.
47. "The Nose or the Gut" Authors: **Palacios N**. *UML Annual Research Retreat 90 second lighting talk*.
48. "Air Pollution and Risk of Parkinson's Disease in a Large Prospective Study of Men." **Palacios N**, Fitzgerald KC, Hart JE, Weisskopf M, Schwarzschild MA, Ascherio A, Laden F. Venue: American Academy of Neurology 69th Annual Meeting, April 22 to April 28, 2017 in Boston, MA. Poster presentation.
49. "Exposure to Particulate Matter Air Pollution and Risk of Multiple Sclerosis in Two Large Cohorts of US Nurses." **Palacios N**, Munger KL, Fitzgerald KC, Hart JE, Chitnis T, Ascherio A, Laden F. *National Institutes of Health, National Institute of Environmental Health Sciences (NIEHS) Environmental Health Science FEST*. Durham, NC. December 2016. By-invitation meeting for NIH/NIEHS awardees only. Poster presentation.
50. "Exposure to Airborne Metals and Risk of Parkinson Disease in a Large Prospective Study of Women." **Palacios N**, Fitzgerald K, Roberts AL, Hart JE, Weisskopf MG, Schwarzschild MA, Ascherio A, Laden F. *Alzheimer's and Parkinson's Disease Congress*, Florence, Italy. 2013. Poster Presentation.
51. "Air Pollution and Risk of Multiple Sclerosis in a Prospective Study of Women." **Palacios N**, Munger KL, Fitzgerald KC, Hart JE, Chitnis T, Ascherio A, Laden F. *International Society for Environmental Epidemiology (ISEE)*, Basel, Switzerland. Oral Presentation.
52. "Air Pollution and Risk of Parkinson Disease in a Prospective Study of Women." **Palacios N**, Fitzgerald KC, Hart JE, Weisskopf M, Schwarzschild MA, Ascherio A, Laden F. *International Society for Environmental Epidemiology (ISEE)*, Barcelona, Spain. 2011. Oral Presentation.
53. "Cigarette smoking and sex ratio of multiple sclerosis." **Palacios N**, Alonso A, Bronnum-Hansen H, Ascherio A. *Annual meeting of the American Academy of Neurology*, Toronto, ON, Canada. 2010. Oral Presentation.
54. Obesity, Diabetes and Risk of Parkinson's Disease in a Large Prospective Cohort of Men and Women. **Palacios N**, Xiang Gao, Marjorie L. McCullough, Jacobs E, Patel A, Mayo T, Schwarzschild M.A., Ascherio A.
55. *World Federation of Neurology*, Seattle, WA 2009. Poster Presentation.
56. "Polymorphisms in caffeine metabolism and estrogen receptor genes and risk of Parkinson's disease in men and women." **Palacios N**, Weisskopf M, Simon K, Gao X, Schwarzschild M, Ascherio A. *Annual meeting of the Society of Epidemiologic Research*, Chicago IL. 2008. Poster Presentation.

vi. INVITED PRESENTATIONS

NATIONAL AND INTERNATIONAL

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| 2025, September | Invited Symposium Presentation. "Gut Microbiome, Cognition, MRI in the Study of Latinos". Oral presentation in that Dr. Palacios is organizing, " <i>Gut Microbiome and Brain Health: From Depression to Dementia and Beyond</i> " at the 17th World Congress of Biological Psychiatry. Dr. Palacios is the Symposium co-organizer. September 2025 in Berlin, Germany. |
| 2025, February | Invited Webinar. " <i>The Gut Microbiome and Cognition in Latino Cohorts</i> ." Webinar for Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART). Nutrition, Metabolism and Dementia Professional Interest Area. |

