

2024 Annual Report



OSHER CENTER FOR INTEGRATIVE HEALTH



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Acknowledgments

With appreciation and in gratitude for
The Bernard Osher Foundation
without which our work would not be possible.

A message from our director

I am so proud of the achievements, resilience, and vision of our Osher Center for Integrative Health team over this past year. Despite significant uncertainty in the fundamental structure of healthcare research along with the merger of Massachusetts General Hospital with Brigham & Women's Hospital, we have continued to stay true in our efforts to carry out our mission of: 'Advancing a model of health that recognizes the interconnections of the body, mind, and spirit to enhance resilience and promote health and healing in individuals, communities, and the environments that support them.'

Our research portfolio, now comprising 69 studies, added multiple new exciting initiatives supported by the National Institutes of Health and foundation support, while completion and publication of findings from ongoing studies have helped advance research evidence and inform policy related to whole person health.

Noteworthy educational initiatives this year included our forward-looking and highly successful 2024 Integrative Medicine Network Forum entitled "High-tech Medicine, Soft-touch Healing: Advancing Innovation in Integrative Health." And the findings of our 2023 international conference on the "Science of Tai Chi and Qigong as Whole Person Health" were synthesized into two landmark White Papers that map out the current and future state of the field. Our thriving pool of postdoctoral trainees and junior faculty are further gems in our educational program, along with our monthly Integrative Medicine Grand Rounds showcasing leading-edge ideas and front-line leaders.

And I am more excited than ever about new initiatives at our Osher Clinical Center. Harnessing the combined vision and practical skills of our Medical Director (Darshan Mehta, MD, MPH), Core Leader focused on Leveraging Technology for Integrative Health (Andrew Ahn MD, MPH), and our founding Associate Clinical Director (Matthew Kowalski, DC), our clinic is providing excellent care for a growing number of patients while exploring and testing new models of care and incubating our next generation of providers.

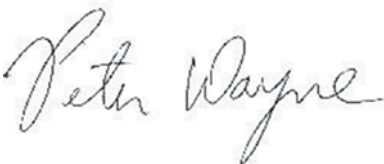
Finally, under the lead of Aterah Nusrat, MSc, Director of Programming in Integrative and Planetary Health, we have made significant strides in raising awareness of the bidirectional relationship between the health of people and planet through national conferences, alliance building, publications, pilot research studies, and hospital-based educational initiatives.

In a recent trip to the National Academies of Science, Engineering, and Medicine in Washington DC, a plaque quoting Thomas Jefferson reminded me of the deeper context of the Whole Person Health paradigm we 'whole-heartedly' embrace, which includes social imperatives of equity and justice.

"Liberty is the great parent of science and of virtue; A nation will be great in both always in proportion as it is free" – Thomas Jefferson

I hope you enjoy reading this report, continue actively engaging with us as part of our 'center without walls', and consider lending your financial support to help us discover and implement solutions to the broad healthcare challenges facing our society today.

Best,



Peter M. Wayne, Ph.D.

Bernard Osher Associate Professor of Medicine in the Field of Complementary and Integrative Health Therapies
Harvard Medical School

Director

Osher Center for Integrative Health
Brigham and Women's Hospital and Harvard Medical School

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Highlights

High-Tech Medicine, Soft-Touch Healing: Advancing Innovation in Integrative Health



In December 2024, our sixth Integrative Medicine Network Forum explored the emerging and novel applications of digital and wearable technology and Artificial Intelligence (AI) applications in the field of Complementary and Integrative Health.

The two-day hybrid event at the J. B. Martin Conference Center at Harvard Medical School (HMS) attracted over 800 registrants and hosted over 30 speakers, including industry pioneers from companies such as **Oura, Muse, and SoundHealth**. Insightful discussions focused on how technology influences and impacts integrative healthcare—from diagnostics, analysis of disease, and therapeutics to translational research, clinical care, and healthcare disparities.



2 Days | 8 Sessions | Keynotes | 30+ Speakers | 50+ posters | Oral Medley | Prize Raffle | Digital Art Display | Multi-Media Music Demo | Exhibitors | Networking Reception

Training the Next Generation of Complementary and Integrative Health Researchers

In addition to continuing our long-standing Harvard Medical School T-32 Post-doctoral Research Fellowship in Integrative Medicine (now running for 26 years), in 2024, we recruited our



second chiropractic research fellow, **Macy Randolph, DC**, with renewed support from the NC-MIC Foundation. She will be pursuing research in chronic neck pain. Our first chiropractic fellow, **Wren Burton, DC, MPH**, completed her three-year fellowship in 2024 and received a second NIH Loan Repayment Program Award. She also received a T-90 Interdisciplinary Research Award from the NIH to join the Mass General Brigham IMPACT Fellowship Program in pain research. This is part of the interdisciplinary NIH HEAL Initiative (Helping to End Addiction Long-term). Her new research will explore the use of group chiropractic visits for multi-site pain in older adults.



Julia Loewenthal, MD is a junior faculty member and geriatrician at the Osher Clinical Center, currently supported by a Geriatric Academic Career Award from the Health Resources and Services Administration (HRSA). Her current research explores the impact of both long-term yoga practice as well as integrative group medical visits on the risk of frailty and biomarkers of aging and resilience. In 2024, she received an NIH Loan Repayment Award, was featured as an "Internal Medicine Physician Leader" by the American College of Physicians and won Best Poster Award at the 2024 Integrated Center for Group Medical Visits. Dr. Loewenthal will be joining the Osher Collaborative Faculty Fellowship in Integrative Medicine in 2025.



Two recent T32 research fellowship graduates, now junior faculty, **Dennis Muñoz-Vergara, DVM, MPH, PhD**, and **Yan Ma, MD, MPH**, are both supported by five-year NIH Career Development Awards. Dr. Munoz Vergara is studying Yoga for Persistent Post-Surgical Pain, and Dr. Ma is studying App-Guided Bedtime Mindfulness for Insomnia.



Planetary Health Successes



Healthy People, Healthy Planet Symposium

by Osher Collaborative

Playlist • 12 videos • 408 views



Guided by our planetary health lead, **Aterah Nusrat, MSc**, our integrative and planetary health program made significant progress in 2024 since its launch two years ago. Successes included supporting an Earth-Compassion Retreat for first-year Harvard College students with Osher Pilot Research Grant awardee, Michael Ferguson, PhD; chairing the Healthy People, Healthy Planet program committee for the Osher Collaborative Annual Virtual Symposium, which



UVM Planetary Health Summit (from left): Dr. Andrew Ahn, Dr. Darshan Mehta, Ms. Aterah Nusrat, Dr. Helene Langevin, Dr. Peter Wayne, Dr. Gloria Yeh

attracted over 1,000 live attendees; presenting integrative and planetary health Grand Rounds; and providing planning committee, plenary speaker and session moderator support for the University of Vermont's planetary health summit, Whole Health for People and Planet.

In 2024, our Osher Research faculty and our research teams had a highly productive year conducting studies within our core research domains:

- The Science of Mind-Body Connections
- Clinical Effectiveness of Multimodal and Integrative Interventions
- Systems and Translational Biology in Integrative Medicine
- The Science of Human and Nature Connections
- Lifestyle, Nutrition and Dietary Supplements

Our robust portfolio of active studies includes 42 studies funded by the National Institutes of Health and an additional 27 funded by foundations or philanthropy.

Here we highlight selected studies from our research portfolio in 2024.



Healthy Aging

Osher research has delved into numerous integrative health modalities that favorably impact healthy aging throughout the lifespan, while deepening our understanding of their biological mechanisms. Our Nutrition and Supplement Research Director, Dr. Howard Sesso received a grant to examine multivitamin supplementation on healthy aging outcomes in the COcoa Supplement and Multivitamin Outcomes Study (COSMOS), initiating important new projects on sleep, quality of life, and other aging-related outcomes. This builds upon findings in COSMOS that long-term multivitamin supplementation improved cognition in older adults.¹ Dr. Sesso also Co-Chaired the 11th International Conference on Polyphenols and Health in Boston, MA, which highlighted the effects of polyphenols (nutrients in plant-based foods) on mechanisms of aging and health outcomes. Several COSMOS abstracts from this conference examined how long-term cocoa extract supplementation favorably affects aging biomarkers and may reduce hypertension, deep venous thrombosis, and other aging outcomes. Dr. Sesso and postdoctoral research fellow, Dr. Sarah Park, reported that women with greater blueberry intake, which contain bioactives called anthocyanins that have been linked with healthy aging, reduced the risk of age-related macular degeneration, but not cataract.²

Osher junior faculty, Dr. Yan Ma and Center Director, Dr. Peter Wayne examined short- and long-term Tai Chi training in healthy older adults, finding improvements in physical function and suggestive of a preventative healthy aging effect.³ A comprehensive review highlighting the role of yoga on improvements in aging physiology by Osher geriatrician, Dr. Julia Loewenthal, Dr. Wayne, and colleague Dr. Orkaby,⁴ further led to a new research grant on yoga and aging through the Boston Pepper Center.

1. Vyas CM, Manson JE, Sesso HD, Cook NR, Rist PM, Weinberg A, Moorthy MV, Baker LD, Espeland MA, Yeung LK, Brickman AM, Okereke OI. Effect of multivitamin-mineral supplementation versus placebo on cognitive function: results from the clinic subcohort of the COcoa Supplement and Multivitamin Outcomes Study (COSMOS) randomized clinical trial and meta-analysis of 3 cognitive studies within COSMOS. *Am J Clin Nutr* 2024;119(3):692-701.

2. Sesso HD, Rautiainen S, Park SJ, Kim E, Lee IM, Glynn RJ, Buring JE, Christen WG. Intake of blueberries, anthocyanins, and risk of eye disease in women. *J Nutr* 2024.

3. Ma Y, Gow BJ, Song R, Rist PM, Hausdorff JM, Lipsitz LA, Manor B, Wayne PM. Long-term Tai Chi practice in older adults is associated with "younger" functional abilities. *Aging Cell*. 2024 Jan;23(1):e14023.

4. Loewenthal JV, Farkas EJ, McGough K, Tomita B, Wayne PM, Orkaby AR. The impact of yoga on aging physiology: A review. *J Nutr Health Aging*. 2024 Feb;28(2):100005.

Integrative Cancer Care

Our research team is evaluating the promise of Complementary and Integrative Health (CIH) therapies for managing the often debilitating challenges patients face following cancer diagnosis and treatment.



Along with researchers at University of Calgary, Dr. Wayne completed a trial among 600 individuals comprising survivors of 12 types of cancer. Findings support that 12 weeks of either Mindfulness-Based Cancer Recovery or Tai Chi/Qigong training, compared with a waitlist control, reduces overall emotional distress, with largest

improvements seen in tension, anger, depression and vigor.¹ Other findings from this study support marked improvements in sleep, pain, and fatigue. In another study led by former Osher postdoctoral research fellow, Dr. Daniel Hall, with mentorship from Osher Center Director of Clinical Research, Dr. Gloria Yeh, findings suggest an 8-week mind-body group resiliency intervention can help reduce fear of cancer recurrence—one of the most pressing psychological concerns among cancer survivors.² With additional support from an Osher pilot study, researchers at Dana Farber's Zakim Center for Integrative Therapies along with Dr. Wayne are evaluating if Tai Chi training can reduce pain and improve balance and mobility among cancer survivors with chemotherapy-induced peripheral neuropathy (CIPN).³ Finally, Dr. Sesso reported that remaining active before and after a cancer diagnosis, as well as becoming physically active after a cancer diagnosis, improved cancer survival in 10,541 older adults.⁴

1. Carlson LE, Jones JM, Oberoi D, Piedaloe K, Wayne PM, et al. The Mindfulness And Tai Chi for Cancer Health (MATCH) Study Primary Outcomes of a Preference-Based Multi-Site Randomized Comparative Effectiveness Trial. *J Clin Oncol* 2025.

2. Hall, Daniel L, Gloria Y Yeh, Connall O'Clairigh, Lynne I Wagner, Jeffrey Peppercorn, John Denninger, April M Hirschberg, et al. 2024. "Pilot Randomized Controlled Trial of IN FOCUS: A Mind-Body Resiliency Intervention for Fear of Cancer Recurrence." *Psycho-oncology* 33 (11): e70026.

3. Yang M, Shao C, Shao C, Saint K, Wayne PM, Bao T. Tai Chi for balance and postural control in people with peripheral neuropathy: A scoping review. *Complement Ther Med*. 2024 Nov;86:103089.

4. Christopher CN, Chandler PD, Zhang X, Tobias DK, Hazra A, Gaziano JM, Buring JE, Lee IM, Sesso HD. Physical activity before and after cancer diagnosis and mortality risk in three large prospective cohorts. *Cancer Causes Control* 2024 Oct 8. doi: 10.1007/s10552-024-01925-w.

Virtual Delivery of Mind-Body Therapies

Leveraging the increased availability and acceptance of technology for virtual interventions, Osher faculty are leading innovative studies to bring mind-body therapies into the

Are you interested in becoming more physically active through walking?



Mindful Steps is a 15-month research program for people with COPD and/or CHF

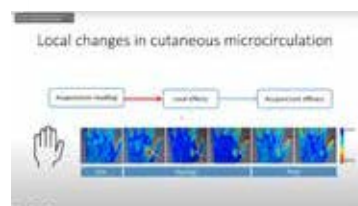
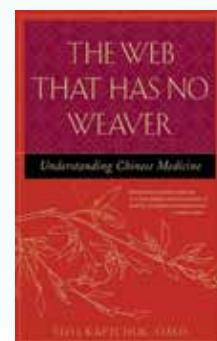
future. Drs. Yeh and Wayne, in collaboration with the Veterans Health Administration, continue to lead a nationwide, NIH-funded study (Mindful Steps v.2.0)¹ that is evaluating an interactive,

educational web-platform that includes a mindful movement video curriculum plus live virtual mind-body classes, and interfaces with a wearable fitness tracker for individualized step goals and feedback to promote walking in patients with chronic heart and lung disease.^{2,3} An exciting new series of developmental studies is being led by Osher junior faculty Dr. Yan Ma who will be delving into the neurophysiology of sleep and pre-sleep wakefulness and evaluating a popular meditation app specifically at bedtime to decrease hyperarousal and racing thoughts in patients with insomnia.⁴ Finally, novel work by Dr. Wayne together with several Osher affiliates, applied wearable sensors and machine learning to objectively monitor adherence and proficiency of home-based virtual tai chi training which has potential broad applications across research and implementation.⁵



Acupuncture

Building on the pioneering work of Drs. Ted Kaptchuk and Helene Langevin, our Center continues leading edge research in acupuncture and traditional East Asian Medicine. Osher junior faculty, Dr. Eunmee Yang's research exploring the biological basis of acupuncture points led to multiple publications, including one awarded by the Rosalind Franklin Society Award in Science for best paper of the year in the Journal of Integrative and Complementary Medicine.¹ Her current empirical work is employing sophisticated measures of blood flow, temperature, and pressure-pain sensitivity to test, for the first time, if inflammation in the intestines is associated with neuroinflammation and sensitivities at



specific acupoints on the skin, in individuals with and without irritable bowel disease. Osher research affiliate and former fellow, Dr. Weidong Lu completed a landmark multi-national study showing that a 10-week course of acupuncture reduces the frequency and severity of hot flashes in breast cancer patients undergoing endocrine therapy.² Drs. Lu and Wayne are planning a follow-up study to evaluate if acupuncture's positive impact on treatment symptom management leads to better long-term adherence to cancer therapies. Finally, Drs. Yang, Wayne, and Yeh continue to bridge the state of the evidence in acupuncture with clinical care and provide a leading clinical resource for practicing clinicians.^{3,4}

1. Clinical Trials.gov; Mindful Steps 2.0: Promoting Physical Activity in Patients with COPD and HF; NCT05934565.

2. Kraemer KM, Kilgore K, Litrownik D, Jean-Laurent B, Wayne PM, Richardson CR, Moy ML, Yeh GY. A Web-Based Mind-Body Intervention (Mindful Steps) for Promoting Walking in Chronic Cardiopulmonary Disease: Insights From a Qualitative Study. *Glob Adv Integr Med Health*. 2023 Dec 2;12:27536130231212169.

