

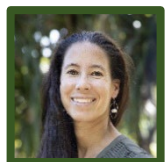
R01 FUNDED INVESTIGATORS AT JABSOM



Youping Deng, PhD - Department of Integrative and Complementary Medicine

CIRCULATING LIPID AND MIRNA MARKERS FOR EARLY DETECTION OF BREAST CANCER AMONG WOMEN WITH ABNORMAL MAMMOGRAMS (CA230514)

Most abnormal mammograms are false positives requiring biopsies and additional imaging. Dr. Deng's research will identify circulating lipid and microRNA (miRNA) signatures for use as a diagnostic tool to reduce unnecessary follow-up procedures. He and his team are testing lipids and miRNA ratios that can distinguish early-stage breast cancer from benign samples with >90% accuracy. Their results will have major implications for early detection of breast cancer.



Claire Townsend Ing, DrPH - Department of Native Hawaiian Health

THE PILI 'ĀINA PROJECT (HL168858)

In this 5-year study, Dr. Townsend-Ing and her team will adapt and test PILI 'Āina, an evidence-based multilevel intervention method they developed to promote healthy eating, weight loss, and cardiovascular health for overweight/obese Native Hawaiian adults. The team will work with community members to promote traditional diets and social cohesion in Native Hawaiian homesteads to reduce risk factors for diet-related illnesses, and improve the self-management of cardiometabolic diseases prevalent in the community.



Marjorie K. Mau, MD (Multiple PI) - Department of Native Hawaiian Health

I KUA NA'U "LET ME CARRY OUT YOUR LAST WISHES" ADVANCE CARE PLANNING FOR NATIVE HAWAIIAN ELDERS (NR018400, awarded to Tufts Medical Center)

Despite the rapid expansion of advance care planning (ACP) services in the health care system, Native Hawaiians consistently have negligible rates of ACP and low use of palliative and hospice care services. To address these shortcomings, our multi-disciplinary community and research group has partnered together to create the I kua na'u "Let Me Carry Out Your Last Wishes" ACP video intervention.



Alike Maunakea, PhD - Department of Anatomy, Biochemistry and Physiology

SOCIOECOLOGICAL DETERMINANTS OF IMMUNOEPIGENETIC SIGNATURES OF DIABETES RISK IN INDIGENOUS COMMUNITIES (MD016593)

We propose a hypothesis that the social environment conditions the epigenomic landscape and gut microbiome composition that regulate inflammation and metabolic pathways underlying DM. Using a new cohort of NHPs and that of their social networks, we will examine associations with neighborhood- and interpersonal-level social factors using a cross-sectional study design and explore the mechanistic basis to which this signature may underlie innate DM-relevant traits to determine the degree to which this signature may prospectively be predictive of DM outcome.



Jesse B. Owens, PhD - Department of Anatomy, Biochemistry and Physiology

DIRECTED EVOLUTION OF A SEQUENCE-SPECIFIC TARGETING TECHNOLOGY FOR THERAPEUTIC GENE DELIVERY TO THE HUMAN GENOME (EB031124)

Current tools for inserting genes have drawbacks such as immune response, limited gene size, and uncontrolled insertion which may lead to cancer. This project aims to develop a new tool capable of inserting therapeutic genes of flexible size to a safe location in the human genome. A treatment for Hemophilia B will be tested to demonstrate a therapeutically relevant application of this new technology.



Matthew W. Pitts, PhD - Department of Cell and Molecular Biology

ASSESSMENT OF THE JOINT INFLUENCE OF METHYLMERCURY AND SELENIUM UPON POSTNATAL BRAIN DEVELOPMENT AND RISK FOR PSYCHIATRIC DISORDERS (ES035851)

Dr. Pitts and his team are conducting a basic research study to understand the molecular and cellular mechanisms by which chronic low exposure to mercury during adolescence may contribute to the development of psychiatric disorders. They hypothesize that mercury inhibits the ability of selenoproteins to protect against oxidative stress in the brain, especially in fast-spiking, parvalbumin-expressing interneurons (PVIs). At the systemic level, the resulting excitatory-inhibitory imbalance in the brain could lead to changes in behavior and increased risk for psychiatric problems.

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V. Andrew Stenger, PhD - Department of Medicine

RADIAL ECHO VOLUMAR IMAGING (EB028627)

Dr. Stenger and his team are developing pulse sequence and image reconstruction software for fast and motion robust magnetic resonance imaging (MRI), in particular, novel “Radial Echo Volumar Imaging” methods for brain MRI that are capable of high spatial resolutions with reduced artifacts related to motion in short acquisition times.



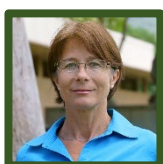
Wei-Kung Wang, MD, ScD - Department of Tropical Medicine, Medical Microbiology and Pharmacology

MULTIPLEX SERODIAGNOSTIC ASSAYS FOR PATHOGENIC ARBOVIRUSES IN BRAZIL (AI149502)

Dr. Wang will use fusion loop-mutated virus-like particles and nonstructural protein 1 proteins of flaviviruses to overcome cross-reactivity and combine with recombinant E2 and nucleocapsid proteins plus virus like particles of chikungunya virus (CHIKV), Mayaro virus (MAYV), and Oropouche virus (OROV) in two multiplex formats to develop sensitive and specific microsphere immunoassays for pathogenic arboviruses and investigate arbovirus seroprevalence in Bahia, Brazil.

LONG-TERM SAFETY AND EFFECTIVENESS OF DENGVAXIA IN THE PHILIPPINES (R01 AI186073)

Dr. Wang will work with scientists in the Philippines to study long-term safety and effectiveness of Dengvaxia, a Dengue vaccine that caused severe disease in seronegative Filipino children after breakthrough DENV infection (BTDI). It is the team’s hypothesis that the antibody and T-cell responses elicited by Dengvaxia is inferior to responses generated by natural infection, leading to limited type-specific neutralizing antibodies, weak T-cell responses and waning vaccine efficacy especially for baseline DENV-naïve recipients. The researchers will measure baseline DENV serostatus of Dengvaxia recipients, characterize antibody and T-cell responses induced by Dengvaxia prior to and after BTDI in an overall effort to assess the long-term safety and effectiveness of the vaccine.



Monika Ward, PhD - Department of Anatomy, Biochemistry and Physiology

THE ROLES OF MOUSE Y CHROMOSOME ZFY GENES IN MALE REPRODUCTION (R01 HD114645)

In this study, Dr. Ward and her research team will use mouse models to test the hypothesis that mouse Zfy proteins are essential regulators of spermatogenesis and male fertility. They will first examine the consequences of Zfy loss in Zfy knock-out mice. They will then create new mice with specific tagged Zfy proteins that will allow them to identify chromatin and protein binding targets. With these experiments, the research team expects to define the gene and protein network/s regulated by Zfy in mice and gain a better understanding of Zfy’s role in regulating spermatogenesis. Results of this study will provide insights on the role of the human ZFY and the mechanisms underlying human male infertility.