



BRIDGING RESEARCH AND INNOVATION
IN NEUROSCIENCE

2025 BRAIN (Bridging Research And Innovation in Neuroscience)

The [BRAIN \(Bridging Research and Innovation in Neuroscience\)](#) Scholar medical student research program is part of the University of Hawaii John Burns School of Medicine MD5 MED 599 Neuroscience Research Course. University Hawaii medical students may sign up for elective credit while working at BRAIN in MD5 MED 599 Neuroscience research credit.



Hawaii BRITL

BRAIN is part of [Hawaii Pacific Neuroscience's](#) robust clinical and academic research programs where we foster a culture of innovation and collaboration. Physicians and scientists work closely within and across centers, institutes, and schools to collaborate whether they are basic laboratory-based scientists, bio statisticians or clinicians to encourage cross disciplinary translation bench to bedside research. BRAIN scholars work alongside and collaborate with at Hawaii Pacific Neuroscience [Clinical Research Program](#) whose ground breaking work is funded by NIH and other agencies and recognized nationally.

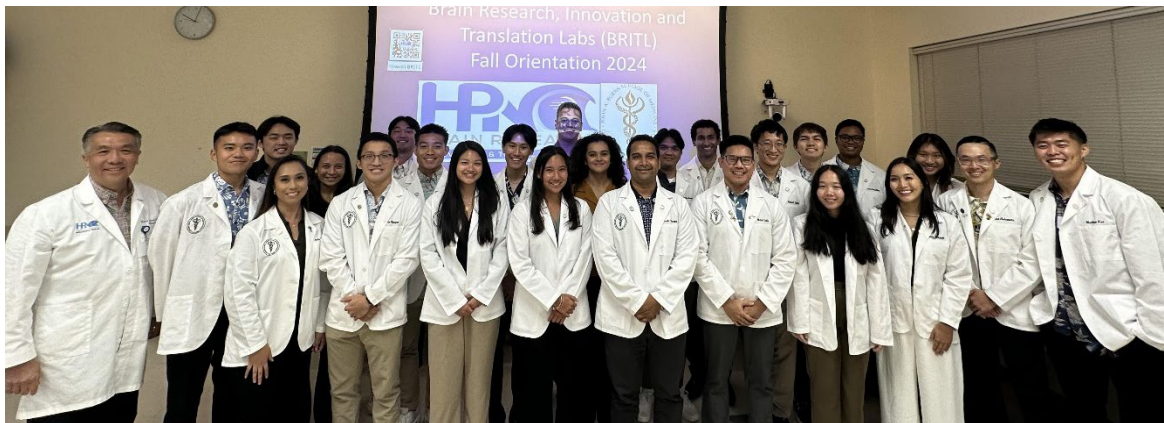
BRAIN's mission is to support aspiring students to pursue their passion in neuroscience, research and develop leadership in this field to make an impact in their local community. It provides students the opportunity to work in a team setting working with seasoned investigators, junior investigators, residents, senior student leaders and junior students. BRAIN is proud to recognize exceptional medical students as "neuroscience academic scholars" and project leaders who have demonstrated exemplary academic abilities in neuroscience, leadership qualities, passion, and commitment to the pursue of excellence in research and a commitment to make a difference in the local and global community. See their [Publications & International Presentations](#)



Core Neurology/Neuroscience Faculty

Kore Kai Liow, MD,	Neurology, Neuroscience Chair, Director, BRAIN Scholar Program
Enrique Carrazana, MD,	Neurology, Publication Director
Janette Abramowitz, MD,	Neurology, Ctr for Psychiatric Neuroscience
Darren DuGas, MD	Neurology, Comprehensive Epilepsy Center & Video-EEG)
Natalia Gonzalez, MD	Neurology, MS & Neuroimmunology Center , ALS and Neuromuscular Center
Angeline Eojung Kim, MD	Neurology, Headache and Facial Pain Center
Nichoals Anderson, MD	Sleep Medicine, Sleep and Insomnia Center
Qi Zhi, DNP, MPH, FNP	Neurology, Memory Disorders Center
Katy Tarrit, Ph.D.	Cognitive Neuroscience, AI ANNE (Alzheimer's Neural Network EEG) Lab
Chathura Siriwardhana, PhD	Biostatistics, Department of Quantitative Health Sciences
Kristy Shine, MD	Director of Medical Student Research