3. Kraemer KM, Litrownik D, Wayne PM, Richardson CR, Rist P, Kilgore K, Moy ML, Yeh GY. A Web-Based Mind-Body Intervention (Mindful Steps) for Promoting Walking in Chronic Cardiopulmonary Disease: A Pilot RCT. *J Integr Compl Med*. 2021; A28-A48.

4. Ma Y, Wayne PM, Mullington JM, Bertisch S, Yeh GY. Bedtime App-guided Mindfulness Meditation in Patients with Insomnia: A Mixed-Methods Feasibility and Acceptability Pilot Study. *JMIR Formative Research*; in press.

5. Corniani G, Sapienza S, Vergara-Diaz G, Valerio A, Vaziri A, BonatoP, and Wayne PM. Remote Monitoring of Tai Chi Balance Training Interventions in Older Adults Using Wearable Sensors and Machine Learning. *Scientific Reports*. 2025. In press.

1. Yang EM, Lu WD, Muñoz-Vergara, Goldfinger E, Kaptchuk TJ, Napadow V, Ahn AC, Wayne PM. Acupoint sensitivity in health and disease: a systematic review. *JICM* 2024 Oct;30(10):925-939.

2. Lu W, Giobbie-Hurder A, Tanasijevic A, Kassis SB, Park SH, Jeong YJ, Shin IH, Yao C, Jung HJ, Zhu Z, Bao C, Bao T, Yang E, Bierer BE, Ligibel JA. Acupuncture for hot flashes in hormone receptor-positive breast cancer: A pooled analysis of individual patient data from parallel randomized trials. *Cancer*. 2024 Sep 15;130(18):3219-3228.

3. Yang EM, Lu WD, Napadow V, Wayne PM. Clinical and research implications of Cochrane Systematic Review of Acupuncture for Chronic Non-Specific Low Back Pain: A Cochrane Column, *GAHM* 2024;13:27536130241261161.

4. Yang EM, Yeh GY. Overview on the Clinical Uses of Acupuncture. In: UpToDate, Connor RF (Ed), Wolters Kluwer.

Multimodal Approaches to Pain

With support from the NIH, Drs. Peter Wayne, Matthew Kowalski, Pamela Rist and colleagues have completed recruitment for the first randomized trial evaluating the combined benefits of multimodal chiropractic care (including spinal manipulation and self-care) plus tai chi for reducing pain and improving function and quality of life in chronic neck pain.¹ New grants from the Interinstitutional Network for Chiropractic Research and the Van Sloun Foundation are supporting a parallel study using electroencephalography (EEG) evaluating how chronic neck pain impacts brain dynamics and the neural underpinnings of multimodal chiropractic care's impact



on neck pain and function. A third new study (NIH funded), in partnership with Veterans Health Administration, is evaluating multimodal chiropractic care and its impact on frequency and severity of migraine headaches. Other multimodal approaches for pain conditions include an exciting new NIH supported project led by

Dr. Dennis Muñoz-Vergara evaluating yoga training for managing persistent post-surgical pain, and a recent epidemiological study that found that beginning care with a chiropractor or physical therapist, compared with a physician, results in fewer and less costly subsequent medical services and invasive interventions in patients with neck pain.²

1. Wayne PM, Vining R, Long C, Burton WM, Litrownik D, Guzman J, Kilgore K, Hagan TJ, Rist PM, Kowalski MH. Combined Chiropractic Care and Tai Chi for Chronic Non-Specific Neck Pain: A Protocol for a Pilot Randomized Trial. Contemporary Clinical Trials Communication. 2025.

2. Fenton JJ et al. Longitudinal Care Patterns and Utilization among Patients with New-Onset Neck Pain by Initial Provider Specialty. Spine. 2023. 15;48(20):1 409-1418

Group Medical Visits

Appreciating the power of social connection and support in healthcare, new Osher studies are leveraging group medical visits as a vehicle to deliver integrative care. In one program called 'Age Self Care-Resilience,' geriatrician, Dr. Julia Loewenthal developed and pilot tested a novel



approach to prevent the progression to frailty with aging.¹ The eight-week virtual group visit program included sessions focused on physical activity, nutrition, social engagement, mind-body practice, and home environment modification. Mixed-methods results support that the program was feasible to deliver and well received. Themes emerging from qualitative interviews include 'group participation was meaningful and empowering' and 'the

program positively changed attitudes and lifestyle behaviors'. Inspired by this study, chiropractic postdoctoral fellow Dr. Wren Burton developed 'GOLDEN' (Group medical visits and chiropractic care for older adults with chronic spine pain). Now underway, this new study



combines group educational and experiential (e.g. postural exercises, ergonomics) sessions with 1:1 weekly hands-on chiropractic sessions. In addition to feasibility, outcome of interests include pain, function, and medical utilization.

1. Loewenthal JV, Burton WM, Smith C, Ramani S, Wayne PM, Orkaby, AR, Aronson L. Age Self Care-Resilience, a medical group visit program targeting pre-frailty: a mixed methods pilot clinical trial'. J Frailty and Aging 2025;14(1):100005.

Educator.

In 2024, we made substantial strides forward in disseminating innovative integrative health research and clinical practice through both in-person and online education:

- Sixth Osher Integrative Medicine Network Forum
- Twenty-sixth year of NIH-funded T32-Postdoctoral Research Fellowship
- Second cycle of NCMIC-funded Chiropractic Research Fellowship
- Ninth year of Integrative Medicine Grand Rounds
- Expanding Integrative and Planetary Health Programs
- Deepening Clinical and Research Mentorship

2024 OSHER INTEGRATIVE MEDICINE NETWORK FORUM

High-Tech Medicine, Soft-Touch Healing: Advancing Innovation in Integrative Health

**2 Days | 8 Sessions | Keynotes | 30+ Speakers | 50+ posters | Oral Medley | Prize Raffle
Digital Art Display | Multi-Media Music Demo | Exhibitors | Networking Reception**

On December 9-10, 2024, we hosted our signature biennial Integrative Medicine Network Forum, marking 10 years since the inaugural conference in 2014. The two-day hybrid conference at Harvard Medical School successfully fostered insightful discussions on how technology influences and impacts integrative healthcare— from diagnostics, analysis of disease, and therapeutics to translational research, clinical care, and disparities.

Over 30 speakers including researchers, clinicians, industry pioneers, ethicists, and policymakers, exchanged lessons learned from in-the-field applications and explored future opportunities and challenges in applying technology to enhance integrative health practices. The free conference attracted over 800 registrants across in-person and virtual audiences. Eight plenary sessions, included short talks, panel discussions and audience Q&A.

- ▶ Bias and Health Equity through a Technology Lens
- ▶ Independence and Aging in Place
- ▶ Body-Mind Connections and Technology
- ▶ Accelerating the Development of Innovative Technologies in Industry
- ▶ Educational and Ethical Innovations with Technology Implications
- ▶ Complex Systems Perspectives on Traditional Healing Systems
- ▶ AI & Machine Learning for Integrative Health
- ▶ Music, Movement, Meditation and Machines



SPEAKERS



Andrew Ahn



Alessandra Anzolin



Paul Anderson



Lou Awad



Gilda Barabino



Abigail Batchelder



Kaitlyn Becker



Paolo Bonato



Treyden Chiaravalloti



Sekai Chideya



Leo Anthony Celi



Giulia Corniani



Michael Dempsey



Jing Fan



Paula Gardiner



Ariel Garten



Paramesh Gopi



Dina Katabi



Chung-Kang Peng



Lisa Lehmann



Kimaya Lecamwasam



Yan Ma



Tod Machover



Brad Manor



Nina Masuelli



Darshan Mehta



Manaswi Mishra



Vitaly Napadow



Rupal Patel



Shyamal Patel



Mary Peng



Adam Rodman



Steven Schachter



Ana Schon



Jagmeet Singh

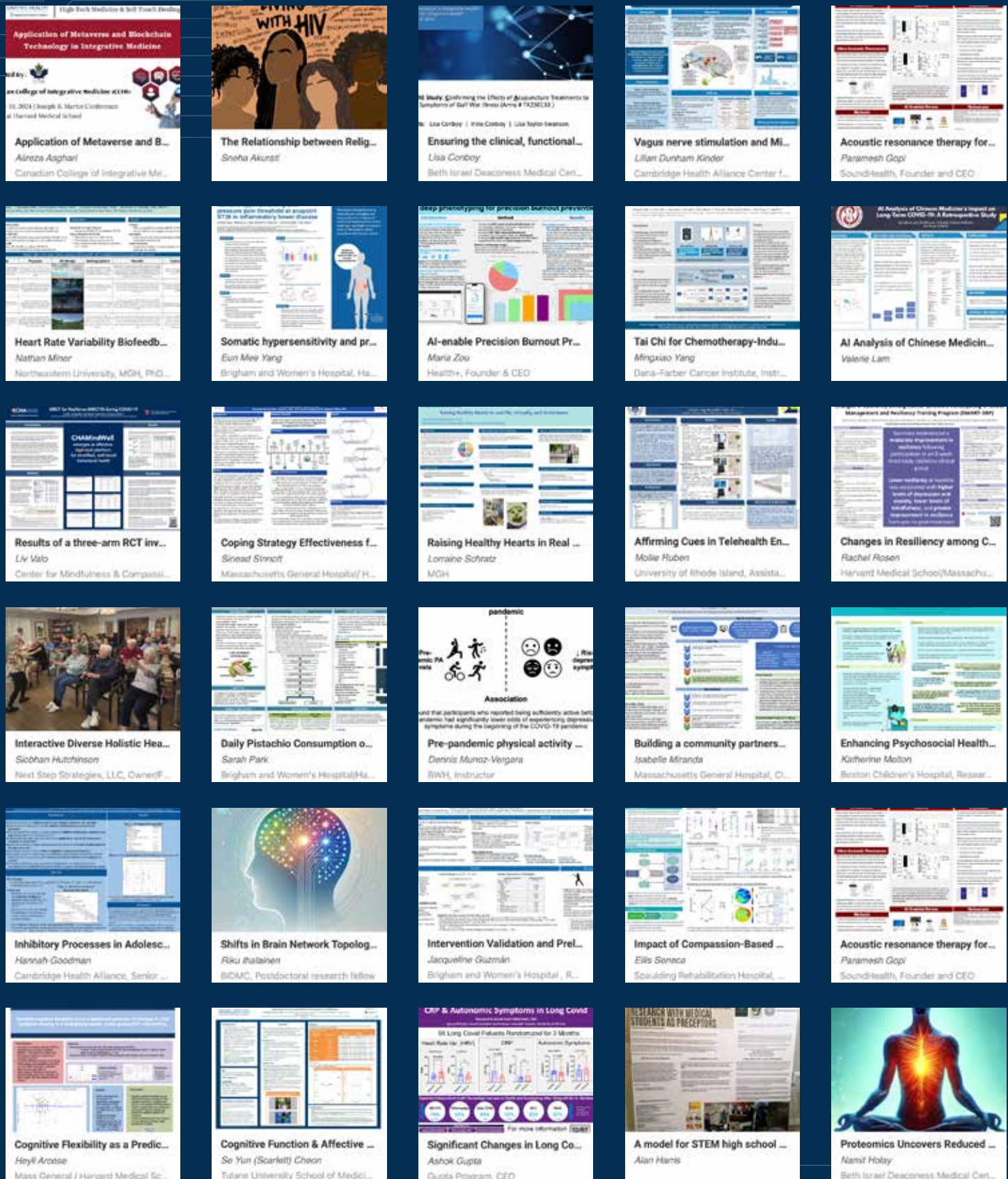


Peter Wayne



Gloria Yeh

Network Forum Scientific Posters



Sponsors

We gratefully acknowledge the generous support of the The Bernard Osher Foundation and The Weil Foundation, along with our industry and academic sponsors. Their contributions were instrumental in making the conference a success.

Level: Benefactor



CIMIT

Level: Innovator



Labfront

SADHGURU CENTER FOR A CONSCIOUS PLANET
Beth Israel Lahey Health
Beth Israel Deaconess Medical Center



Level: Champion



Center for Mindfulness and Compassion



Exhibitors

We extend our appreciation to our paid exhibitors who helped enrich the conference experience by showcasing innovative products, services, and research relevant to our attendees.



Raffle Prizes Included



muse®



Labfront



Wayne Jonas



OURA



SoundHealth



We are also grateful to participating organizations that generously donated a variety of raffle prizes. Prizes included Garmin watches, Oura rings, complimentary CME-accredited workshop attendance, and wellness products such as protein powder.

Training the Next Generation in Integrative Medicine Research and Leadership

Led by Osher Center Director of Clinical Research, Dr. Gloria Yeh, our NIH-funded post-doctoral research fellowship in integrative medicine (T32) continues to thrive. Established in 1999, it is the longest standing training program in integrative medicine research in the United States.

Our fellows-in-training, recent graduates and junior faculty are tackling leading edge research topics, and their work has led to multiple peer-reviewed publications and awards. Recent graduates have joined Harvard faculty, and earlier graduates of the Fellowship continue to have an important presence in integrative medicine leadership roles nationally. Fellows continue to come from diverse academic backgrounds, including physicians, psychologists, neuroscientists, and complementary and integrative providers trained in naturopathy and chiropractic. Meet our current research fellows, recent graduates and junior faculty.

T32 Fellows research topics include:

- Brain responses to chiropractic care in patients with chronic pain
- Development of mindfulness interventions in special populations such as multiple sclerosis, serious mental illness, or alcohol use disorder and addictions
- Understanding the impact of mind-body interventions on cardiovascular disease in populations at increased risk such as post-traumatic stress disorder or HIV
- Nutrition, food as medicine, and teaching kitchen interventions in under served communities
- Understanding the scientific basis for acupuncture points

CHIROPRACTIC FELLOWSHIP

Alongside our T32 Fellowship, we secured renewed funding from the NCMIC Foundation for a second chiropractic research fellow, **Macy Randolph, DC, MPH** who started in July 2024. Our first chiropractic fellow, **Wren Burton, DC, MPH**, completed her three-year training in June 2024. She is continuing both her Osher clinical and research work and has since received a T90 award to join the Mass General Brigham IMPACT Fellowship Program in pain research in June 2025, an interdisciplinary NIH HEAL-funded program.

RESEARCH FELLOWS

First Year Fellows



Kieley Chapman, MD, is a 1st year T32 fellow and pediatric gastroenterologist. Her research focuses on characterizing the relationship between food insecurity, dietary quality, and diet-related chronic diseases in children.



Macy Randolph, DC, MPH is a 1st year chiropractic research fellow. Her work explores how multimodal chiropractic care impacts pain, physical and cognitive function, and brain dynamics (assessed with EEG) in individuals with chronic neck pain.



Sinead Sinnott, PhD, is a 1st year T32 fellow and clinical psychologist. Her research focuses on the study of stress, coping, cardiovascular correlates of post-traumatic stress disorder (PTSD), and behavioral interventions for improved health and wellbeing.

Second Year Fellows



Sarah Park, ND, is a 2nd year T32 fellow and a naturopathic physician. Her research focuses on the role of nutrition and dietary supplements in the prevention of aging-related chronic diseases, including major risk factors such as hypertension.



Rachel Rosen, PhD, is a 2nd year T32 fellow. Her research focuses on the development, evaluation, and implementation of behavioral and mind-body interventions for tobacco use and co-occurring conditions.