- 2025, January Invited Presentation. “The Gut Microbiome in The Study of Latinos”. CHARGE Microbiome working group. January 2025.
- 2024, May Invited Presentation. “*The Gut Microbiome and Cognitive Function in Latinos.*” 2024 Albert Einstein College of Medicine Microbiome Population Symposium.
- 2023, Oct. Invited Presentation. “*The Gut Microbiome and Cognition in The Study of Latinos.*” 2023 Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE) Consortium. San Antonio, Texas.
- 2021, May Invited Presentation “The Gut Brain Axis and Parkinson’s Disease”. *8th Microbiome & Probiotics R&D and Business Collaboration Forum, Europe.* Virtual Due to COVID-19 Pandemic. Invited Presentation.
- 2021, March Invited Plenary Presentation. “The Gut Microbiome in Parkinson’s Disease.” *Annual Meeting of the Association of Biomolecular Resource Facilities.* Session Title: The Microbiome: Analysis, Health, and Epidemiology. Invited Plenary Session Presentation.
- 2020 Nov. Invited Seminar. “Risk Factors for Cognitive Decline and Depression in Boston Area Puerto Ricans”. *Massachusetts General Hospital Clinical and Translation Epidemiology Unit Research Seminar.* Virtual due to COVID-19 pandemic.
- 2020, Nov. Invited Presentation. “The Gut Microbiome and Parkinson’s Disease”. *8th Microbiome & Probiotics R&D and Business Collaboration Forum, USA.* Virtual Due to COVID-19 Pandemic. Invited Talk.
- 2019 Feb. Invited Seminar. “The Gut-Brain Axis in Parkinson Disease.” Department of Integrative Physiology, University of Colorado at Boulder. Boulder, CO, USA.
- 2018, Nov. Invited Presentation. “The Gut-Brain Axis in Parkinson Disease, Appendectomy, Antibiotics and the Microbiome.” *The Microbiome Movement Gut-Brain-Axis Summit.* Boston, MA.
- 2018, June. Invited Workshop Leader. “The Gut Microbiome and Parkinson’s Disease, Importance for Premotor Detection”. *Microbiome Movement Drug Development Summit.* (3-hour workshop for industry and academics). Seaport Hotel and World Trade Center, Boston, MA.

vii. **EXPERT PANEL, INVITED**

2026, March Faculty Judge, 3 Minute Thesis (3MT Competition), UML round. 3MT is competition, founded by University of Queensland, that challenges doctoral students to explain the significance, innovation, methods and results of their thesis in under 3 minutes.

2025, Dec. Invited Panelist. UMass Lowell Innovative Fellows Training Program. “Translating Research for Aging Innovation”

2024, Dec. Invited Panelist. UMass Lowell Innovative Fellows Training Program. “Translating Research for Aging Innovation”

2024, May Invited Panelist. UMass Lowell Innovative Fellows Training Program. “Translating Research for Aging Innovation” Invited Panelist.

2018, July Invited Panelist. The Gut Microbiome in Clinical Trials. *NeuroConX Conference*. (Annual Meeting for Researchers focused on the gut-brain Axis). Prince Edward Island. Canada.

L. INSTRUCTIONAL RELATED ACTIVITY

CLASSROOM TEACHING

Courses Taught

I typically teach between one and two courses each semester, or 2-4 courses per year, with a minimum of 15 and maximum of 45 (approximately) students per course.

Spring 2026

- Applied Epidemiology (Online). Graduate Course. 37 students.

Fall 2025

- Epidemiology and Biostatistics. Graduate Course. 33 students.

Fall 2024-Spring 2025

- Sabbatical

Spring 2024

- Applied Epidemiology Methods. Graduate course. 15 Students.

Fall 2023

- Applied Epidemiology Methods. Graduate course, Developed New Online Graduate Course.

Spring 2023

- Applied Epidemiology Methods. Graduate course. 9 Students.

Fall 2022

- Epidemiology and Biostatistics (Online). Graduate course. 41 Students.

Spring 2022

- Applied Epidemiology Methods. Graduate course. 18 Students.

Fall 2021

- Epidemiology and Biostatistics. Graduate course. 26 Students (as of Aug 21, 2021).

Spring 2021

- Applied Epidemiology Methods. Graduate course. 18 Students.