Questions, contact BRAIN Scholar Program Director Kore Kai Liow, MD, kliow@hawaii.edu
Info: [BRAIN Scholar Program](#). [BRAIN Internship Program](#)



2024 2025 BRAIN Scholars/Medical Students

Tyrone John Sumibcay, MS2, *Program Leader*
 Matthew Kao, MS2, *Program Leader*
 Janette Keola, MS2, *Program Leader*
 D-Dré Wright, MS3, *Program Mentor*
 Anita Cheung, MS3, *Program Mentor*
 Ryan Nakamura, MS3, *Program Mentor*
 Shay Nakahira, MS3
 Kirra Borrello, MS3
 Bradon Hong, MS3
 Jonathan Carino, MS3
 Matthew Kobylinski, MS3
 Nina Krupa, MS3
 Eli Snyder, MS3
 Erin Kim, MS2
 Kylie Yamauchi, MS2
 Ryan Nishi, MS2
 Jiwoo Kim, MS2
 Erin Evangelista, MS2

Megan Kawamura, MS2
 Nina Krupa, MS2
 Michael Read, MS2
 Jan Augustine Aurelio, MS1
 Mitch Cadiz, MS1
 Xavier Heidelberg, MS1
 Albert Jiang, MS1
 Matthew Ko, MS1
 Kevin Nguyen, MS1
 Cameron Nishida, MS1
 Shashi Sharma, MS1
 Jenna Tsuzaki, MS1
 Yash Vyas, MS1
 Bryce Hong, MS1
 Titan Alexio, MS1

2025 BRAIN Interns

Mia Lopez-Hallmeyer, U Hawaii
 Emanuela Vastola, Suor Orsola Benincasa U
 Kylee Takanishi, U Hawaii
 Sarah Dao, U Hawái
 Isabella Ford, Columbia U
 Emily Daehler, Northeastern U
 Tiara Harris, UCLA
 Kendal Nakaoka, U Hawaii
 Alanna Nicole Rillorta, Princeton U
 Rhiannon Wong, U Hawaii
 Dariann Ohai, U of Vermont
 Hannah Kwak, Iolani
 Caroline Ulep, U San Francisco
 Emma O'Keefe, U Hawaii
 Ashley Arroyo, U Hawaii
 Asja Deai, UC Irvine
 Kacey Sasaki, U Hawaii
 Maya Westbrook, Binghamton U
 Jennifer McQueeney U Puerto Rico

Leilani Teso, U Hawaii
 Rishika Isanaka, UC Santa Cruz
 Maya Kimura, Maryknoll
 Moriah Adamson, U Hawaii
 Elysia Teruya, U San Francisco
 Kayla Mishima, U Hawaii
 Olivia Maehara, UC Riverside
 Tyson Wu, American U of the Caribbean SOM
 Rae Kamikawa, Pitzer College
 Carson Konop, Bishop Kelly
 Seth Heller, San Jose State U
 Maya Howell, Chapman U
 Nya-Lynn Santos, U Hawaii
 Bella Lim, Punahou
 Kammiee-Marie Ardo, Carnegie Mellon U
 Joshua Wung, Mililani
 Emily Kulaga, U Hawaii
 Matthew Fujikami, U Hawaii
 Mia Ng, James Campbell



2025

Didactics & Lectures



June 14th Sat 9AM-4PM Spring Finals & Summer Orientation

Faculty Research Mentors



Kore Liow, MD
Neuroscience Chair and BRAIN Director
Clinical Professor Medicine (Neurology)
Clinical & Translational Research

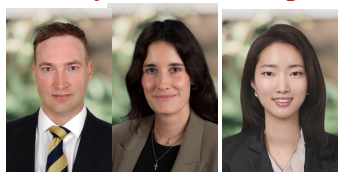


How to be a Stellar Research Mentee
Kristy Shine, MD
Director, Med Student Research
Associate Professor, Emergency Med.