3rd Year Fellows



Heena Manglani, PhD, is a 3rd year T32 fellow and clinical psychologist. She is developing and testing mind-body interventions in individuals with multiple sclerosis and their care partners, targeting whole health behaviors to improve physical, psychological, and cognitive function.



Joseph Rosansky, PhD, is a 3rd year T32 fellow and clinical psychologist. His work focuses on mindfulness-based and integrative approaches to treating addictive behaviors, including reducing alcohol consumption. He is also studying innovative, integrative approaches to population mental wellness.

RECENT GRADUATES & JUNIOR FACULTY



Julia Loewenthal, MD, is a junior faculty member and geriatrician at our Osher Clinical Center. Her current research explores the impact of both long-term yoga practice as well as integrative group medical visits on the risk of frailty and biomarkers of aging and resilience.



Wren Burton DC, MPH graduated from the NCMIC funded Osher chiropractic fellowship in 2024. Dr. Burton's research focuses on the relationship between chronic musculoskeletal pain, mobility, cognitive function and fall risk, and the promise of a novel group-based chiropractic care program for older adults.



James Doorley, PhD, graduated from the T32 fellowship in 2024. His research focuses on mind-body and psychologically-informed physical therapy for chronic pain.



Michael Datko, PhD, graduated from the fellowship in 2023. His work examines the neurophysiology of multi-modal therapies, including vagal nerve stimulation and mindfulness meditation for chronic pain, and is helping to elucidate fundamental processes such as interoceptive awareness.



Jacklyn Foley, PhD, graduated from the fellowship in 2023. Her research evaluates mindfulness and cardiovascular health among people living with HIV. Her work is supported by a NIH National Heart Lung Blood Institute (NHLBI) K23 career development award.



EunMee Yang, PhD, MPH, MS, LICAC, graduated from the fellowship in 2022. She is a junior faculty member at the Osher Center. Her research focuses on understanding the biophysical properties of acupoints, using sophisticated measures of blood flow, skin temperature and pressure sensitivity, within the context of inflammatory bowel disease.



Yan Ma, MD, MPH, graduated from the fellowship in 2021. She is now a junior faculty member at the Osher Center. With support of an NIH K23 career development award,

her research explores the use of non-linear physiological markers of heart and brain wave dynamics to characterize sleep quality, and how bedtime mind-body practices can improve sleep onset and quality in patients with insomnia.



Dennis Muñoz-Vergara, DVM, PhD, MPH, graduated from the fellowship in 2021. With support of an NIH K01 career development award, he studies the impact of yoga on tissue remodeling, inflammation, pain and quality of life in patients suffering from post-surgical persistent pain.



Kristen Kraemer PhD, graduated from the T32 program in 2020 and joined Beth Israel Deaconess Medical Center as a Harvard faculty member. She was awarded a K23 career development award from the National Institutes of Complementary and Integrative Health (NCCIH) to study components of mind-body exercise for physical activity engagement in metabolic syndrome.

2024 Current and Recent Fellows' Grant and Abstract Awards

Wren Burton, DC, MPH

T-90 Interdisciplinary Research Training Award, NIH, National Institute of Neurological Disorders and Stroke
2nd NIH Loan Repayment Program Award

Julia Loewenthal, MD

Best Poster Award, Integrated Center for Group Medical Visits, Boston, 2024
NIH Loan Repayment Program Award

Dennis Muñoz-Vergara, DVM

Chair's Research Award, Department of Medicine Research Performance Incentive Program, Brigham and Women's Hospital

Sarah Park, ND

Brigham Research Institute Microgrant
NIH Loan Repayment Program Award

Joseph Rosansky, PhD

Livingston Fellowship Award,
Department of Psychiatry, Harvard Medical School

Rachel Rosen, PhD

Student/Trainee Travel Award, International Congress on Integrative Medicine & Health, 2025

EunMee Yang, PhD

2024 Rosalind Franklin Award in Science, Best Paper of the Year by a Woman or Underrepresented Minority – Journal of Integrative and Complementary Medicine

Planetary Health Initiatives

After launching our Integrative and Planetary Health Program in 2022, this year we saw the program grow in leaps and bounds, with the development of multiple collaborative and anchoring initiatives throughout the year, guided by our planetary health lead, Aterah Nusrat, MSc. DIC.

Growing Planetary Health Initiatives

January



Healthy People, Healthy Planet Symposium

Osher Collaborative Planetary Health (PH) Working Group: Aterah Nusrat continued to serve as Chair for 2nd consecutive year.

Osher Collaborative 2024 Annual Virtual Symposium: Aterah Nusrat was nominated as Program Committee Chair for the planetary health themed symposium.

March



Earth Compassion Weekend Retreat, Harvard Forest: Dr. Peter Wayne and Aterah Nusrat supported and participated in this retreat for 1st year Harvard College students, led by Michael Ferguson, PhD, course co-instructor on the Cognitive Neuroscience of Meditation at Harvard College. The retreat was one outcome of Dr. Ferguson's 2023 Osher Pilot

Research Study, "You're Not Alone: Examining Biophilia and Compassion as Candidate Moderators of Loneliness."

University of Vermont (UVM) One-Day Planetary Health Summit: Aterah Nusrat joined the Program Planning Committee.

April



Harvard/Brigham Osher Earth Month Grand Rounds: "Climate Change, Human Health, and

Sustainability: Intersections and Opportunities for the Health Sector."

Gregg Furie, MD, Brigham and Women's Hospital Medical Director for Climate and Sustainability.

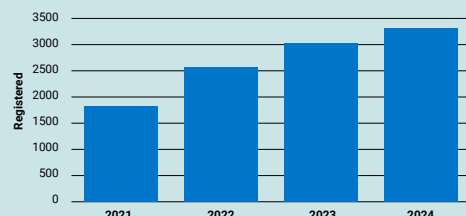


UCSF Osher Center Earth Month Grand Rounds: "Reintegrating Medicine – Nurturing Connection between Personal and

Integrative Medicine Grand Rounds

Our monthly Integrative Medicine Grand Rounds series, now in its tenth year, continues to garner interest, attracting 3,300 registrants in 2024, a 10% increase from 2023. We hosted a range of research presentations and clinical cases from leaders in their respective fields.

2024 Grand Round Registrations



Notable presentations included:

- Maryanna Klatt, PhD, on Workplace Well-Being and Intersectionality with Integrative Medicine and Health
- Paula Gardiner, MD, MPH, on Integrative Medicine Group Visit Technology to Empower Diverse Patients with Chronic Pain
- Neil Theise MD, on The Human Interstitium as a Body-Wide Communication Network
- Claudia Witt, MD, MBA, on AI in Health Care: Opportunities and Challenges for Integrative Medicine



Workplace Well-Being and the Intersectionality with Integrative Medicine and Health

Maryanna D. Klatt, Ph.D.

Director of Integrative Health, Professor-Clinical
Department of Family and Community Medicine,
The Ohio State University College of Medicine



Integrative medicine group visit technology to empower diverse patients with chronic pain.

Paula Gardiner, MD, MPH

Director of Primary Care Research at the Center
for Mindfulness and Compassion at Cambridge
health alliance.



The Human Interstitium as a Body-Wide Communication Network

Neil Theise, MD

Professor of Pathology, NYU Grossman School of
Medicine, Co-Chief, Division of GI and Liver
Pathology, NYU Langone Health



AI in Health Care: Opportunities and Challenges for Integrative Medicine

Claudia Witt, MD, MBA

Professor of Medicine, University of Zurich
Director, Institute for Complementary and
Integrative Medicine
University Hospital Zurich, Switzerland

October

Planetary Health, Drs. Peter Wayne and Michael Ferguson and Aterah Nusrat.

Osher PH Working Group, International Congress for Integrative Medicine and Health (ICIMIH), 2024, Cleveland, OH: In-person meeting supported by the Osher Collaborative Exchange Program provided by The Lunder Family Foundation.

Osher Small Research Grant Award: "Growing Together – The Impact of Nature Art on an Inpatient Psychiatric Unit" Jeremy Wortzel, MD, MPH, MPhil, Brigham and Women's Hospital.



UVM Planetary Health Summit, Burlington, VT: Morning Session Presentation: "Can Mind-Body Movement Practices have Co-Benefits for Personal and Planetary Health?" Peter Wayne, PhD; Panelist.

Afternoon Panel Discussion
Moderator, Aterah Nusrat.

November



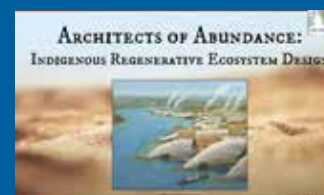
Osher Collaborative Virtual One-Day Symposium on Healthy People – Healthy Planet

4 Sessions exploring Healthy Lifestyles, Connections, Lifespan and Future.

23 Osher Collaborative presenters / moderators / experiential guides.

Over 1,000 live attendees.

Qi gong experiential, Peter Wayne, PhD.



Keynote: "Holistic Health Lessons from Precolonial Native American Land Management," Lyla June Johnston, PhD, Indigenous musician, scholar, and community organizer of Diné (Navajo), Tsétséhéstâhese (Cheyenne) and European lineages.

Keynote Fireside Chat, hosted by Aterah Nusrat.

Clinical and Research Mentorship

Darshan Mehta, MD, MPH and Gloria Yeh, MD, MPH served as clinical and academic mentors for the Osher Collaborative Clinical Fellowship. This longitudinal role allowed meaningful participation in the fellowship experience by discussing clinical cases, guiding scholarly projects, and career counseling. Peter Wayne, PhD, and Matthew Kowalski, DC also participated as faculty for the Fellowship as content experts in their respective areas of expertise. Dr. Yeh received a 5-year competitive renewal of her K24 mentoring award from the NIH NC-CIH to support her research mentoring of pre- and post-doctoral trainees both within the Harvard network and nationally/internationally. She continues to direct the HMS Research Fellowship in Integrative Medicine.

Howard Sesso, ScD, continued to lead the Peer Mentoring Group for junior faculty at the Division of Preventive Medicine (DPM), including those from the Osher Center. In this role he provides career support for the development of new grants and collaborations, new and ongoing data analyses and manuscripts, navigation of administrative and logistical aspects of research, and peer support for one another. Dr. Sesso also mentors several Research Fellows at the DPM, along with masters and doctoral students at the Harvard T.H. Chan School of Public Health. Through this secondary appointment in the Department of Epidemiology, he supports the next generation of researchers with career interests in nutrition, epidemiology, biomarkers, and clinical trials.



From Left: Photo 1: Jo Jo Kwok and Andrew Ahn ; Photo 2: Peter Wayne and Eana Meng ; Photo 3: Sinead Sinnott, Sarah Park, Rachel Rosen, Joseph Rosansky, Heena Manglani, Gloria Yeh, Wren Burton

Dr. Wayne continues to prioritize mentoring, serving as postdoctoral and junior faculty mentor to Drs. Muñoz-Vergara, Yang, Ma, Randolph, Loewenthal, and Kraemer, as well as his team of research assistants and coordinators. In 2024, Drs. Wayne and Yeh also mentored Jo Jo Kwok, PhD, MPH, RN, FAAN, a Visiting Research Scholar from the University of Hong Kong. Dr. Kwok's research focuses on neurology care, behavioral science, and rehabilitation medicine, with a particular emphasis on compassionate-based care models for Parkinson's disease (PD).

Andrew Ahn, MD, in his role as Core Leader Leveraging Technology for Integrative Health, works with nearly all fellows and junior faculty advising on the use of wearable technology to capture real-world physiological data, and sophisticated analytical methods (non-linear dynamics, AI) to evaluate clinical outcomes and mechanistic biomarkers.

Donald Levy Retirement Lecture

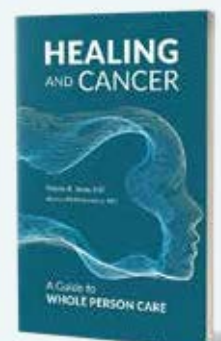


Following his retirement in 2023, Osher Clinical Center Founding Medical Director Donald B. Levy, MD was invited to an honorary Grand Rounds to share his reflections on over 40 years of practice and his thoughts on the future of integrative health. Accompanied by an in-person reception, the event celebrated his pioneering career and contributions to integrative medicine.

Jack Cogan Lecture – Wayne Jonas

Over 40% of the 295 registrants for this year's online Cogan lecture joined live. The 2024 lecture was presented by Wayne Jonas, MD, President of Healing Works Foundation, a not-for-profit organization dedicated to the integration of healing and curing in routine health care delivery. Dr. Jonas presented insights from his new book, co-authored with Alyssa McManamon, MD, "Healing and Cancer: A Guide to Whole Person Care."

Dr. Jonas is passionate about shifting the healthcare paradigm, where a patient's journey to wellness goes beyond symptom suppression and pharmacological approaches. He is a board-certified, practicing family physician, expert in integrative health and whole person care delivery, a widely published scientific investigator and former Director of the Office of Alternative Medicine at the National Institutes of Health from 1995-1999.





In 2024, we marked 18 years of the value of integrative healthcare embedded in an academic hospital setting. Our strategic focus included:

- Leadership transitions
- Inter-departmental collaborations with departments for Pain Management, Aging, Psychiatry, Sports Medicine and Spine Care
- Expanding our clinical bench with acupuncturists, massage therapists, and chiropractors
- Serving as a clinical research site to investigate the combined benefits of tai chi and chiropractic care for chronic neck pain
- Providing a coordinating function for brain health and healthy aging clinical studies
- Delivering clinical classes for our patients and healthcare providers

Osher Clinical Center Highlights



"A Research and Education Lab"

The recent and current activities to fully integrate Massachusetts General Hospital and Brigham and Women's Hospital have provided a valuable opportunity to strengthen institutional alliances and enhance our network of integrative health providers. In 2024, much of our focus was on leadership transitions, ensuring a seamless evolution that supports our mission.

At the Osher Clinical Center, we continued to expand our interdepartmental collaborations, fostering deeper connections with Pain Management, the Department of Aging (Medicine), Psychiatry, Orthopedics/Sports Medicine, and the Spine Care team. These partnerships have been reinforced by working towards the strategic co-location of key

"I would like to say thank you to all staff. Very professional and very friendly, caring."

clinicians within our center, which will further embed integrative health into multi-disciplinary patient care.

Now in our 18th year, the clinic is experiencing a transition period, with new clinician recruitment and onboarding underway. At the same time, we remain anchored by the dedication and expertise of five of our inaugural clinicians, whose continued presence reflects our commitment to clinical excellence and continuity of care.

"Dr. Mecke is one of the best doctors I have had in the past four years, especially, with my injury. He put me back on my feet, which none of the meds or procedures had done. I got my sleep back. I am hoping to continue seeing doctor Mecke to improve my health."

The Osher Clinical Center continues to serve as a hub for scientific inquiry into integrative health practices. In 2024, we successfully completed recruitment and enrollment for a novel study investigating the combined benefits of Tai Chi and chiropractic care for individuals with chronic neck pain.

Additionally, we are a key coordinating and recruitment site for research on brain health and healthy aging, as well as a hub for studies evaluating chiropractic care and related therapies for migraine headaches, further advancing our commitment to evidence-based integrative medicine.

"I felt much better, physically and emotionally after my visit with Jie Roche."

2024 Clinical Team News

Dennis Matos, DC, was recruited to work with the U.S. Fencing organization, providing hands-on care and biomechanics coaching to national and Olympic-level athletes at training camps. His expertise supports injury risk management and enhances athletic performance, helping fencers optimize their movement and resilience.

Carolyn Bernstein, MD, expanded her Tobin Collaboration STEM programs within Boston Public Schools to include engaging topics such as “Brain Health is Cool,” vaping and smoking, nutrition, and mindfulness. As part of this initiative, a food truck event was launched, providing students with a unique opportunity to interact with health professionals and learn about wellness in an accessible and dynamic setting.