Fall 2020

- Epidemiology and Biostatistics. Graduate course. 47 Students.

Spring 2020

- Epidemiology and Biostatistics. Graduate course. 38 Students.

- Converted course to online format in March 2020 due to COVID-19 pandemic.

Fall 2019

- Advanced Regression. Graduate course. 18 Students.

Spring 2019

- Epidemiology and Biostatistics, Graduate course. 46 Students.

Fall 2018

- Advanced Regression, Graduate course. 16 students.

Spring 2018

- Introduction to Epidemiology. Undergraduate course, Section 2. 46 students.
- Introduction to Epidemiology. Undergraduate course, Section 1 . 18 students.

Fall 2017

- Advanced Regression. Graduate course. 22 Students.
- Introduction to Epidemiology. Undergraduate course. 32 Students.

Spring 2017

- Introduction to Epidemiology. Graduate course. 23 students.
- Introduction to Epidemiology. Undergraduate course. 24 students.

Fall 2016

- Advanced Regression, Graduate course. Full Course Re-development. 13 students.

Significant Contributions to Teaching and Curriculum: (expand this section)

New Courses Developed:

2023, Fall Developed New Online Graduate Course, PUBH 6820, Applied Epidemiology

2021 UML Department of Public Health Teaching Award

2016, Fall. Performed Full course redesign for PUBH 6890, Advanced Regression

Other Significant and Meaningful Teaching Related Activities:

2023 Fall – 2024 Spring. Graduate Coordinator for the Department of Public Health Doctoral Program.

Other teaching:

2010– 2015 Neuro-epidemiology, Brown University, Guest Lecturer 2010 - 2015
2006 Introduction to Epidemiology, Teaching Assistant, Harvard University

2005-2007	Introduction to Nutrition and Nutrition Biochemistry (TA), Teaching Assistant, Harvard University
2006-2018	Food Policy, Harvard School of Public Health, Main Lecturer, Developed Course

MENTORING OF POSTDOCTORAL TRAINEES AND STUDENTS IN RESEARCH:

RESEARCH SCIENTIST MENTORING:

2025 - Present **Deepika Dinesh**. Current Position: Research Scientist at the Department of Public Health, University of MA, Lowell, under my supervision. Research Focus: Gut Microbiome, Omics and Brain Health. Deepika started working with me as an MS student and has progressed to Research Scientist under my mentorship.

POSTDOCTORAL MENTORING:

2024 – Present **Emily Green, PhD**. Postdoctoral Fellow at the Department of Biostatistics at The Harvard T.H.Chan School of Public Health. Working on analyses of serum metabolomics and Alzheimer's Disease in the Boston Puerto Rican Health Study. Co-mentored with Prof. Curtis Huttenhower (Harvard).

2024 – 2025 **Deepika Dinesh, PhD**. Postdoctoral Fellow at the Department of Public Health, University of MA, Lowell under my supervision. Research Focus: Gut Microbiome and Brain Health in Puerto Rican Adults. Promoted to Research Scientist at UML, continuing to work under my mentorship.

2023 –2025 **Thomas Kuntz, PhD**. Postdoctoral Fellow at the Department of Biostatistics at The Harvard T.H.Chan School of Public Health. Working on analyses of the gut microbiome and Alzheimer's Disease in the Boston Puerto Rican Health Study. Co-mentored with Prof. Curtis Huttenhower (Harvard).

DOCTORAL STUDENT MENTORING:

Doctoral Thesis Completed, Primary Thesis Advisor:

2024 **Deepika Dinesh**. PhD in Pharmaceutical Sciences, Awarded Dec 2024. **Dean's Award** or PhD Student with highest GPA. Thesis Title "Gut-Brain Axis and Cognitive Function in Boston-area Puerto Ricans". Student Accomplishments: Current Position: Research Scientist in Palacios group at University of MA, Lowell.