Enrique Carrazana, MD
Publication Director, Neurology
Clinical Educator

Faculty Research Supervisors



[Darren DuGas, M.D.](#) Co-Director,
[Comprehensive Epilepsy Ctr](#) Director,
[Video-EEG Epilepsy Monitoring Unit](#),
Clinical Assist Prof Med (Neurology)

[Natalia Gonzalez Caldito, M.D.](#) Director –[MS & Neuroimmunology Center](#), [ALS and Neuromuscular EMG Center](#), [IV Infusion Ctr](#) Clinical Assistant Professor of Medicine (Neurology)

[Eonjung Angeline Kim, M.D.](#) Director,
[Headache & Facial Pain Center](#), Clinical Assistant Professor Med (Neurology)

June 17, 25 Tues 5:00-6:30PM



Research Bio Statistics I and II
Chathura Siriwardhana, PhD,
Assistant Professor,
Biostatistics Core Facility,
Dept. Quantitative Health Services

July 12th Saturday 9AM-4PM MID TERM Oral Presentation

July 15 Tues 5:00-6:00PM



Writing up Your Abstract and Paper
[Natalia Gonzalez Caldito, M.D.](#)
Clinical Assistant Professor of Medicine
(Neurology) University of Hawaii John Burns School of Medicine

July 22, 29, Aug 5 - Tues 5:00-6:00PM



How to Submit Posters to National Meetings How to Submit Full length Publications

Tyrone John Sumibcay, MS2, Program Leader
Matthew Kao, MS2, Program Leader
Janette Keola, MS2, Program Leader

Aug 16th Sat 8AM-4PM

FINAL Poster Presentation

2025 Hawaii Neuroscience Symposium Emerging Trends in Neuroscience



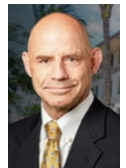
David Baskin, MD
Professor and Vice Chair, Dept
Neurosurgery, Residency Program
Director, Houston Methodist Hospital
Weill Cornell Medical College

Psychedelic Use in Neuroscience



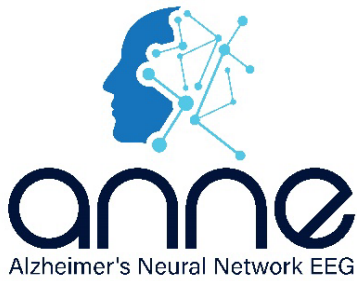
Nolan Williams, M.D.
Associate Professor Psychiatry &
Behavioral Sciences, Director,
Interventional Psychiatry Clinical
Research, Department of Psychiatry and
Behavioral Sciences, Stanford University

Poster Competition Award Presentations



Sam Shomaker, MD
Dean, University of Hawaii
John Burns School of Medicine

Alzheimer's Neural Network EEG (ANNE) Research Lab



Assessing the Correlation Between Demographics, BEAM™, and MMSE

BRAIN Research Faculty Supervisor: Katy Tarrit, PhD

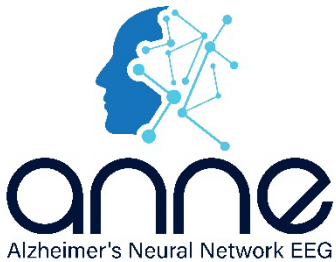
BRAIN Scholar, Medical students: Janette Bow-Keola (lead), Mitch Cadiz, Albert Jiang, Yash Vyas, Josh Grube ,

NeuroAI Research Lab

Description: We aim to create a complete database of Alzheimer's Disease patients receiving treatment at the Memory Center. Our data collection will include: demographics (age, race/ethnicity, education level) and diagnostic procedures (APOE/CSF, BEAM EEG). Current identification of Alzheimer's Disease (AD) is limited to either invasive techniques of CSF and blood sampling or cost prohibitive PET imaging. Therefore, there exists a need for a novel, noninvasive biomarker for the detection and monitoring of AD.

[Recent Publications](#)

Alzheimer's Neural Network EEG (ANNE) Research Lab



Utility of EEG biomarkers in the early identification of Alzheimer's Disease: A systematic review

BRAIN Research Faculty Supervisor: Katy Tarrit, PhD

BRAIN Scholar, Medical students: Kylie Yamauchi, Kenji Aoki, Christyn Mellor

NeuroAI Research Lab

Alzheimer's patients had lower accuracy compared to neurotypicals for the AO task P300 can be used as a biomarker to detect AD → larger P300 amplitudes are associated with better short-term and long-term memory. Current identification of Alzheimer's Disease (AD) is limited to either invasive techniques of CSF and blood sampling or cost prohibitive PET imaging. Therefore, there exists a need for a novel, noninvasive biomarker for the detection and monitoring of AD.