Carolyn Bernstein, MD

In 2024, we focused on recruiting and onboarding new clinical talent to support our growing integrative health services. We successfully welcomed two new acupuncturists to replace outgoing clinicians, added two massage therapists, and expanded our chiropractic team with an additional provider. Additionally, **Wren Burton, DC, MPH**, transitioned from a Fellow to a practicing clinician, further strengthening our team’s expertise and continuity of care.

Integrative care for individuals with migraine disorders remains a core focus at the Osher Clinical Center. In 2024, we furthered this commitment by hosting three headache Fellows under the mentorship of Dr. Carolyn Bernstein, fostering the next generation of specialists in migraine care. Other educational opportunities have included internal medicine and geriatric care residents.

The current focus on integrating Massachusetts General Hospital and Brigham and Women’s Hospital has provided an opportunity to assess and strengthen the Mass General Brigham (MGB) network of integrative health providers. As we gain a deeper understanding of the exceptional services offered across the MGB system, we are working to catalog and unify our integrative health practitioners through enhanced communication, retreats, and collaborative initiatives. Additionally, this merger has allowed us to evaluate and align standards of practice, billing procedures, compliance, job roles, and provider collaboration to ensure consistency and excellence in patient care.



Wren Burton, DC, MPH

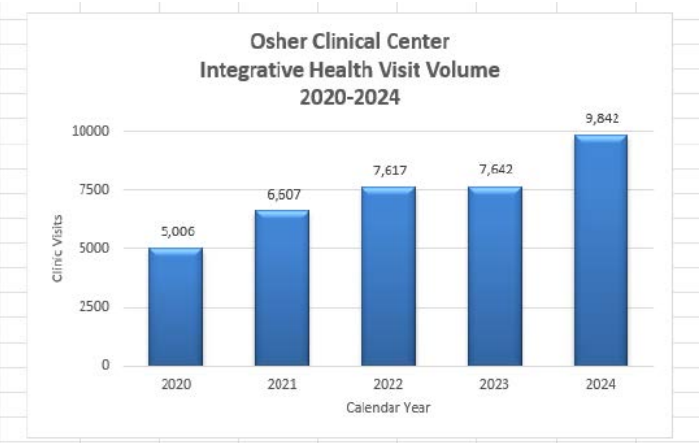
Clinical Classes

The popularity of our Pilates for Ehlers-Danlos Syndrome and Hypermobile Bodies workshop series continues to grow.



"Dr. Loewenthal is a smart and caring professional. I wish that she was my primary physician!"

Clinic Statistics



In 2024, the Osher Clinical Center’s total integrative health visit volume increased by ~30% with nearly 10,000 visits, up from 7,642 integrative health visits in 2023. For fiscal year 2024, while OCC revenues were 2% ahead of budget, higher than expected expenses, driven by salary and wage costs, resulted in a slight negative margin at the end of the fiscal year.

Network Building

In 2024, we continued to serve as a 'Center Without Walls' for the local and broader integrative medicine and health community by leveraging research funding, convening conferences, and providing integrative health news online:

- \$1.4 million pilot research funding awarded since 2014, translating to a return of investment of over \$6 million in subsequent competitive funding
- Integrative Medicine Network Forum on 'High-Tech Medicine, Soft-Touch Healing' bringing together industry pioneers and leading academics
- Growing online subscriber engagement

Strengthening & Stewarding the Integrative Medicine &

As a 'Center Without Walls,' one of our primary aims is to connect and strengthen the integrative medicine and health community across Harvard Medical School—and beyond. In 2024, we continued supporting innovative research through our Osher Pilot Research Grants, we delivered our sixth signature Integrative Medicine Network Forum (see education section), built new connections with industry partners, and continued to provide visibility for the integrative medicine community with our online presence.

2015-2024 Osher Pilot Awards

Pilot Research Grants

Since the Osher Pilot Research Grant program was launched in 2015, we have distributed \$1.47 million in seed funding to the HMS community, with awardees leveraging the funds to solicit over \$6 million in subsequent awards. The program supports innovative, cross-disciplinary and collaborative projects in integrative medicine and health in the following domains:

- **The Science of Mind-Body Connections**
- **Clinical Effectiveness of Multimodal and Integrative Interventions**
- **Systems and Translational Biology in Integrative Medicine**
- **Placebo and the Science of Human Connections**
- **Lifestyle, Nutrition and Dietary Supplements**
- **The Science of Human and Nature Connections**

2024 Pilot Awards



Andrew Taylor, PhD

Department of Physical Medicine & Rehabilitation

Spaulding Rehabilitation Hospital

"Yoga Breath Training to Improve Cardiorespiratory Synchrony in Spinal Cord Injury"



Elyse Park, PhD, MPH

Department of Psychiatry and Medicine
Massachusetts General Hospital

"Adapting a Psychosocial Mind-Body Resiliency Intervention to Treat Post-Traumatic Stress"



Simmie Foster, MD, PhD

Department of Psychiatry
Massachusetts General Hospital

"Whole-body Cryotherapy for Dysautonomia in Long COVID"

Health Community through Our Center Without Walls

10 Rounds of annual funding

42 Pilot research projects supported

\$1,473,412 Awarded

Subsequent Outcomes:

>\$6M Leveraged Funding

33 Academic Presentations

26 Scientific Publications

>20 New Collaborations

15 New Studies

Notable Outcomes from Past Pilot Project Awards



Gaelle Desbordes, PhD

Massachusetts General Hospital

Grant (2024-2025): R03MH136402 Neural Correlates of Self-Critical Rumination. (\$151,700)

New Collaborations: New trial underway of Mindful Self-Compassion (MSC) for Anxiety with neuroimaging in collaboration with Georgetown University.

Publication: Neural Correlates of Reduction in Self-Judgment after Mindful Self-Compassion Training: A Pilot Study with Resting State fMRI. J Mood Anxiety Disord.

New Collaborations: Adaptation of Osher pilot for physician burnout - multiple projects implemented across numerous healthcare systems nationwide, led by Paula Gardiner, after joining CMC faculty following mindfulness self-compassion for pain collaboration.

Publication: Self-Compassion for Healthcare Communities: Exploring the Effects of a Synchronous Online Continuing Medical Education Program on Physician Burnout. J Contin Educ Health Prof.

Grant (2023-2025): R44AT012302 GEMINI: Virtual Integrative Medical Group Visits for Managing Chronic Pain. (\$1,949,076)



Roberta Sclocco, PhD

Spaulding Rehabilitation Hospital (SRH)

2022 Osher Pilot Awardee: \$33,000

"Body Region-Specific Effects in the Neuromodulation of the Brain-Gut Axis in Functional Dyspepsia"

Downstream Post-Award Outcomes

Grant (2023-2028): NIH-NCCIH: K01AT012208 (\$676,208)

New Collaborations: Peter Wayne and Ted Kaptchuk on K01

Grant (2024-2029): NIH-NDDK: R01DK136243: (\$3,658,372)

Publication: Electroceuticals and Magnetoceuticals in Gastroenterology. Biomolecules. 2024 June 26;14(7)

Young Investigator Award: Clarie Donaldson YI Award, SRH

Oral Presentations: SRH, MGH (x2), Digestive Disease Week, Washington DC

Poster presentations: Society for Neuroscience, Chicago, IL; Organization for Human Brain Mapping, Seoul, South

New Collaborations: MGH, Emory University, Lehigh College, resulting in four new NIH grant submissions.



Zev Schuman-Olivier, MD

Cambridge Health Alliance, Center for Mindfulness and Compassion (CMC)

2016 Osher Pilot Awardee: \$33,000

"Neural and Physiologic Effects of Self-Compassion on Chronic Pain"

Downstream Post-Award Outcomes

Grant (2018-2025): P01 grant funded by NIH/NCCIH: 1P01AT009965-01 Boosting Mind-Body Mechanisms and Outcomes for Chronic Pain. (\$10,963,140)

Grant (2018-2019): UH3AT009145 NIH/NCCIH grant funding (with Brown University): NCT03609749 Mindfulness Influences on Self-Regulation: Mental and Physical Health Implications. (\$2,380,140)

New Collaborations: Osher Pilot attracted new faculty hire to the Center for Mindfulness and Compassion (CMC) (Diane Joss, PhD).

Our Online presence



Youtube channel: 315 videos, 252,000 views to date.

We reach our online integrative medicine and health community through our OsherCenter.org website, monthly e-newsletter, YouTube Channel, and social media postings. We support the connectivity of our community with video resources, research publications, access to clinical providers and news and event updates.

In 2024, our mailing list continued to grow and demonstrate above industry average open and click through rates and our social media presence on LinkedIn and YouTube also grew steadily. In 2025, we aim to increase engagement with our social media audiences and increase our presence on Facebook and Instagram.

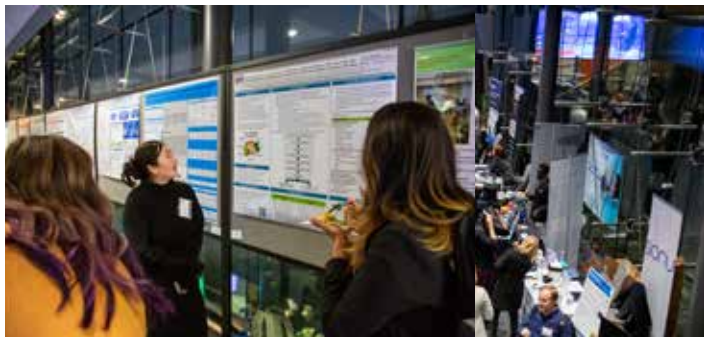
Mailing List

	2018	2019	2020	2021	2022	2023	2024
Subscribers	2,168	2,309	2,693	2,696	3,269	3,687	3,931
Open Rate	25.5%	24.2%	30.3%	30.4%	42.0%	33.8%	48.9%
Click-throughs	3.0%	3.2%	3.2%	4.2%	4.2%	4.2%	4.3%

Social Media Channels

	2023	2024
YouTube Followers	2,938	3,364
LinkedIn Followers	266	577

Network Forum Industry Partnerships



For the first time in the 10-year arc of our Integrative Medicine Network Forums, we invited industry sponsors and exhibitors that aligned with the High-Tech, Soft-Touch Medicine theme to support the success of the conference. Working partnerships ranged from invited speaker presentations, financial sponsorship, raffle prize contributions, online sponsor booths, and in-person exhibitor tables to demonstrate technologies and engage with delegates. Multiple discussions have since been initiated for collaborative research between industry and the Osher Center stemming from the connections made at the conference.

Network Forum Industry & Academic Sponsors



Leadership.

In 2024, Osher faculty continued to provide visionary leadership to the integrative medicine and health community through local, national, and international presentations and contributions. The Osher directors remained active in a variety of committees and organizations responsible for steering and shaping the future of integrative medicine and health globally.

Faculty gave 56 invited presentations, ranging from local talks to international keynotes. The full list of presentations can be found in the Appendices.

Faculty Regional, National and International Presentations

Peter Wayne

Tai Chi and Qigong for Whole Health: Rationale and State of the Evidence
Invited Lecture
Universitat Zurich, Switzerland

Mindful Movement for Chronic Pain: Does it 'Make Sense'?

Invited Plenary Lecture
The Herbert Benson, MD
Course in Mind Body Medicine, Benson-Henry
Institute for Mind Body Medicine, Boston, MA

Qigong in Nature for Resiliency

Invited Lecture
First-Year Wellness & Self-Discovery Program,
Harvard University

The Mind-Body-Movement Laboratory at Osher Center

Invited Lecture
Integrative Health and Spirituality Special Interest
Group, Society of Behavioral Medicine

Tele-Tai Chi – Leveing Wearable Sensors and Machine Learning to Monitor Proficiency in Tai Chi Training Delivered via a Virtual Platform
Lecture and Panel Presenter
Osher Network Forum, Harvard Medical School



Gloria Yeh

Move the Body, Still the Mind: Mind-Body Movement for Whole Person Health in Chronic Disease

Sanghvi Mind-Body Interface of Health and Healing
Endowed Lecture
Osher Center for Integrative Health, University of Cincinnati, OH

Cultivating Whole Person Health Through Mind Body Movement in Chronic Disease

Invited Keynote (Virtual)
MA Association of Cardiovascular and Pulmonary
Rehabilitation, Annual Meeting

Complementary and Integrative Medicine: What's It All About in 2024

Invited Lecture
Pri-Med Annual East Conference, Providence, RI

Evidence-Based Medicine in Integrative Health

Invited Lecture
Osher Collaborative Fellowship in Integrative
Medicine, University of California, SF



Howard Sesso

Dietary Supplements and Brain Health:

A Dose of Reality
Invited Lecture
The Herbert Benson, MD
Course in Mind Body
Medicine, Benson-Henry
Institute for Mind Body
Medicine, Boston, MA

Unraveling Environment-Host Interactions and their Consequences
Seminar

Departments of Medicine, Brigham and Women's
Hospital and Massachusetts General Hospital,
Boston, MA

What's Old is New Again!? New Insights on Retinoid and Carotenoid Supplementation and Healthy Aging through Randomized Clinical Trials

Invited Lecture
American Society of Nutrition, Nutrition 2024
Conference, Chicago, IL

COSMOS Trial on Healthy Aging Through Dietary Supplementation

Invited Plenary Lecture
National University Health System (NUHS) Centre
for Healthy Longevity Conference 2024, Singapore

What's the Latest Data in Multivitamin Supplementation and Cognitive Health?