2021 **Neha Sahasrabudhe** (Public Health). Sc.D. Defended in April 2021. Thesis Title "*Environmental and Dietary determinants of Depression*". Role: Doctoral Advisor, Doctoral Committee Chair. Student Accomplishments: One thesis manuscript accepted for publication at Journal of Nutrition and second manuscript published in Journal of Gerontology. Thesis work presented as poster at Society for Epidemiological Research annual meeting. Current Position: Epidemiologist at Henry Ford Health systems- Center for Individualized and Genomic Medicine Research.

2021 **Tahani Boumenna** (Public Health). Defended Sc.D. Thesis in June 2021. Thesis Title "*Risk Factors for Poor Cognition in the Boston Puerto Rican Study*". Role: Doctoral Advisor, Doctoral Committee Chair. Student Accomplishments: One thesis manuscript accepted for publication at American Journal of Clinical Nutrition, second manuscript published in Journal of Gerontology, both top journals in the field. Poster presentation at American Society for Nutrition Annual Meeting (Boston, MA), and two oral presentations at Society for Epidemiological Research Annual Meeting (Virtual due to COVID-19). Current Position: Epidemiologist at EMD Serono, Inc.

Doctoral Thesis In Progress, Primary Advisor:

2021 - Present **Hajnalka Hartl.** (Expected Graduation 2025-2026 academic year) Sc.D.
Candidate, Department of Public Health. Role: Doctoral Advisor, Doctoral Committee Chair
Thesis Title: *Stress, Inflammation and Cognitive Function in the Boston Puerto Rican Health Study*. Defended Doctoral Thesis January 2026.

2021 - Present **Tathabbai Pakalapati.** (Expected Graduation 2025-2026 academic year) Sc.D.
Candidate, Department of Public Health. Role: Primary Doctoral Advisor, Doctoral Committee
Chair Thesis Title: *Microbiome, Diet and Diabetes in the Puerto Ricans*. Started doctorate in
Fall 2021. Passed Qualifying Exam and Thesis Proposal.

Doctoral Committee Member (not primary advisor):

Doctoral Thesis Completed:

1. **Inyene Essien** PhD Candidate, Nursing University of MA, Lowell. Primary Advisor: Ainat Konen. Thesis Title *"Environmental and Dietary determinants of Depression."* Defended.
2. **Miryam Adelfio** PhD Candidate, Biomedical Engineering, University of MA, Lowell. Primary Advisor: Chiara Ghezzi. Thesis Title: sustaining long-term host-microbiome interactions in a physiologically relevant gum tissue model in vitro. Defended.
3. **Lisa Merrill** Sc.D. in Public Health. Advisor: Prof. Kelsey Mangano. Thesis Title: Dietary Intake and Bone Health, The Impact of the Gut Microbiome and Inflammation in Puerto Rican Adults. Defended.
1. **Paridhiben Patel** Sc.D. In Public Health Candidate. Primary Advisor: Prof. Dhimiter Bello. Thesis Title: Mapping reactive chemical systems in construction: A roadmap for data-driven disease prevention. Defended August 2025.

Doctoral Oral Exam Committee Member:

1. 2016 - 2017. **Praveena Velpuri**, PhD candidate in Biomedical Engineering and Biotechnology, UML; Primary PhD Advisor: Prakash Rai

Master's Student Research Mentor:

1. Fall 2023 – Present. **Rutvik Patel**, Harvard University. I serve as Rutvik's research thesis mentor for Bioinformatics Program at the Harvard Extension School. The research thesis is an original research project focusing on gut virome and Parkinson's disease.
2. Fall 2024 - Spring 2025 (**graduated, ongoing work as employee**). Sydney Sampson. M.S. Biomedical and Nutritional Sciences. Worked as a paid researcher for our NIH funded project on gut microbiome and Alzheimer's in the Boston Puerto Rican Health Study. Handled study samples for analysis and managed laboratory data.
3. Spring - Fall 2024. **Hannah Grinzstein**. MPH in Epidemiology. Worked as a paid research assistant for our NIH-funded project on gut microbiome and Alzheimer in Latinos. Contributed to one manuscript that is being prepared for publication.
4. Spring 2021 - Spring 2024. **Scott Gordon** (UML, Computer Science). Project: "The Gut Microbiome in Cognitive Decline in the Boston Puerto Rican Health Study". Contributed, as data analyst and lead author to three published peer reviewed manuscripts.
5. 2021 Fall - Spring 2022. **Lillian Kuehl** (Public Health MPH, continuation from undergraduate). Project: "Food security and Physical Function in the Boston Puerto Rican Health Study." Lillian continued in my