[Recent Publications](#)



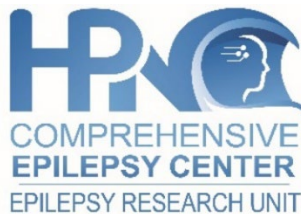
Assessing the Incidence of Adjustment Disorders (Ajd) in MS & Other Neurologic Diseases especially those of Native Hawaiian and Pacific Islander Descent

BRAIN Research Faculty Supervisor: Janette Abramowitz, MD, Neurology/Psychiatry, Natalia Gonzalez, MD, ALS, Neuromuscular & MS Neurologist

BRAIN Resident: Kyung Moo Kim, MD (Psychiatry), BRAIN Scholar, Medical students: Titan Alexio

Ajd due to terminal neurologic illnesses such as amyotrophic lateral sclerosis (ALS), multiple sclerosis (MS), Parkinson's disease (PD) significantly affects patients' quality of life and functioning. In addition to suffering mounting physical debility as well as the prospect and management of disease-related interventions, patients must deal with the emotional impact of their illness and a potentially poor prognosis. The psychological distress adversely affects quality of life (QOL) and may negatively influence the clinical course of the disease and lead to poor treatment adherence. . There is little to no data collected on Adj disorder in neurologic patients in Hawaii especially those of NHPI descent. The project assess both the incidence and prevalence of Adj disorders of neurologic diseases especially ALS, MS and Parkinson's patients in Hawaii including. Current standard of care or lack thereof and impact on quality of life. [Recent Publications](#)

Comprehensive Epilepsy Center and Video-EEG Epilepsy Monitoring Unit (EMU) & Epilepsy Research Unit



Perceptions of Sudden Unexpected Death in Epilepsy Among Asian American and Native Hawaiian/Pacific Islander (AANHPI) Patients with Epilepsy

BRAIN Research Faculty Supervisor: Darren Dugas, MD

National Collaborating Faculty: Jeffrey Buchhalter MD, PhD,

BRAIN Scholar, Medical student: Tyrone John Sumibcay (leader), Haley Yamamoto, Kristal Xie, Kenneth Lin

BRAIN Interns:

Description: Sudden Unexpected Death in Epilepsy (SUDEP) is a serious, but often underdiscussed complication of epilepsy, responsible for approximately 1 death per 1,000 patients. Research has shown that most patients with epilepsy have no prior knowledge of SUDEP, despite having a desire to be informed on the topic. Previous studies have also demonstrated an overall lack of provider discussions regarding SUDEP, often due to lack of information on the topic or due to fears of causing anxiety in their patients. These existing studies have primarily focused on perceptions among Caucasian and Hispanic populations, with limited exploration into how SUDEP is perceived by Asian American and Native Hawaiian/Pacific Islander (AANHPI) patients. This study aims to address this gap by evaluating the current knowledge, attitudes, and preferences of AANHPI patients with epilepsy regarding SUDEP compared to other ethnic groups, with the potential to identify overall gaps in SUDEP awareness and to develop strategies to improve patient education and counseling on SUDEP.

[Recent Publications](#)

ALS & Neuromuscular Center and Neuromuscular Research Unit



Assessing the Educational Value of Online Videos on Tarsal Tunnel Syndrome: A YouTube-Based Study

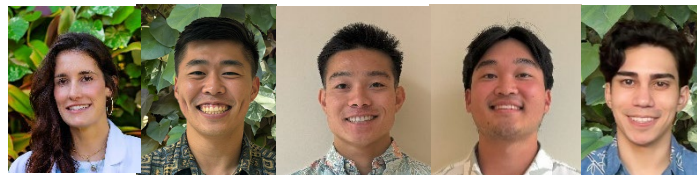
BRAIN Faculty Supervisor: Natalia Gonzalez, MD

BRAIN Scholar, Medical student: Ryan Nishi (leader), Jenna Tsuzaki, Shashi Sharma

Description: Tarsal tunnel syndrome, like carpal tunnel syndrome, is a nerve compression disorder that can cause pain, numbness, and tingling, but it affects the tibial nerve in the ankle rather than the median nerve in the wrist. Given the increasing reliance on the internet—particularly YouTube—for health-related information, it is crucial to assess the quality of online educational content about this condition. This study will analyze YouTube videos related to tarsal tunnel syndrome, evaluating their accuracy, completeness, and educational value using a structured rating system. We aim to determine whether patients can rely on YouTube for accurate information on tarsal tunnel syndrome. The results may help guide both patients and healthcare professionals in identifying high-quality educational resources.