Invited Plenary Lecture
82nd International Pharmaceutical Federation
(FIP) World Congress of Pharmacy and Pharmaceutical
Sciences, Cape Town, South Africa



Darshan Mehta

Mind Body Medicine in the Modern Healthcare System

Invited Lecture
2024 International Medical
Tai Chi Qigong Association
Conference, Buffalo, NY

The Evidence Behind Whole-Person Primary Care

Invited Panel Presenter
(Virtual)
Primary Care Collaborative, Washington, DC

Enhancing the Holistic Well-Being of Academic Leaders

Invited Lecture and
Workshop
National Association of Deans and Directors of
Schools of Social Work Annual Meeting, San Juan,
Puerto Rico

The Role of Mind-Body Medicine in the Management of Diabetes – A Modern Take on Wisdom Traditions

Invited Lecture
4th Malaysian Lifestyle Medicine Conference,
Kuala Lumpur, Malaysia



Andrew Ahn

Introduction to HRV Physiology

Invited Lecture
Stanford WELL for Life
Laboratory, Stanford, CA

Two Paths, One Journey: Bridging Technology & Integrative Health

Introductory Keynote
Osher Network Forum,
Harvard Medical School

Tackling Whole Health with Technology

Invited Lecture (Podcast)
Unstress Health with Dr. Ron Ehrlich Podcast

Menopause Assessment with Wearables

Invited Lecture
Labfront and Lia Bally Research Group, University
of Bern, Switzerland

Wearable Research: Heart Rate Variability

Invited Lecture (Virtual)
Labfront, Virginia State University



Matthew Kowalski

Advances in Integrated Practice Opportunities

Invited Lecture
ACA-RAC (Association
of Chiropractic Colleges,
Research Agenda Confer-
ence), San Diego, CA

Advancing Integrated Postdoctoral Training Opportunities for Chiropractors

Invited Lecture
ACA-RAC (Association of Chiropractic Colleges,
Research Agenda Conference), San Diego, CA



Aterah Nusrat

Fireside Chat with Keynote, Lyla June Johnston, PhD

Session Chair (Virtual)
Healthy People, Healthy
Planet Annual Symposium,
Osher Collaborative for
Integrative Health

Reintegrating Medicine: Nurturing Connections Between Personal and Planetary Health

Invited Lecture (Virtual)
Osher Center for Integrative Health, University of
California, San Francisco



Faculty National and International Leadership Positions

Peter Wayne

- Membership on multiple NIH grant review panels (NIA and NCCIH)
- Chair, Data and Safety Monitoring Board for the NIH-funded multicenter trial: Spinal Manipulation and Patient Self-Management for Preventing Acute to Chronic Back Pain (PACBACK)
- Member, Advisory Board, Assessing Pain, Patient Reported Outcomes and Complementary Health (APPROACH): The CIH for Pain National Demonstration Project, Veterans Administration
- Fellow and Faculty Member, Mind & Life Research Institute
- Advisory Board Member, Cochrane Complementary Medicine, Center for Integrative Medicine, University of Maryland School of Medicine
- Executive Editor, Journal of Integrative and Complementary Medicine
- Board Member, Society for Acupuncture Research
- Member, Advisory Board, OptumLabs Neck Pain Study, University of California, Davis, Center for Healthcare Policy and Research
- Member, International Advisory Board, Research Centre for Chinese Medicine Innovation, Hong Kong Polytechnic University
- Co-Chair, Executive Organizing and Oversight Committee, International Conference, The Science of Tai Chi and Qigong as Whole Person Health, Boston, MA
- Member, Advisory Committee, RAND 'Research Across Complementary and Integrative Health Institutions (REACH)' Virtual Resource Center

Gloria Yeh

- Former Member, National Institutes of Health, National Advisory Council for Complementary and Integrative Health, NCCIH
- National Institutes of Health, RECOVER- Researching COVID to Enhance Recovery - Clinical Trials Steering Committee, RECOVER Consortium, Member
- Vice Chair, Board of Directors, Academic Consortium for Integrative Medicine and Health (ACIMH)
- Co-Chair, Executive Organizing Committee, Academic Consortium for Integrative Medicine and Health, International Congress on Integrative Medicine and Health, Phoenix, Arizona
- Advisory Board Member, Cochrane Complementary Medicine, Center for Integrative Medicine, University of Maryland School of Medicine
- Academic Advisory Council Member, Osher Center for Integrative Health, University of Cincinnati

- Member, Harvard Catalyst Scientific Review Committee, Harvard Medical School, Harvard Catalyst Clinical Research Center
- Co-Chair, Executive Organizing and Oversight Committee, International Conference, The Science of Tai Chi and Qigong as Whole Person Health, Boston, MA
- Expert Panel Member, World Health Organization Collaborating Centre, Research Priorities for Traditional, Complementary, and Integrative Medicine
- Editor-in-Chief, Global Advances in Integrative Medicine and Health

Howard Sesso

- Representative (Physicians' Health Study and Women's Health Study), National Cancer Institute Cohort Consortium, NCI, NIH
- Steering Committee, Platinum Study, Indiana University School of Medicine
- Co-Chair, Adult Study Design Committee, Researching COVID to Enhance Recovery (RECOVER), NIH
- Member, Mentoring for Professionals Program, American Heart Association
- Co-Chair, Functional Foods, Bioactives and Human Health Study Group, Real Colegio Complutense at Harvard University
- Clinical Epidemiology Admissions Review Committee (SM and PhD applicants), Department of Epidemiology, Harvard T.H. Chan School of Public Health
- Associate Director, Division of Preventive Medicine, Brigham and Women's Hospital
- Editor-in-Chief, Contemporary Clinical Trials and Contemporary Clinical Trials Communications
- Co-Chair, 2024 International Conference on Polyphenols and Health (ICPH)
- Scientific Advisory Committee, California Strawberry Commission and Tomato Wellness Council

Darshan Mehta

- Chair, Diversity, Equity, and Inclusion (DEI) Task Force for the Academic Consortium for Integrative Medicine and Health (ACIMH)
- Director, Office for Well-Being, Center for Faculty Development at MGH
- Site Director (MGH), Practice of Medicine Curriculum, Harvard Medical School
- Workplace Well-Being Collaborative, Massachusetts General Hospital

- Black, Indigenous, and People of Color (BIPOC) Committee, Academy of Integrative Health and Medicine
- Resilience, Well-Being, and Prevention Think Tank, Department of Psychiatry, Massachusetts General Hospital
- Faculty Development Advisory Council for Anti-Racism, Harvard Medical School
- Supportive Oncology Workgroup, Mass General Brigham Cancer Planning
- Career Reflection Interview Committee, MGH/BWH

Matthew Kowalski

- Member, Inter-Institutional Chiropractic Research Network
 - Advisory Committee Member, NCMIC Foundation, Inc.
 - Fellowship Co-Director – NCMIC Foundation Chiropractic Clinician Researcher Fellow
- Delphi Panel Reviewer, Core Competencies (chiropractic for integrated healthcare settings)

Aterah Nusrat

- Chair, Osher Collaborative Planetary Health Working Group
- Chair, Healthy People, Healthy Planet Program Committee, Osher Collaborative for Integrative Health Annual Virtual Symposium
- Invited Faculty, Nova Institute for the Health of People, Places and Planet
- Member, Board of Directors, Mind Body Ecology Institute
- Member, Executive Committee, Osher Collaborative for Integrative Health

Appendices

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SUMMARY OF ACTIVE RESEARCH STUDIES

NIH Funded						
STUDY/PROJECT TITLE (FUNDING SOURCE)	SUMMARY DESCRIPTION	PI/ KEY OSHER INVESTIGATORS/ AFFILIATES	RESEARCH DOMAIN			
A mobile Tai Chi platform for fall prevention in older adults NIH / NIA 1 R42 AG059491-01 (2018-2023; NCE 2024)	This STTR grant supports development of a smart-phone based platform for delivering, monitoring adherence and safety, and assessing quality of performance of a Tai Chi program for improving balance in older adults.	Peter Wayne (MPI)				
App-Guided bedtime mindfulness for insomnia National Institutes of Health NIH – NCCIH K23 1K23AT012475) 2024- 2029	This K23 award will support the candidate's training and development towards an independent clinical research career focused on behavioral sleep medicine and the use of remote technology-based delivery/assessment of mindfulness meditation to facilitate self-sleep management in patients with chronic insomnia disorder.	Ivy Ma (PI) Gloria Yeh (Mentor) Peter Wayne (Mentor)				
Assessing the efficacy of mindfulness apps NIH/ NCCIH, 1R01 AT013324-01 (2025-2030)	This is a remotely-conducted randomized controlled trial to evaluate the efficacy of a mindfulness app (vs. digital placebo) in individuals with moderate to severe depression during the waiting phase for mental health treatment.	Gloria Yeh (Co-I)				
Biophysical properties of acupoints NIH/ NCCIH T32 AT000051, Osher Pilot (2021-2023; NCE 2024)	Using a neuroinflammation viscera-somatic model in IBD patients, this study evaluates local blood flow (laser speckle photometry), thermography, and pressure sensitivity at verum and sham acupoints relevant to GI health in IBD patient and healthy controls.	Eunmee Yang (PI), Peter Wayne (Mentor) Weidong Lu (Mentor) Pamela Rist (co-I)				
Boosting mind-body mechanisms and outcomes for chronic pain NIH / NCCIH P01AT009965 (2018-2024)	This is an investigation of the neural and physiological effects of an intervention combining mindfulness training and transcutaneous vagus nerve stimulation among episodic migraine patients. The outcomes involve using ultra high-field functional MRI, positron emission tomography, and high frequency heart rate variability to assess how the intervention affects central autonomic nervous system hypersensitivity, emotion/pain regulation processes, and neuroinflammation.	Michael Datko (Co-I)				
Chiropractic care for episodic migraine NIH / NCCIH 1 R01 AT012228 (2023-2025)	The goal of this application is to perform a pilot study of chiropractic care for episodic migraine to help inform the design of a future, full-scale multi-site pragmatic effectiveness trial.	Peter Wayne (MPI), Matthew Kowalski (Co-I), Pamela Rist (MPI)				
Cocoa flavanols for migraine NIH/NCCIH U01 AT012611 (2024-2027)	The goal of this grant is to perform a pilot study of a cocoa extract supplement for episodic migraine to help inform the design of a future, full-scale efficacy trial.	Pamela Rist (PI)				
COcoa Supplement and Multivitamins Outcomes Study (COSMOS): Effects on falls and physical performance NIH / NIAMS R01 AG071611 (2021-2025)	This study will determine whether supplemental cocoa flavanols slow age-related declines in physical performance and decrease falls and falls-related fractures that are major public health problems in older women and men in the U.S.	Howard Sesso (Co-I)				
Combined chiropractic care and Tai Chi for chronic non-specific neck pain NIH / NCCIH R34AT011368-01A1 (2022-2025)	Chronic neck pain ranks in the top five causes for years lived with disability. To inform the feasibility and design of a future definitive trial, the goal of this application is to perform a pilot study of chiropractic care and Tai Chi mind-body exercise for adults with chronic non-specific neck pain	Peter Wayne (PI), Pamela Rist (Co-I), Matthew Kowalski (Co-I)				
Complementary and integrative health provider training administrative supplement for combined chiropractic care and Tai Chi for chronic non-specific neck pain NIH / NCCIH 3 R34 AT011368-03W1 (2024-2025)	This supplement supports the training of a postdoctoral fellow in clinical trial conduct and the assessment of gait and balance within an RCT evaluating chiropractic care and tai chi for neck pain.	Peter Wayne (MPI)				
COSMOS Eye: Cataract and AMD in a trial of multivitamin and cocoa extract NIH / NEI R01 EY025623 (2018-2024)	This is an ancillary study of the Cocoa Supplement and Multivitamin Outcomes Study (COSMOS) and will look at the benefits and risks of cocoa extract and multivitamins for cataracts and AMD.	Howard Sesso (Co-I)				
Decoding mechanisms underlying metabolic dysregulation in obesity and digestive cancer risk NIH / NCI U01 CA272452 (2022-2027)	This proposal will investigate the associations of the novel inflammatypes with incident colorectal and liver cancer risks in men and women by examining metabolic disturbances-related systemic inflammatypes. We hypothesize these can be identified among healthy older adults with varying degrees of visceral adiposity and insulin resistance, and that these inflammatypes may promote the cascading development of digestive cancers (colorectal, liver) through both unique and shared causal pathways.	Howard Sesso (Co-I)				

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STUDY/PROJECT TITLE (FUNDING SOURCE)	SUMMARY DESCRIPTION	PI/ KEY OSHER INVESTIGATORS/ AFFILIATES	RESEARCH DOMAIN			
Decreasing sedative requirements for peripheral vascular interventions using preoperative guided meditation. Agency for Healthcare Research and Quality (2022-2024)	This early career post-doctoral development award supports the development and piloting of a novel preoperative guided meditation program to decrease sedative requirements in patients undergoing vascular surgery intervention.	Max Png (PI), Gloria Yeh (co-mentor)				
Development and pilot testing of an integrated mind-body intervention for Chinese Americans with depression and somatic symptoms NIH / NCCIH R34 (2024-2027)	This pilot RCT evaluates compared a novel combined intervention of CBT and Qigong vs health education to treat somatic depressive symptoms in Asian Americans	Peter Wayne (Co-I)				
Effect of cocoa supplementation on falls, fracture, and physical performance NIH / NIAMS R01 AG071611 (2021-2025; NCE: 2026)	We will evaluate the effect of the cocoa flavanol and multivitamin interventions from the COSMOS trial in 21,442 women aged ≥65 years and men aged ≥60 years on the risk of falls and fracture that will be adjudicated with medical records, as well as physical performance. In addition, we will examine the effect of the COSMOS interventions on 2-year changes in physical performance measures collected in-person in a subset of 603 participants who completed clinic assessments at baseline and 2 years follow-up.	Howard Sesso (Co-I)				
Effect of randomized cocoa supplementation on inflammation and epigenetic aging NIH / NHLBI R01 HL157665-01 (2021-2025)	We will evaluate the effect of the cocoa flavanol and multivitamin interventions from the COSMOS trial on longitudinal changes in biological aging, including epigenetics and inflammation, and the subsequent risk of cardiovascular disease in 600 participants.	Howard Sesso (MPI)				
Genetic susceptibility and biomarkers of platinum-related toxicities NIH / NC R01 CA157823-07A1 (2020-2025; NCE: 2026)	In a clinical cohort of >2,000 testicular cancer survivors (TCS) cured with cisplatin-based chemotherapy, we will characterize (a) the longitudinal trajectory of platinum toxicities, (b) the impact of toxicities on health-related quality of life and patient functioning, and (c) the role of genetic variation to identify high-risk subgroups.	Howard Sesso (PI - Subcontract)				
Health effects of substituting sugar-sweetened beverages with non-caloric beverages in adults with overweight and obesity NIH / NIDDK R01 DK125803 (2020-2024; NCE: 2026)	We will conduct the SUBstituting with Preferred OPTIONS (SUB-POP) trial, a parallel-arm trial to test the effects of substituting sugar-sweetened beverages (SSBs) with non-caloric options on body weight and markers of type 2 diabetes and cardiometabolic health in 540 adults.	Howard Sesso (Co-I)				
Integrative Analysis of Lung Cancer Etiology and Risk (INTEGRAL) – Biomarkers of Lung Cancer Risk (LC3-II) NIH / NCI U19 CA203654 (2019-2024)	This proposal investigates the role of proteomics and the risk of lung cancer using the Lung Cancer Cohort Consortium in a case-cohort study, and includes samples and data from the Physicians' Health Study and Women's Health Study.	Howard Sesso (PI - Subcontract)				
Mentoring and patient-oriented research in mind-body exercise NIH / NCCIH K24 AT009465 (2023-2028)	This mid-career investigator/mentoring award provides support for patient-oriented research (multimodal behavioral mind-body approaches, cardiopulmonary conditions, promoting positive behavior change) and mentoring of trainees in the field of integrative medicine.	Gloria Yeh (PI)				
Mass General Brigham Interdisciplinary Clinical Pain Research Training Program NIH / NIND (National Institute of Neurological Disorders and Stroke) T90/R90 NS138001 (2024-2029)	This program will support a diverse pool of postdoctoral fellows, who will enroll in the program for 2-3 years, with the goal of expanding and enhancing the pool of early career stage investigators who are able to launch and maintain successful careers addressing the nation's scientific needs in clinical pain research.	Pamela Rist (Co-I)				
Mindful Steps: A web-based mind-body exercise intervention to promote physical activity in chronic cardiopulmonary disease NIH / NCCIH R01 AT012166 (2023-2028)	This is a remotely-conducted clinical trial with national recruitment testing the efficacy of a multi-modal website/video/Fitbit-mediated mind-body intervention called Mindful Steps to facilitate physical activity adherence in patients with COPD and heart failure.	Gloria Yeh (PI), Peter Wayne (Co-I) Pamela Rist (Co-I)				
Mindfulness training, insomnia, and EEG complexity NIH / NCCIH T32 AT005436 (2019-2023; NCE: 2024)	This pilot RCT examines acute and longitudinal effects of pre-sleep mindfulness meditation via mobile app on pre-sleep wakefulness and sleep brain dynamics assessed with conventional and non-linear EEG complexity frameworks.	Yan Ma (PI), Gloria Yeh (Mentor), Peter Wayne (Mentor)				