group for her MPH research, after completing an undergraduate project in my group. Contributed as lead author to one published manuscript.

6. Fall 2018 - Spring 2020. **Deepika Dinesh**. MS Project: “*Skin Conditions and PD in the Parkinson Premotor Initiative*”. Work has resulted in accepted peer reviewed publication.
7. Fall 2019 - Spring 2020. **Morgan Tess** (Mathematics). Project: “Adiposity and Physical Function in the Boston Puerto Rican Health Study”
8. Spring 2017 **Marina Magicheva**. MS Project. ‘Risk Factors for Parkinson’s Disease in the Parkinson Premotor Initiative Cohort’ After graduation, student obtained full time position at MA Department of Public Health, and subsequently, Massachusetts General Hospital, Translational Epidemiology Unit.

Undergraduate Student Research Mentor:

1. 2025 - Present **Ammar Nagy**. Undergraduate Research Project Mentor. Conducting data analyses focused on the gut microbiome and medication use in the Boston Puerto Rican Health Study.
2. 2025 - Present **Shalini Kumar**. Undergraduate Research Mentee. Conducting a literature review on applications for breath-based biomarkers.
3. 2025 - Present **Suhani Karki**. Honors Project Committee Member. Oral Microbiome and Menstrual Cycle.
4. 2020 - 2022 **Lillian Kuehl**. Project: “Food security and Physical Function in the Boston Puerto Rican Health Study.” Work has resulted in a published manuscript Student later enrolled in MPH in Public Health at UML and continued to work in my research group.

Kuehl L., Lee, JS, Dinesh D., Na. M., Tucker K., **Palacios N**. “Food Insecurity and Physical Functioning in Boston Area Puerto Ricans”. Public Health Nutrition Volume 25 , Issue 12 , December 2022, pp. 3520 - 3526 (mentored UML MPH student project). Annotation: Food insecure participants had higher physical function scores over time, compared to those who were food secure. Role: Senior Author. 2022. Impact Factor: 3.18.

5. Fall - Spring 2021 **Samuel Gomez**. Project: “Metabolomics and Physical Function in the Boston Puerto Rican Health Study”.

2015 SERVICE TO THE PROFESSIONAL FIELD, UNIVERSITY, COLLEGE AND DEPARTMENT

1. Service to the Professional Field

- 2016 - Present **National Institute of Health and Department of Defense Grant Review Panels**. I serve regularly on such panels regularly (2-3 times annually). Please see above for specific agencies and panels served.
- 2025 - Present **Executive Committee Elected Member**, Nutrition, Metabolism and Dementia Professional Interest Area (PIA), International Society to Advance Alzheimer’s Research and Treatment. Provide: Leadership to the Professional Interest Area (PIA) including organization of outreach activities, monthly webinar organization and organization of the annual PIA meeting at the Alzheimer’s Association International Society Annual Meeting.
- 2025 - Present I am leading the organization of a featured research session focused on the gut microbiome and Alzheimer’s for the 2026 Alzheimer’s Association International Conference, in London UK.