[Recent Publications](#)

MS and Neuroimmunology Center and MS Research Unit



Evaluating Risk Factors for Fibromyalgia in Native Hawaiian, Pacific Islander, and other Ethnic Minority Communities

BRAIN Faculty Supervisor: Natalia Gonzalez, MD

BRAIN Scholar, Medical student: Matthew Kao (lead), Cameron Nishida, Bryce Hong

BRAIN Interns: Andrew Mettias

Description: Fibromyalgia is a debilitating diagnosis associated with neuropsychological associated diagnoses such as sleep disorders and depression. With the exact etiology of fibromyalgia still unclear, treatment for the diagnosis can often be challenging. This study aims to explore various risk factors and comorbidities associated with the diagnosis of fibromyalgia. Moreover, we hope to uncover potential trends between risk factors and fibromyalgia specific to various ethnic groups. By doing this, we hope to provide more patient-centered care focused on addressing these potential risk factors to help treat what's an otherwise challenging diagnosis to address.

[Recent Publications](#)

Headache and Facial Pain Center & Headache Research Unit



Analyzing the Relationship Between Patient Ethnicity vs Differences in Treatment for Chronic Migraines

BRAIN Research Faculty Supervisor: Angeline Eonjung Kim, MD

BRAIN Scholar, Medical student: Erin Kim (leader), Xavier Heidelberg, Jan Aurelio, Nicole Hada

BRAIN Interns: Princess Cacpal

Description: Previous research done at HPN found racial/ethnic differences in patient demographics, clinical presentation, and comorbidities among patients with chronic migraines. This study aims to further categorize specific migraine treatments into class (eg. abortive vs preventative) for patients with chronic migraines. Our objective is to determine if a correlation exists between certain ethnicities or comorbidities (eg. physiologic, psychologic, social) and treatment/medications prescribed for patients with chronic migraines in Hawaii. We hope to bring focus to the NHPI population in Hawaii treated for migraines and determine if there are racial/ethnic disparities in treatment.

[Recent Publications](#)

Spine and Pain Management Center and Spine Research Unit



Assessing the Understanding of Neurological Conditions in Young Adults and Leveraging Media Outlets and Social Media Platforms for Neurology Awareness

BRAIN Faculty Supervisor: Eonjung Angeline Kim, MD

BRAIN Scholar, Medical student: Ryan Nakamura (leader), Kevin Nguyen, Amy Mar

Description: Concussion education and awareness has been a sustained effort in neurology since the first understanding of concussive injuries. However, there are extremely variable levels of concussion awareness and understanding in the public's eyes. Traditional media seems to bring attention to concussions in an oscillating manner; perhaps when a well-recognized athlete suffers a severe concussion. Shortly after the coverage stops, it appears this coordinated effort for concussion education and awareness no longer becomes a priority. This study is designed to determine a community's perceived understanding of concussions in relation to traditional and social media coverage.

[Recent Publications](#)

Memory Disorders Center and Alzheimer's Research Unit



Native Hawaiian and Pacific Islander Participation in Alzheimer's Disease Clinical Trials

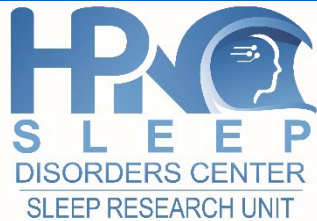
BRAIN Research Faculty Supervisor: Michale Sonson, MD, Kore Liow, MD

BRAIN Scholar, Medical students: Nina Krupa, Matthew Kobylinski, Anson Lee

Previous research done at HPN demonstrates that Asian and Native Hawaiian patients were less likely than White patients to participate in AD clinical trials. The goal of this study is to determine what percentage of AD clinical trial participants are Native Hawaiian and Pacific Islander (NHPI). While NHPI make up about 28% of the population in Hawaii, we predict that less than 10% of AD clinical trial participants will be NHPI.

[Recent Publications](#)

Sleep and Insomnia Center & Sleep Research Unit



BRAIN Research Faculty Supervisor: Nicholas Anderson MD

BRAIN Scholar, Medical students: Kaela Iwai

BRAIN Intern: Hannah Miura, Andrew Mettias

CPAP Therapy Compliance in Obstructive Sleep Apnea Patients in Hawaii

Retrospective chart review using the eClinicalWorks medical record database. Patients treated at HPN and diagnosed with OSA. Findings: No significant association between patient characteristics and CPAP therapy. CPAP adherence significantly associated with OSA severity. Investigate CPAP adherence and compliance of patients in Hawai'i diagnosed with OSA.

[Recent Publications](#)