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STUDY/PROJECT TITLE (FUNDING SOURCE)	SUMMARY DESCRIPTION	PI/ KEY OSHER INVESTIGATORS/ AFFILIATES	RESEARCH DOMAIN			
Multimodal tele-video mind-body intervention for mTBI NIH / NCCIH K23 AT01065 (2020-2025)	This study will develop, refine and test feasibility in an RCT of a mind-body resiliency program delivered remotely via video for anxiety in patients with traumatic brain injury.	Jonathan Greenberg (PI), Gloria Yeh (mentor)				
Opioid dose reduction in comprehensive inpatient rehabilitation: A pharmacological-behavioral approach NIH / NIDA K23 DA052041-01A1 (2021-2026)	This career development award supports Dr Morales-Quezada in conducting a pilot RCT of a novel intervention based on classical conditioning and placebo analgesia for pain management in complex pain patients with spinal cord injury in the inpatient rehabilitation setting.	Leon Morales-Quezada (PI), Gloria Yeh (Mentor), Ted Kaptchuk (Mentor)				
Peer led intervention to reduce loneliness and depression among older gay and bisexual men living with HIV Multidisciplinary Studies of HIV/AIDS and Aging NIH/ NIA (R21) 2024-2025	This study will develop a novel evidence-informed intervention, Bridge 2 Belonging (B2B), to reduce depression and loneliness among older gay and bisexual men living with HIV (OGBMLH) by leveraging three evidence-based intervention strategies: cognitive behavioral therapy-based friendship enrichment program, motivational interviewing communication styles, and peer mentorship.	Jacklyn Foley (Co-I)				
Physiological outcomes of mind-body health behaviors for stress-related disorders NIH / NCCIH F32 (2021-2024)	This is a pre-doctoral early career development award that supports a project to examine pranayama, hyper-arousal and cardiovascular reactivity in female sexual trauma survivors.	Sinead Sinott (PI), Gloria Yeh (co-mentor)				
Pilot of a brief cognitive behavioral therapy intervention to enhance benzodiazepine deprescribing (C-STARs) US Deprescribing Research Network (USDeN), funded through NIH/ NIA (National Institute for Aging) R24 AG64025 (2023-2024)	This is a one-year grant to support a developmental pilot studying the impact of a telehealth cognitive-behavioral therapy intervention to aid tapering of benzodiazepine medications in older patients in primary care.	Tim Anderson (MPI) Gloria Yeh (MPI)				
Plasma metabolite and proteome signatures for migraine classification NIH / NINDS (National Institute of Neurological Disorders and Stroke) R33 (2021- 2024)	This proposal seeks to identify plasma-based metabolite and protein signatures for migraine with the goal of improving current approaches to migraine treatment and identifying new therapeutic targets.	Pamela Rist (MPI)				
Researching COVID to Enhance Recovery (RECOVER) Initiative: A multi-site observational study of post-acute sequelae of SARS-CoV-2 infection in adults NIH / NHLBI OT2HL161847 (2021-2025)	The goal of the study is to rapidly improve understanding of recovery after SARS CoV-2 infection and to prevent and treat post-acute sequelae of COVID-19 (PASC).	Howard Sesso (Co-I)				
Research training: Complementary & integrative medicine NIH / NCCIH T32 AT000051 (2012-2029)	This institutional training grant supports a three-year research fellowship program for faculty development in complementary and integrative medicine.	Gloria Yeh (PI)				
Rheumatoid arthritis and the risk of cardiovascular disease: Biomarkers risk prediction and underlying mechanisms NIH / NHLBI R01 HL163580 (2022-2027)	This study leverages data from the completed Treatments Against RA and Effect of FDG PET CT (TARGET) trial to develop a novel risk score for cardiovascular disease among individuals with rheumatoid arthritis and elucidate the cellular immune mechanisms linking rheumatoid arthritis and cardiovascular disease.	Daniel Solomon (PI) Pamela Rist (Co-I)				
Stress management and resiliency program for fear of cancer recurrence NIH / NCCIH K23 AT010157 (2019-2024)	This study will develop, refine and test feasibility in an RCT of adapted SMART program for fear of recurrence in cancer survivors, and explore impact on psychological symptoms and healthcare engagement.	Daniel Hall (PI), Gloria Yeh (mentor)				
Tai Chi and chronic pain in HIV NIH / NCCIH K23 AT010099 (2019-2024)	This study will develop, refine and test feasibility in an RCT of adapted Tai Chi Easy program for HIV patients with chronic pain, and explore its impact on psychological symptoms.	Eugene Dunne (PI), Gloria Yeh (mentor)				
Tai Chi & Qigong as Whole Person Health: Advancing the Integration of Mind-Body Practices in Contemporary Healthcare NIH/NCCIH 1 R13 (2023-2024)	This grant supports the first international conference on the science of Tai Chi and Qigong, with an emphasis on whole person health and translation of research into clinical and community based programs. The award also enhance participation and development of early career investigators	Peter Wayne (PI) Gloria Yeh (Co-I)				

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STUDY/PROJECT TITLE (FUNDING SOURCE)	SUMMARY DESCRIPTION	PI/ KEY OSHER INVESTIGATORS/ AFFILIATES	RESEARCH DOMAIN			
Tai Chi exercise and wearable feedback technology to promote physical activity in ACS survivors (MIND2MOVE) NIH / NCCIH, R01 AT012072 (2022-2027)	This is a dual-site (BIDMC/HMS and Brown University/Miriam Hospital) randomized controlled trial investigating a virtual multi-modal intervention (online tai chi exercise classes and use of a Fitbit) to promote physical activity in sedentary CV patients after acute coronary syndrome.	Gloria Yeh (MPI) Peter Wayne (Co-I)				
The Women's Health Initiative regional field center program renewal NIH / NHLBI HHSN268201100001C (2010-2027)	The overall objective of the trial is to test the effectiveness of treatments that may improve the health of post-menopausal women in the areas of cardiovascular disease, cancer and fractures.	JoAnn Manson (PI) Howard Sesso (Co-I)				
Toolkit for optimal recovery after orthopedic injury: A multi-site feasibility study to prevent persistent pain and disability NIH / NCCIH U01AT010462 (2020-2024)	This is a multisite feasibility trial of the Toolkit for Optimal Recovery after injury delivered via live video versus usual care. We aim to meet feasibility markers necessary before a fully powered RCT via the UG3/UH3 mechanisms.	James Doorley (Co-I)				
Treat-to-Target Serum Urate versus Treat-to-Avoid Symptoms in Gout: A randomized controlled trial (TRUST) NIH / NIAMS (National Institute of Arthritis and Musculoskeletal and Skin Diseases) U01 AR080985-01A1 (2023-2028)	This study entails conducting a randomized controlled trial comparing treat-to-avoid symptoms with treat-to-target serum urate among patients with gout and hyperuricemia. We will also test the effects of lowering serum urate on kidney disease endpoints, glycemic control, and blood pressure among relevant subgroups of patients with gout enrolled in the randomized controlled trial.	Daniel Solomon (MPI) Hyon Choi (MPI) Michael Barry (MPI) Pamela Rist (Co-I)				
Understanding components of mind-body exercise for physical activity engagement in metabolic syndrome NIH / NCCIH, 1K23AT011043-01A1 (2021-2026)	This grant proposes to investigate the effects of mindful exercise on health behavior change processes and physical activity engagement among individuals with metabolic syndrome.	Kristen Kraemer (PI), Gloria Yeh (Mentor), Peter Wayne (Mentor)				
Using instrumented everyday gait to predict falls in older adults using the WHS cohort NIH / NNCCIH R01 AG078256-01 (2023-2027)	Among community-living older adults, falls are a leading cause of injury, disability, injury-related death, and high medical costs. Using data collected from approximately 17,500 women enrolled in the Women's Health Study who wore an accelerometer during waking hours for a week, we will evaluate if metrics of daily living gait and physical activity inform the prediction of injurious falls.	Peter Wayne (MPI), Pamela Rist (Co-I)				
Yoga for Persistent Post-Surgical Pain (PPSP) aNIH / NCCIH K01 (2024-29)	This K01 will provide essential preliminary data to inform a future trial evaluating a widely available non-pharmacological intervention (yoga) for a highly prevalent and debilitating pain condition (PPSP) that impacts multiple dimensions of whole-person health.	Dennis Munoz Vergara (PI) Gloria Yeh (Mentor), Peter Wayne (Mentor)				

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SUMMARY OF ACTIVE RESEARCH STUDIES

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STUDY/PROJECT TITLE (FUNDING SOURCE)	SUMMARY DESCRIPTION	PI/ KEY OSHER INVESTIGATORS/ AFFILIATES	RESEARCH DOMAIN			
ACT for migraine trial Lavine Foundation (2020-2024)	RCT evaluating Acceptance and Commitment Based Therapy vs. wait-list control for chronic migraineurs. Outcomes: feasibility, migraine episodes. Neuroimaging sub-study. Mixed methods. (N=40)	Carolyn Bernstein (PI), Pamela Rist (Co-I)				
A Phase IIB randomized waitlist-controlled trial of Tai Chi training for balance improvements among cancer survivors with chemotherapy-induced peripheral neuropathy (CIPN) HMS/BWH Osher Center Pilot Grant (2024-5)	This pilot RCT will evaluate the impact of a 12-week Tai Chi training program on chemotherapy-induced peripheral neuropathy, pain, gait dynamics, balance and quality of life.	Peter Wayne MPI				
Effects of a pistachio-enriched diet on cognitive and cardiometabolic markers in older adults: A parallel-arm randomized controlled trial American Pistachio Growers (2024-2026)	We will conduct a randomized clinical trial to test the effects of a pistachio-enriched diet, compared to a usual diet, on cognitive function, life satisfaction, and cardiometabolic risk factors in older adults leveraging participants from the COSMOS trial cohort.	Howard Sesso (PI)				
Establishing a clinician-researcher chiropractic postdoctoral fellowship at the Osher Center for Integrative Health (HMS/BWH) NCMIC Foundation (2024-2027)	Support from this grant supports the training of a chiropractic clinician-research fellow and a pilot study investigating the impact of chiropractic care on EEG-assessed brain dynamics in chronic neck pain patients.	Peter Wayne (MPI) Matthew Kowalski (MPI)				
Exploring the role of long-term yoga practice on the prevalence of frailty and biomarkers of aging and resilience: a pilot study Boston Claude D. Pepper Older Americans Independence Center Grant (2024-25)	This cross-sectional study assess translational measures of aging, including frailty, physical function, aging biomarkers, and measures of resilience, in long-term yoga practitioners as compared to older and younger controls. We plan to use these data to design a randomized controlled trial of a yoga-based intervention for frailty, using geroscience-guided measures.	Julia Loewenthal (PI). Peter Wayne (Co-I)				
Gait health as a clinical outcome Palmer Foundation (2020-2024)	This feasibility study assesses integration of gait health parameters (Zeno Gait System) into patient visits at Osher Clinic.	Peter Wayne (PI), Mat- thew Kowalski (Co-I) Wren Burton (Co-I)				
Genetics-informed discovery of etiologic predictors of cardiovascular events among individuals with migraine American Heart Association (2023-2025)	The goal of this application is to determine the contribution of migraine to cardiovascular disease and to discover new etiologies underlying the migraine-cardiovascular disease association	Daniel Chasman (MPI) Pamela Rist (MPI)				
Health Equity Research Network (HERN) project for the prevention of hypertension: RESTORE (AddReSSing Social Determinants TO pRevent hypErTension) network projec American Heart Association, 878488 (2021-2025)	The goal of this study is to determine the effectiveness of a DASH grocery intervention on SBP among Black adults with elevated blood pressure or untreated stage 1 hypertension, using the RE-AIM framework.	Kristen Kraemer (Co-I)				
Increasing access to Tai Chi balance training for frail older adults using a robotic-enhanced 'Tele-Tai Chi' platform MIT Asada Robotics Lab (2022-2024)	This proof of concept study merges an existing platform for virtual delivery of Tai Chi with a robotic walker and fall-preventing harness to extend balance training to frail elders at high risk of falling.	Peter Wayne (Co-I)				
Inter-institutional chiropractic research network Grant Palmer College Foundation (2017-2025)	This award supports a series of pilot/feasibility trials and observational evaluating the effectiveness of chiropractic care for reducing pain and enhancing function in chronic pain conditions.	Peter Wayne (PI), Matthew Kowalski (Co-I)				
Mindfulness and Tai Chi for cancer health: The MATCH Trial Hecht Foundation (2018-2023; NCE 2025)	This Canada-based pragmatic patient preference and randomized trial evaluates the effectiveness of two alternative mind-body therapies (tai chi vs. mindfulness training) for symptom management and quality of life in cancer patients.	Linda Carlson (PI), Peter Wayne (Co-I)				
Natural history of neurofilament concentrations and mechanisms of healthy aging using data science Massachusetts Life Science Center Investigator-Initiated Grant (2020-2023) NCE: 2024	Through a unique combination of industry and academic collaborations, we will develop a Data Science Platform among 1,300 participants providing 3,000 blood samples from PHS, VITAL, and COSMOS to study the natural history of neurofilament levels with novel aging-related biomarkers newly measured via substantial in-kind contributions and previously collected risk factors and aging outcomes.	Howard Sesso (PI)				

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STUDY/PROJECT TITLE (FUNDING SOURCE)	SUMMARY DESCRIPTION	PI/ KEY OSHER INVESTIGATORS/ AFFILIATES	RESEARCH DOMAIN			
Non-verbal measurement of negative self-conscious emotion Harvard Medical School Osher Center for Integrative Medicine (2020-2023; NCE 2024)	Pilot study using facial gesture, posture, and voice acoustic analyses along with machine learning algorithms to identify objective markers of shame in men diagnosed with HIV and who engage in risky behaviors. (N=30)	Abigail Batchelder (PI), Paolo Bonato (Co-I), Peter Wayne (Co-I)				
Novel biomarkers for cognitive function in the COSMOS Randomized Trial Women's Brain Initiative, BWH (2022-2025)	This project explores how three novel biomarkers correlate with change in cognitive and physical function among apparently healthy individuals at baseline using COSMOS data.	Howard Sesso (Co-I) JoAnn Manson (Co-I) Pamela Rist (Co-I)				
Pre-sleep EEG brain dynamics and mindfulness meditation in insomnia Harvard Medical School Osher Center for Integrative Medicine (2019-2023; NCE: 2024)	This pilot awards supports the development of a pilot feasibility study examining changes in novel EEG brain dynamics, pre-sleep mindfulness meditation, and improvement of sleep quality in patients with insomnia, utilizing advanced physiological processing and non-linear complexity measures.	Gloria Yeh (MPI) Yan Ma (MPI) Peter Wayne (Co-I)				
Physiological dynamics of the sleep onset process: conventional and novel analyses using SHHS data The American Academy of Sleep Medicine (AASM) Foundation - Focused Projects Grant for Junior Investigators (2022-2024)	Physiological dynamics during the sleep onset process may represent important biomarkers characterizing sleep pathophysiology. This grant allows me to explore the physiology of the wake-sleep transition, and provide novel information regarding pre-sleep physiology, hyper-arousal, and sleep-onset with the richness of observational data from the real world.	Yan Ma (PI)				
Randomized trial of cocoa flavanols and multivitamins for cardiovascular disease and cancer prevention (COSMOS Blood) Mars Symbioscience Investigator-Initiated Grant (2014-2025)	This ancillary study will collect supplemental blood and urine, plus anthropometrics and blood pressure, at baseline, 1, 2, and 3 years follow-up in the COSMOS trial, a randomized, 2x2 factorial trial testing a cocoa extract and a multivitamin supplement (Centrum Silver) in the prevention of cardiovascular disease (CVD) and cancer in 21,444 women aged ≥65 years and men aged ≥60 years.	Howard Sesso (MPI)				
Randomized trial of cocoa flavanols and multivitamins for cardiovascular disease and cancer prevention (COSMOS ModBent) Mars Symbioscience Investigator-Initiated Grant (2014-2025)	This ancillary study will collect cognitive function data via web assessment at baseline, 1, 2, and 3 years follow-up, plus add cognitive assessments to COSMOS Clinic visits at baseline and 2 years follow-up, in the ongoing COSMOS trial testing a cocoa extract and a multivitamin supplement (Centrum Silver) in 21,444 women aged ≥65 years and men aged ≥60 years.	Howard Sesso (MPI)				
Randomized trial of cocoa flavanols and multivitamins for cardiovascular disease and cancer prevention Mars Symbioscience Investigator-Initiated Grant (2014-2025)	This study proposes to conduct a randomized, double-blind, placebo-controlled, 2x2 factorial trial of a patented, high-quality cocoa extract and a multivitamin supplement (Centrum Silver) in the prevention of cardiovascular disease (CVD) and cancer in 21,444 women aged ≥65 years and men aged ≥60 years with 4 years of treatment and follow-up.	Howard Sesso (MPI)				
SubK: Abatacept for Immune checkpoint inhibitor associated Myocarditis (ATRIUM) Bristol Myers Squibb Company (2022-2027)	The goal of the project is to reduce the risk for major adverse cardiac events (MACE) in participants with myocarditis secondary to treatment with immune checkpoint inhibitors.	Pamela Rist (Co-I)				
Tai Chi plus chiropractic for chronic neck pain in nurses Palmer and Van Sloun Foundations (2021-2024)	Pre-post feasibility study evaluating pragmatic (community-based) delivery of combined tai chi and chiropractic care for chronic neck pain Primary outcomes: feasibility, neck pain, function, postural control. Mixed methods.	Peter Wayne (PI), Matthew Kowalski (Co-I), Pamela Rist (Co-I), Wren Burton (Co-I)				
Teaching Kitchens for Hypertension with Mindful Exercise (THYME) President & Fellows of Harvard College (2024-2026)	Our long-term goal is to develop an effective TK+MM intervention that will significantly improve health behaviors and clinical outcomes in underserved and/or diverse communities throughout the Greater Boston area.	Howard Sesso (PI)				