- 2003 – Present Reviewer. I regularly review for various professional journals in my field. Please see above for list of journals.
- 2016 - Present **Harvard T.H.Chan Microbiome Scientific Working Group.** As a member of the Harvard T.H.Chan Microbiome Scientific Working Group, I am involved with a team of investigators who are leading the development and standardization of sample collection methodology for studies of the human gut microbiome, as a member of the Microbiome Working Group. This working group is composed of investigators worldwide with ongoing human gut microbiome related projects. The group was initially formed to standardize the stool collection questionnaire as well as microbiome data collection methods in order to enable future reproducibility of the data and collaboration across studies of the human microbiome. The group continues to collaborate on analyses, grant proposals and scientific questions related to microbiome science. We meet monthly at the Harvard T.H.Chan School of Public Health.
- 2023 - Present Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE) Consortium Microbiome Working Group, member International consortium of researchers harmonizing and performing meta analyses on data on microbiome and chronic disease. Meets monthly with members from the US, Netherlands, Germany and other countries. We are currently co-organizing a workshop in Berlin in 2025.
- 2020 - Present Harvard T. H. Chan Center for the Microbiome, Founding Member. I am closely involved with the workings of this center, including organization of the annual symposium that happens each May.
- 2016 - Present University of Massachusetts Lowell Center for Population Health, Member.

2. Service to the University

University-Wide Service:

- 2025 - Present Co-Chair. Faculty Operations Committee. Leading efforts to review and recommend revisions to faculty-facing administrative procedures and documentation, with the goal of increasing faculty efficiency, productivity and job satisfaction.
- 2025 - Present University of Massachusetts Lowell Faculty Senate, Elected Member.
- 2024 - Present University of MA, Lowell Committee on AI in research.
- 2024 - Present Search Committee for Associate Dean of Graduate Studies, Member.
- 2024 - Present U-Mentor Faculty Advocate. Providing mentorship to junior faculty at UML.
- 2022 - 2023 Strategic Directions working group -- R1 Planning Commission. Planning for UML transition to R1 research university status.
- 2018 - 2020 Climate Change Initiative. Steering Committee Member and College of Health Sciences Representative. Coordination of educational and research opportunities at UML related to climate change.
- 2018 - 2019. Sustainability Committee. Member. Committee tasked with assessing the needs and opportunities for on-campus academic programs focused on sustainability.

2017 - 2019 MLSC Imaging Committee. Member. Committee convened to apply for a MLSC grant funding to purchase neuroimaging equipment (MRI, etc.) at UML. Put together proposal for \$27 million dollars in funding from the State of Massachusetts.

University, College-Wide Level Service:

2023 - 2024 **Doctorate in Public Health Program Coordinator.** Working to provide effective leadership for the Department of Public Health Doctoral Program. The program serves students and faculty across the college of health sciences. Stepped down due to sabbatical leave.

2023 - Present **Public Health ScD Committee (College-wide).** Developing policies and standards for the doctorate in Public Health at UML. Include reviewing and approving applicants for admission. Member Summer 2020-present. Chair:

2018 - 2020 **Committee to develop the ScD in Public Health.** Re-developing the doctorate program in Public Health. The committee successfully developed the new ScD curriculum, which was approved and went into effect September 2020. Member.

2017 Led a group of faculty from across UML in the development of an application for proposal for a Mini Symposia to the annual retreat Center of Clinical and Translational Science.

University, Department-Wide Level Service:

2022 - Present Department of Public Health MPH Curriculum Committee. Member.

2017 - Present Department of Public Health Faculty Search Committee. Member.

2018 - 2019 TURI/TNEC Research Center Director Faculty Search Committee. Member. Recruiting a director for the TURI/TNEC who will serve as an Associate/Full Professor in the Department of Public Health.

2016 - 2017 Department of Public Health Mission and Vision Committee. Monthly meeting. Developed mission and currently working on vision for the Department of Public Health. Member.

2016 - 2020 Department of Public Health Graduate Committee. Monthly meeting. Revising and updating the graduate public health curriculum. Member.

2016 - 2018 MPH Working Group for Department of Public Health CEPH accreditation. Meetings every 3-4 weeks. Working on revising the MPH public health curriculum to prepare the department for CEPH accreditation.