## Hawaii Pacific Neuroscience



## **2023 Fall-2024 Spring**

## BRITL Scholars/Medical Students Project Descriptions

#### Neuromuscular Rehabilitation Center and Neuromuscular Research Unit



Medical students: Anita Cheung (lead), D-Dre Wright (lead), Erin Kim, Lauren Kim, Ryan Nishi, Jiwoo Kim



# Differences in Neuropathy Etiology, Presentation & Treatment in AANHPI Populations

- To identify etiological trends of neuropathy especially in AANHPI populations
- To identify differences in clinical presentation and treatment of neuropathy in the AANHPI population compared to other ethnocultural groups in Hawaii
- To identify associated comorbidities in AANHPI populations

#### Risk Factor Association of Diabetic Neuropathy

- To assess prevalence of diabetic neuropathy in NHPI populations compared to other populations
- To analysis the relationship between diabetes and peripheral neuropathy especially in NHPI populations



#### **Concussion and TBI Center and Concussion Research Unit**

Medical students: Ryan Nakamura (lead), Erin Evangelista



#### TBI Education

- Concussion education and awareness has been a sustained effort in neurology since the first understanding of concussive injuries
- To survey high schools, colleges, and medical students about their respective understandings and perceptions of concussions



#### Alzheimer's Neural Network EEG (ANNE) Research Lab

Medical students: Shay Nakahira (lead), Kirra Borrello (lead), Kylie Yamauchi, Janette Bow-Keola



#### Investigating Neural Network using EEG for early detection and monitoring of Alzheimer's Disease

- To investigate the possibility of using EEG as a potential non-invasive biomarker to facilitate early detection and intervention/management of Alzheimer's Disease
- Evaluate P300 latency and amplitude in ApoE4+ vs. ApoE4- and CSF+ vs. CSF-
- Analyze P300 changes over time in ApoE4+/- and CSF+/-



#### Memory Disorders Center & Alzheimer's Research Unit

Medical students: Ryan Nakamura (lead), Michaela Kop, Anna Gan



#### Evaluating the Onset of Falls and Fall Frequency in Mild Cognitive Impairment – a Case Control Study

- To determine the odds ratio of falls vs. MMSE scores and observe if the onset of falls is sooner than the cognitive decline
- To evaluate whether patients living with dementia who are at high fall risk, suffer more frequent traumatic brain injuries

#### Comprehensive Epilepsy Center & Epilepsy Research Unit



Medical students: Cierra Nakamura (lead), Liza Rooks (lead), Kaela Iwai, Tyrone John Sumibcay, Matthew Kao, Megan Kawamura



#### Characterizing Epilepsy in Native Hawaiian and Pacific Islander Populations

- Characterize the severity of epilepsy in NHPI population, treatment course and outcomes
- How do NHPI patients with epilepsy present?

#### Smoking and Risk for Depression in People with Epilepsy

- Investigate the relationship between depression, nicotine use, and epilepsy severity by:
- Examining the prevalence of depression in individuals who are smokers, former smokers, and non-smokers
- Investigating the correlation between the length of smoking history and the presence of seizures, refractory epilepsy status, and epilepsy-related quality of life



### **Stroke and Neurologic Restoration Center and Stroke Research Unit**

Medical students: Bradon Hong (lead), Justin Wong, Sarah Bellati



#### **Prevalence of Small Vessel Disease in NHPI Stroke Patients**

- Current literature show that NHPI patients are 4x more likely to suffer a stroke than non-Hispanic white adults
- To examine the prevalence of cerebral small vessel disease (CSVD) in NHPI compared to other ethnic groups in Hawaii, including Caucasians, Asians, and African Americans



#### Comprehensive MS Center & MS Research Unit

Medical Students: Johnny Carino (lead), Nina Krupa, Anna Davide



#### A Comprehensive Analysis of Depression Screening Practices in MS Outpatient Care

- To evaluate the applicability and routine implementation of the PHQ-2/9 depression screening tool in an outpatient MS clinic
- To map the patient journey from post-screening, focusing on referral patterns and management

Questions? contact Principal Investigator Kore Kai Liow, MD kliow@hawaii.edu

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