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The effect of a combined technology-mediated walking and Tai Chi intervention on physical function in veterans with COPD and co-occurring dyspnea and chronic musculoskeletal pain VA MERIT, 1 I01 RX004225-01 (2022-2027)	This is a randomized controlled trial that tests efficacy of an existing web-mediated intervention (Every Step Counts) integrated with a tai chi exercise video library and synchronous online exercise classes to promote physical function in patients with COPD and co-morbid pain.	Gloria Yeh (Co-I)				
The role of epigenetics on health outcomes and risk factors in the Physicians' Health Study FOXO Technologies, Inc Investigator-Initiated Grant (2021-2026)	We will conduct epigenetic profiling of 11,718 PHS participants in relation to numerous risk factors, long-term aging outcomes, and the extension of mortality follow-up through 2020 via a National Death Index search.	Howard Sesso (PI)				
The Small Steps Healing Project: Assessing the feasibility of a whole-person health equity model of care in community spaces HMS/BWH Osher Center Pilot Grant (2024-25)	This pilot community-based study explores the delivery of CIH to marginalized populations in the Greater Boston area. It will: 1) evaluate the feasibility of establishing relationships with community partner sites and staff who are crucial to driving project outcomes; 2) collect preliminary quantitative and qualitative data that will inform a dignity-based model of care; and 3) aim to understand what is most important to patients from historically marginalized communities in their health journeys.	Peter Wayne (MPI) Eana Meng) (MPI)				
Trial of magnesium supplementation and blood pressure reduction among adults with elevated systolic blood pressure Pure Encapsulations Investigator-Initiated Grant (2021-2026)	This study is a randomized, double-blind, placebo-controlled trial to test the effects of 480 mg/day of Mg glycinate on BP over 12 weeks of treatment and follow-up in 120 middle-aged and older adults with initial seated BP ≥130 mmHg.	Howard Sesso (PI)				
Trial of magnesium supplementation and blood pressure reduction among adults with untreated hypertension Pure Encapsulations Investigator-Initiated Grant (2018-2024)	This study is a randomized, double-blind, placebo-controlled trial to test the effects of 480 mg/day of Mg glycinate on BP over 12 weeks of treatment and follow-up in 59 middle-aged and older adults with untreated hypertension.	Howard Sesso (PI)				

Education and Clinic Awards

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Intersecting High-Tech Medicine with Soft-Touch Healing: Exploring the Emerging Interface between Technology and Integrative Health Weil Foundation Research Conference Grant (2024)	This grant supports the planning and implementation of an international conference exploring the intersection of high-tech medical devices and analytical tools with the principles and practice of integrative health therapies.	Peter Wayne (PI)
Myalgic encephalomyelitis/chronic fatigue syndrome initiative Once Here Foundation; Clinical Project (2021-2026)	This project aims to expand the clinical program at MGH and improve access to care and quality of life for patients with ME/CFS through innovations in diagnosis and treatment.	Darshan Mehta (Co-I), Daniel Hall (Co-I)
Stress management and resiliency training for employees. Mass General Brigham Systems Behavioral and Mental Health Grant; Clinical Project (2022 -2026)	This project aims to improve access to behavioral health care for MGB employees through stress management and resiliency training (SMART) offered through the Benson-Henry Institute for Mind Body Medicine	Darshan Mehta (PI)



Science of Mind Body Connections



Placebo and the Science of Human Connection



Nutrition/Supplement Research



Systems and Translational Biology of Integrative Medicine



Clinical Effectiveness of Multimodal and Integrative Interventions



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Submitted and Pending						
STUDY/PROJECT TITLE (FUNDING SOURCE)	SUMMARY DESCRIPTION	PI/ KEY OSHER INVESTIGATORS/ AFFILIATES	RESEARCH DOMAIN			
Comprehensive Mapping of Physiology Across Systems and life Stages (COMPASS): Whole Person Research Coordination Center (WPRCC) NIH/NCCIH U24 Submitted 10/2024	The goal of this initiative is to establish a research center that will map the human physiome across life stages.	Howard Sesso (MPI) Julia Loewenthal (Co-I) Peter Wayne (Co-I) Gloria Yeh (Co-I)				
Enhancing early detection and intervention for cognitive decline through FHIR-based clinical decision support NIH/NIA R01 Submitted 10/2024	This project will leverage a machine learning algorithm that can detect cognitive decline in the electronic health record, facilitating more timely diagnosis and connecting patients and families to essential resources.	Julia Loewenthal (Co-I)				
Evaluating Tai Chi for reducing aromatase inhibitor-induced arthralgia in breast cancer: A Multisite feasibility study NIH / NCCIH 1R01AT013260-01 Pending (2024-2027)	This multi-site planning study will lay the foundation for a definitive trial evaluating the impact of Tai Chi on Aromatase Inhibitor-Induced arthralgia in women with breast cancer.	Peter Wayne (Consultant)				
Improving Adherence to Endocrine Therapy with Acupuncture in Breast Cancer: A Multisite Feasibility Trial (ACU-BETA Trial) NIH / NCCIH R34 Pending 2024	The main goal of this innovative project is to collect preliminary data to plan a future multi-site trial evaluating if acupuncture can improve adherence among breast cancer patients undergoing endocrine therapies.	Peter Wayne (Co-I)				
Inflammatory mediators and endocannabinoids dynamics in patients suffering from persistent post-surgical pain (PPSP) randomized to a yoga program versus a chronic pain health education control (Catalyst NCATS Grant). Pending 2024	This grant proposes to support the translational research component of 'Persistent Relief' a pilot randomized controlled trial comparing yoga versus chronic pain health education programs.	Dennis Munoz Vergara (PI)				
MOMENT Study NIH/NCCIH Pending 2024	This is a two-site feasibility study to evaluate aims of recruitment, retention and shared data. We will recruit 120 people with migraine (60 at each site) who are stable on CGRP monoclonal antibodies for migraine prevention and will randomize 1:1 so that half will receive biobehavioral therapy (Acceptance and Commitment Therapy) via a telehealth platform.	Pamela Rist (Co-I)				
Retinoid-omics to study mechanisms of provitamin A on cognitive decline in older adults Submitted 2024	This project will determine how vitamin A metabolism may be associated with cognitive protection in older men and women through an evaluation of a causal role of vitamin A metabolites, and lipids and proteins under vitamin A control, in cognitive protection. We will further elucidate if randomized, long-term provitamin A supplementation directly or indirectly drove the cognitive protection previously reported in PHS subjects.	Howard Sesso (MPI)				
Tai Chi vs CBT-I for comorbid chronic insomnia and musculoskeletal pain NIH / NCCIH R01 MPI (\$1,898,431) Pending (2024-2027)	The main goal of this multi-site planning study is to begin to evaluate, for the first time, the comparative effectiveness of Tai Chi and CBT-I for comorbid chronic insomnia and musculoskeletal pain (CCIMP)—a highly prevalent condition that is associated with multiple interdependent and debilitating morbidities and for which few evidenced treatment options are available.	Peter Wayne (MPI), Gloria Yeh (Co-I), Yan Ma (Co-I)				
Tai Chi intervention for geriatric pain syndrome NIH/NIA R01 Pending (2024-2029)	This multi-site trial will evaluate tai chi as an intervention to prevent falls and reduce pain in older adults with multi-site pain syndrome.	Peter Wayne (Co-I) Gloria Yeh (Co-I)				
Yoga Therapy Rx: Creating a dynamic education platform to educate health professionals Submitted Pending 2024	This grant proposes to create a dynamic education platform around different yoga topics to educate health professionals.	Dennis Munoz Vergara (PI)				

2024 GRAND ROUNDS PRESENTATIONS AND ATTENDANCE

DATE	SPEAKER	PROGRAM/INSTITUTION	SESSION TITLE	REGISTRANTS
1/9/2024	Maryanna Klatt, PhD	Ohio State University Center for Integrative Health	Workplace Well-Being and Its Intersectionality with Integrative Medicine and Health	275
2/6/2024	Kimberly Parks, DO, FACC / Julia Loewenthal, MD / George K. Harrold, MD / Katie Walker, MS, MAOM. Lic.Ac., Dipl, OM	Massachusetts General Hospital / Brigham and Women's Hospital	Integrative Approaches to Long COVID: A Clinical Case - With Patient Testimonial	442
3/5/2024	Beth Frates, MD, FACLM, DipABLM	Harvard Medical School and American College of Lifestyle Medicine	Working Toward a Healthy Body, Peaceful Mind, and Joyful Heart with Lifestyle Medicine Principles and Practice	542
4/2/2024	Gregg Furie, MD,MHS	Brigham and Women's Hospital	Climate Change, Human Health, and Sustainability: Intersections and Opportunities for the Health Sector	231
5/7/2024	Gert Bronfort, DC, PhD	University of Minnesota	Individualized Biopsychosocial Assessment and Treatment of Back Pain	256
6/4/2024	Paula Gardiner, MD, MPH	Cambridge Health Alliance Center for Mindfulness and Compassion	Integrative Medicine Group Visit Technology to Empower Diverse Patients with Chronic Pain	211
7/9/2024	Neil Theise, MD	New York University, School of Medicine	The Human Interstitium as a Body-Wide Communication Network	355
8/13/2024	Dennis Muñoz-Vergara, DVM, PhD, MPH / James Doorley, PhD / Wren Burton, DC, MPH	Brigham and Women's Hospital	Olympic Theme: Gait, Sports Psychology, and Physical Activity in Older Adults or Athletes	225
9/10/2024	Donald Levy, MD	Brigham and Women's Hospital	The Art, Power, and Science of Integrative Health	120
10/8/2024	Wayne Jonas, MD	Healing Works Foundation	Cancer in the Context of Integrative Medicine	295
11/5/2024	Elyse Park, PhD	Massachusetts General Hospital	The Arc and Trajectory of the SMART-3RP Program	144
12/3/2024	Claudia Witt, MD, MBA	University of Zurich	AI in Health Care: Opportunities and Challenges for Integrative Medicine	204

PRESENTER	TITLE	TYPE	PROGRAM / INSTITUTION
Andrew Ahn	From Fluorescent Dyes to Electrokinetics: Exploring Bioelectrical Mechanisms in Eastern Medicine	Lecture & Panel Presenter	Osher Network Forum, Harvard Medical School, Boston, MA
Andrew Ahn	Two Paths, One Journey: Bridging Technology & Integrative Health	Introductory Keynote	Osher Network Forum, Harvard Medical School, Boston, MA
Andrew Ahn	Wearables in Clinical Research: An Overview	Invited Lecture	HMS Integrative Medicine Fellows Meeting, Harvard Medical School, Boston, MA
Andrew Ahn	XPRIIZE Team Dynamical Biomarkers: Labfront	Invited Lecture	XPRIIZE Organizing Committee
Darshan Mehta	Meditation and Mind Body Medicine	Invited Lecture	Lifestyle Medicine Group, Harvard Medical School, Boston, MA
Howard Sesso	Unraveling Environment-Host Interactions and their Consequences	Seminar	Departments of Medicine, Brigham and Women's Hospital and Massachusetts General Hospital, Boston, MA
Peter Wayne	Scientific Evaluation of Qigong for Health	Invited Lecture	HMS Osher Center and Emerson College Chinese Student Association, Boston, MA
Peter Wayne	Qigong in Nature for Resiliency.	Invited Lecture	Harvard University First-Year Wellness & Self-Discovery Program, Harvard University, Boston, MA
Gloria Yeh	Complementary and Integrative Medicine	Invited Lecture (Virtual)	Update in Internal Medicine, Harvard Medical School CME Course

NATIONAL/REGIONAL LECTURES 2024

PRESENTER	TITLE	TYPE	PROGRAM / INSTITUTION
Andrew Ahn	Introduction to HRV Physiology	Invited Lecture	Stanford WELL for Life Laboratory, Stanford, CA
Andrew Ahn	Wearable Research: Heart Rate Variability	Invited Lecture (Virtual)	Labfront, Virginia State University, VA
Matthew Kowalaski	Advances in Integrated Practice Opportunities	Invited Lecture	ACA-RAC (Association of Chiropractic Colleges, Research Agenda Conference), San Diego, CA
Matthew Kowalaski	Advancing Integrated Postdoctoral Training Opportunities for Chiropractors	Invited Lecture	ACA-RAC (Association of Chiropractic Colleges, Research Agenda Conference), San Diego, CA
Darshan Mehta	Enhancing the Holistic Well-Being of Academic Leaders	Invited Plenary Presentation/Workshop	National Association of Deans and Directors of Schools of Social Work Annual Meeting, San Juan, Puerto Rico
Darshan Mehta	Mind Body Medicine in the Modern Healthcare System	Invited Lecture	2024 International Medical Tai Chi Qigong Association Conference, Buffalo, NY
Darshan Mehta	The Evidence Behind Whole-Person Primary Care	Invited Panel Presentation (Virtual)	Primary Care Collaborative, Washington, DC
Aterah Nusrat	Reintegrating Medicine: Nurturing Connections Between Personal and Planetary Health	Invited Lecture (Virtual)	Osher Center for Integrative Health, University of California, San Francisco, CA
Howard Sesso	COSMOS Clinical Trial: An Important Partnership Across Academia, Government, and Industry to Further Nutrition Science and Health	Invited Plenary Talk and Fireside Chat	Consumer Healthcare Products Association (CHPA) Regulatory, Scientific & Quality Conference (RSQ) CPHA, Bethesda, MD
Howard Sesso	COSMOS Cognition Results	Invited Lecture	Haleon, Warren, NJ
Howard Sesso	What's Next? The Future of Multivitamin Research and Bridging Science to Public Health to Optimize Wellbeing	Invited Lecture	ASN Satellite Symposium, Chicago, IL
Howard Sesso	What's Old is New Again!? New Insights on Retinoid and Carotenoid Supplementation and Healthy Aging through Randomized Clinical Trials	Invited Lecture	American Society of Nutrition, Nutrition 2024 Conference, Chicago, IL
Peter Wayne	Can Mind-Body Movement Practices Have Co-Benefits for Personal and Planetary Health?	Invited Lecture	2024 Planetary Health Summit, University of Vermont, Burlington, VT
Peter Wayne	Exploring Links between Music, Movement, and Medicine.	Invited Lecture	MIT Media Lab, Boston, MA
Peter Wayne	Introductory Remarks. High Tech Medicine and Soft-touch Healing: Advancing Innovation in Integrative Health.	Invited Lecture	Harvard Medical School, Boston, MA
Peter Wayne	Success and Challenges in the Context of an Institutional Merger	Panel Presenter	Osher Collaborative for Integrative Health Annual Meeting, Burlington, VT
Peter Wayne	Tai Chi for Whole Person Health and Healthy Aging	Invited Lecture (Virtual)	Osher Center for Integrative Health Clinical Fellowship Program San Francisco, CA
Peter Wayne	Tai Chi for Whole Person Health and Healthy Aging. Prescription for Long Life Seminar Series	Endowed Lecture (Virtual)	Chinese American Medical Society, New York, NY
Peter Wayne	Tele-Tai Chi—Leveraging Wearable Sensors and Machine Learning to Monitor Proficiency in Tai Chi Training Delivered via a Virtual Platform	Panel Presenter	Osher Network Forum, Harvard Medical School, MA
Peter Wayne	Reintegrating Medicine: Nurturing Connections Between Personal and Planetary Health	Invited Lecture (Virtual)	Osher Center for Integrative Health, University of California, San Francisco, CA
Gloria Yeh	Move the Body, Still the Mind: The Role of Mindful Movement in Whole Person Health	Endowed Lecture (Virtual)	Sanghvi "Mind-Body Interface of Health and Healing", Osher Center for Integrative Health, University of Cincinnati, Cincinnati, OH
Gloria Yeh	Evidence-Based Medicine in Integrative Health	Invited Lecture / Workshop	Osher Collaborative Fellowship in Integrative Medicine, University of California, SF
Gloria Yeh	Complementary and Integrative Medicine: What's It All About in 2024	Invited Lecture	Pri-Med Annual East Conference, Providence, RI
Gloria Yeh	Evidence-Based Complementary and Integrative Approaches for the Primary Care Clinician	Invited Lecture (Virtual)	Pri-Med PrimaryCareNOW
Gloria Yeh	Cultivating Whole Person Health Through Mind Body Movement in Chronic Disease	Invited Lecture (Virtual)	Massachusetts (Regional) Association of Cardiovascular and Pulmonary Rehabilitation Conference

PRESENTER	TITLE	TYPE	PROGRAM / INSTITUTION
Andrew Ahn	Clinical & Physiological Sciences: Empowering Researchers	Invited Lecture (Virtual)	Labfront & Movesense Research
Andrew Ahn	Garmin Health in Research & Clinical Trials	Invited Lecture (Virtual)	Garmin Health Research
Andrew Ahn	Garmin's Enhanced Beat-Beat Interval	Invited Lecture (Virtual)	Labfront & Garmin Research
Andrew Ahn	Menopause Assessment with Wearables	Invited Lecture	Labfront and Lia Bally Research Group, University of Bern, Switzerland
Andrew Ahn	Labfront's Vision for Advancing Sleep Research: Catalyzing Discovery & Healing	Invited Lecture (Virtual)	Labfront
Andrew Ahn	Review of HRV Research with Dr. Joe Dispenza	Podcast	Joe Dipspenza Living in the Monastery Podcast
Andrew Ahn	Tackling Whole Health with Technology	Podcast	Unstress Health with Dr. Ron Ehrlich Podcast
Andrew Ahn	Unlocking the Secrets of HRV with Dr. Andrew Ahn	Podcast	The Joe Cohen Show
Darshan Mehta	Introduction to Stress Management and Resiliency Training	Workshop	4th Malaysian Lifestyle Medicine Conference, Kuala Lumpur, Malaysia
Darshan Mehta	The Role of Mind-Body Medicine in the Management of Diabetes – A Modern Take on Wisdom Traditions	Invited Lecture	4th Malaysian Lifestyle Medicine Conference, Kuala Lumpur, Malaysia
Aterah Nusrat	Fireside Chat with Keynote, Lyla June Johnston, PhD	Session Chair (Virtual)	Healthy People, Healthy Planet Annual Symposium, Osher Collaborative for Integrative Health
Pamela Rist	Observational Studies and Clinical Trials for Cognition and Other Chronic Disease Outcomes	Session Chair	International Conference on Polyphenols and Health, Boston, MA
Howard Sesso	COSMOS Trial on Healthy Aging Through Dietary Supplementation	Invited Plenary Lecture	National University Health System (NUHS) Centre for Healthy Longevity Conference 2024, Singapore
Howard Sesso	What's the Latest Data in Multivitamin Supplementation and Cognitive Health?	Invited Plenary Lecture	82nd International Pharmaceutical Federation (FIP) World Congress of Pharmacy and Pharmaceutical Sciences Cape Town, South Africa
Howard Sesso	Multivitamin-multimineral supplementation to improve brain health and ageing: Filling nutritional and research gaps through clinical trials	Invited Lecture (Virtual)	Nature Research Custom Media and Haleon, Shanghai, China
Howard Sesso	Dietary Supplements and Brain Health: A Dose of Reality	Invited Lecture	The Herbert Benson, MD Course in Mind Body Medicine, Benson-Henry Institute for Mind Body Medicine, Boston, MA
Peter Wayne	Concluding Remarks and Closing Meditation	Invited Lecture (Virtual)	Healthy People, Healthy Planet Annual Symposium, Osher Collaborative for Integrative Health
Peter Wayne	Mindful Movement for Chronic Pain: Does it 'Make Sense'?	Invited Plenary Lecture	The Herbert Benson, MD Course in Mind Body Medicine, Benson-Henry Institute for Mind Body Medicine, Boston, MA
Peter Wayne	Osher Center for Integrative Health: A Pan-Harvard 'Center Without Walls'	Invited Lecture	Global CIM Summit, Harvard Faculty Club, Cambridge, MA
Peter Wayne	Tai Chi and Qigong for Whole Health: Rationale and State of the Evidence	Invited Lecture	Science Update: Mind-Body Medicine, Universitat Zurich, Switzerland
Peter Wayne	The Mind-Body-Movement Laboratory at Osher Center	Invited Lecture (Virtual)	Integrative Health and Spirituality Special Interest Group, Society of Behavioral Medicine
Gloria Yeh	Move the Body, Still the Mind: Mind-Body Movement for Whole Person Health in Chronic Disease	Invited Lecture	The Herbert Benson, MD Course in Mind Body Medicine, Benson-Henry Institute for Mind Body Medicine, Boston, MA

2024 FELLOWS ORAL PRESENTATIONS

PRESENTER	PRESENTATION TITLE	INSTITUTION / LOCATION
Kieley Chapman	Assessing and Addressing Food Insecurity in IBD	Boston Children's Hospital, Inflammatory Bowel Disease Conference
Kieley Chapman	Caregiver and Pediatrician Perspectives on a Meal Kit Delivery Program for Children with Food Insecurity and Obesity	Fenwick Institute Symposium on Advancing Pediatric Health Equity
Heena Manglani-Terranova	Case Conceptualization Workshop	Center for Health Outcomes and Interdisciplinary Research
Heena Manglani-Terranova	The "Invisible" Mental Health Symptoms of Multiple Sclerosis	McCourt Foundation Neurological Symposium
Heena Manglani-Terranova	High Demand and Low Supply? Research and Clinical Insights from Mind-Body Program Development in Multiple Sclerosis	Vanderbilt Osher Center, Nashville TN
Macy Randolph	Combined Multimodal Chiropractic and Acupuncture Care for Tension-Type Headaches: A Pilot Factorial Randomized Control Trial Grant Proposal	Harvard T.H. Chan School of Public Health, Program in Clinical Effectiveness
Macy Randolph	DC Clinical-Research Track Post-Doctoral Research Opportunities	University of Western States, Portland OR
Joseph Rosansky	Opioid Overdose Bereavement: A Hidden Epidemic of Traumatic Grief	Division of Continuing Education in Psychiatry, Cambridge Health Alliance
Joseph Rosansky	Group-based Mindfulness Training During Buprenorphine Treatment for Opioid Use Disorder	International Congress for Integrative Medicine and Health, Cleveland, OH
Rachel Rosen	Using Ecological Momentary Assessment to Characterize Dynamic Patterns of e-cigarette Use in Adults Planning to Quit E-cigarettes	30th Annual Meeting of the Society for Research on Nicotine and Tobacco (SRNT), Edinburgh, Scotland
Rachel Rosen	Cannabis Use Among People Who Smoke Who are Scheduled for Lung Cancer Screening	30th Annual Meeting of the Society for Research on Nicotine and Tobacco (SRNT), Edinburgh, Scotland
Rachel Rosen	Prevalence of Cigarette Smoking With and Without Tobacco use Disorder Among Adults in the United States: 2010-2021	30th Annual Meeting of the Society for Research on Nicotine and Tobacco (SRNT), Edinburgh, Scotland
Rachel Rosen	Alcohol and Tobacco Co-Use Among Cancer Patients Receiving Virtual Tobacco Treatment: ECOG-ACRIN EAQ171CD	30th Annual Meeting of the Society for Research on Nicotine and Tobacco (SRNT), Edinburgh, Scotland
Sinnot Sinhead	Effectiveness of Coping Strategies for Sexual Trauma Reminders Among Female Survivors and Impact on Cardiovascular Reactivity	Anxiety and Depression Association of American Annual Conference

PRESENTER	PRESENTATION TITLE	INSTITUTION / LOCATION
Sarah Park	Anthocyanin Intake and Risk of Cardiovascular Disease in Women	International Conference on Polyphenols & Health, Boston, MA
Sarah Park	Daily Pistachio Consumption on Cognition, Cardiometabolic Risk Factors, and Life Satisfaction in Older Adults: Protocol for a Randomized Controlled Trial	Osher Network Forum, Boston, MA
Sarah Park	Effects of Cocoa Flavanol Supplementation on the Risk of Venous Thromboembolism: Post hoc Analysis of the COSMOS trial	Nutrition 2024, Chicago, IL
Sarah Park	Internet-based Parkinson severity assessment tool: Validation study	International Congress on Integrative Medicine & Health, Cleveland, OH
Sarah Park	Metagenomics Indicates an Interplay of the Microbiome and Functional Proteins in Parkinson's disease	International Congress on Integrative Medicine & Health, Cleveland, OH
Sarah Park	Research in Integrative Medicine	Osher Network Forum, Boston, MA.
Rachel Rosen	Changes in Resiliency among Cancer Survivors Participating in Stress Management and Resiliency Training Program (SMART-3RP)	Osher Network Meeting in Boston, MA
Rachel Rosen	Evaluating the Implementation of a Tobacco Treatment Intervention in a Cancer Center Clinical Service	17th Annual Conference on the Science of Dissemination and Implementation in Arlington, VA
Rachel Rosen	Evaluating Black and Hispanic Cancer Patients' Experiences in Virtual Tobacco Treatment	58th Annual Meeting of the Association for Behavioral and Cognitive Therapy (ABCT), Philadelphia, PA
Rachel Rosen	Examining the Roles of Psychological Inflexibility and Distress Tolerance on Cigarette Dependence and Binge Drinking Among Individuals in the United States Who Co-Use Cannabis for Therapeutic Purposes	58th Annual Meeting of the Association for Behavioral and Cognitive Therapy (ABCT), Philadelphia, PA
Rachel Rosen	Gender Differences in Communication about Smoking Cessation for Recently-Diagnosed Cancer Patients (ECOG-ACRIN EAQ171CD)	Annual Meeting of the American Psychosocial Oncology Society (APOS),- March, 2024, Albuquerque, NM

FACULTY AND FELLOWS 2024 PUBLICATIONS

Acupoint sensitivity in health and disease: a systematic review. Yang EM, Lu WD, Muñoz-Vergara, Goldfinger E, Kaptchuk TJ, Napadow V, **Ahn AC, Wayne PM.** JICM 2024 Oct;30(10):925-939.

Acupuncture for hot flashes in hormone receptor-positive breast cancer: a pooled analysis of individual patient data from parallel randomized trials. Lu W, Giobbie-Hurder A, Tanasijevic A, Kassis SB, Park SH, Jeong YJ, Shin IH, Yao C, Jung HJ, Zhu Z, Bao C, Bao T, **Yang E, Brier BE, Ligel JA** Cancer 2024.

Adaptive coping, emotions, and antiretroviral therapy adherence among gay, bisexual and other men who have sex with men (gbMSM) with HIV. **Foley JD,** Bernier L, O'Cleirigh C, Mayer KH, Moskowitz JT, and Batchelder, AW. Journal of Health Psychology 2024.[WP1]

Advancing health equity in integrative health: the role of collaborative educational partnerships in addressing structural racism. Zhang X, Mullur RS, Riopelle C, **Mehta, DH,** Vega N, Parker T, Soriano S, Price JR, Miller, YM, Davis, IJ, & Chandran L. Global Advances in Integrative Medicine and Health [WP2][WP3]2025.

Advancing well-being in clinical and translational science. Bredella MA, Duthely LM, **Mehta DH,** Roman G, Pusek S, Bautista T G, Khan M, Meyer JP, & Vitale A. Journal of Clinical and Translational Science 2024; 8(1).

Age self care-resilience, a medical group visit program targeting pre-frailty: a mixed methods pilot clinical trial'. Lowenthal JV, Burton WM, Smith C, Ramani S, Wayne PM, Orkaby AR, Aronson LJ. Frailty and Aging 2024.

A meta-regression of psychosocial factors associated with sleep outcomes in mindfulness-based intervention trials. Choukas NR, Woodworth, EC, **Manglani HR,** Greenberg, J, & Mace RA. Behavioral Sleep Medicine 2024; 0(0), 1–14.

An age-friendly chart review tool: integrating geriatrics education and quality improvement in a resident primary care clinic. Streiter S, Samet E, Beltran CP, Schwartz AW, **Loewenthal J** Gerontol Geriatr Educ. 2024 Aug;1-8. Online ahead of print.

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Clinical and research implications of a cochrane systematic review of acupuncture for chronic non-specific low back pain. **Yang E,** Lu W, Napadow V, **Wayne PM.** Glob Adv Integr Med Health. 2024;13:27536130241261161.

Cocoa flavanol supplementation and incident atrial fibrillation in the COSMOS trial. Middeldorp ME, Manson JE, Aragaki AK, Clar A, **Sesso HD,** Albert CM. Eur J Prev Cardiol 2024 Jul 11:zwae229.

Communicating the benefits of quitting smoking on mental health increases motivation to quit in people with anxiety and/or depression. Steinberg ML, **Rosen RL,** Ganz O, Wackowski OA, Jeong M, Delnevo CD. Addictive Behaviors 2024; 149, 107903.

Comprehensive audiologic analyses after cisplatin-based chemotherapy. Sanchez VA, Dinh Jr PC, Monahan PO, Althouse S, Rooker J, **Sesso HD,** Dolan ME, Weinzerl M, Feldman DR, Fung C, Einhorn LH, Frisina RD, Travis LB. JAMA Oncol 2024 Jul 1;10(7):912-922.

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Educational attainment, severity and short-term prognosis of intracerebral haemorrhage. Yechoor N, **Rist P,** Ganbold A, Kourkoulis C, Mora S, Mayerhofer E, Parodi L, Rosenfeld L, Anderson CD, Rosand J. BMJ Neurol Open 2024;6:e000593.

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Effects of mindfulness training on opioid use and anxiety during primary care buprenorphine treatment (Mindful-OBOT): a comparative effectiveness RCT. **Rosansky JA,** Howard L, Fatkin T, Okst, K, Frederickson AK, Gardiner P, Labelle C, Weiss R, & Schuman-Olivier ZD. Contemporary Clinical Trials 2024.

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