



NCIRE

Northern California Institute for Research and Education, Inc.



NCIRE ANNUAL REPORT 2025

Message from the Board Chair



On behalf of the more than 200 Principal Investigators (PI) and researchers supported by NCIRE, it is my great pleasure to welcome you to our 2025 Annual Report. NCIRE is a wonderful and unique organization that facilitates world-class, remarkable health-related research that benefits both Veterans and the United States population. Through its relationships with both the San Francisco Veterans Affairs Health Care System (SFVAHCS) and the University of California, San Francisco (UCSF), NCIRE helps bring the best investigators to the SFVAHCS campus and catalyzes our research. I am pleased that NCIRE is the largest of the VA-affiliated nonprofit research entities in the U.S., but more importantly, I am proud that NCIRE provides individualized support to our affiliated investigators from our newest PIs—who represent the future of medical research—to our highly accomplished investigators with international reputations.

Throughout my own 25 years as an NCIRE PI, I have received tremendous administrative assistance from NCIRE which allows me to focus maximally on scientific research. As the Chair of the NCIRE Board of Directors for the past 3-plus years, our role is to continue supporting the investigators and their teams so that we can accelerate research progress even further. NCIRE investigators have made so many advances that are helping to reduce the burden of diseases ranging from understanding mechanisms, avenues to early detection and diagnosis, and precision therapeutics to pathways for delivering excellent health care broadly and effectively. Here at NCIRE, our mission is supporting this research and helping our investigators maximize their tremendous work.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Shlipak'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Shlipak, MD, MPH



Message from the Chief Executive Officer



As I reflect on Fiscal Year 2025, I am proud of the extraordinary work being accomplished through NCIRE's partnership with the SFVAHCS and our community of dedicated investigators, staff, donors, and supporters. Together, we are advancing research that improves the health and well-being of Veterans while contributing to discoveries that benefit people worldwide.

NCIRE's mission is rooted in the belief that scientific innovation has the power to transform lives. This year, our investigators continued to lead groundbreaking research across a remarkable range of disciplines. Their work reflects both the breadth of scientific excellence within our research community and an unwavering commitment to addressing the most pressing health challenges facing Veterans today.

The impact of this research extends far beyond the laboratory. NCIRE-supported scientists are developing innovative approaches to earlier diagnosis, identifying novel therapeutic targets, advancing precision medicine, improving care delivery, and expanding access to innovative treatments.

Our success is built on collaboration. Progress at NCIRE is made possible through strong partnerships among VA clinicians, researchers, our academic affiliate, UCSF, government agencies, industry partners, philanthropic supporters, and Veterans themselves. We are particularly grateful to the Veterans who participate in research studies and clinical trials. Their contributions make scientific discovery possible and help shape the future of health care for generations to come.

NCIRE remains committed to fostering innovation, supporting the next generation of scientific leaders, and accelerating research that addresses emerging health care needs. The challenges facing Veterans and our health care system are complex, but the dedication, creativity, and perseverance of our research community give me tremendous confidence in what lies ahead.

On behalf of NCIRE's Board of Directors and leadership team, thank you for your continued support of our mission.

A handwritten signature in blue ink, appearing to read 'Rebecca Rosales', written in a cursive style.

Rebecca A. Rosales, MBA, CRA

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One Mission, One Goal: Veterans' Health

To improve the health and well-being of Veterans and the general public by supporting a world-class biomedical research program conducted by the University of California, San Francisco (UCSF) faculty at the San Francisco VA Health Care System (SFVAHCS).

On December 8th, 1988, the Northern California Institute for Research and Education, Inc. (NCIRE), a non-profit corporation, was created to advance the research and educational activities of the staff of the SFVAHCS under the leadership of Albert Jones, MD, Associate Chief Of Staff for Research (ACOS-R), George McAdams, Research and Development Administrative Officer, and Brian Rood, Business Manager.

NCIRE was established following Congress passing the Veterans Benefits and Services Act of 1988, P.L. 100-322 (now codified at section [7361-66 of title 38](#), United States Code), that permitted the Secretary of Veterans Affairs to authorize the establishment of Nonprofit Research and Education Corporations (NPCs) at Department of Veterans Affairs Medical Centers (VAMCs). This Act laid the foundation for the creation of unique partnerships to conduct VA-approved research and education. The Act allowed the establishment of private, state-chartered, nonprofit entities to provide flexible funding mechanisms for the administration of funds, other than those appropriated to VA, for the conduct of VA-approved research.

Since then, NCIRE has grown from a small 4-person team into a bustling 30-person administrative core staff with more than 200 employees in research labs and offices within the San Francisco VA campus led by Rebecca A. Rosales, MBA, CRA, Chief Executive Officer. NCIRE is the largest of the 77 non-profit research institutes associated with the Department of Veterans Affairs nationwide. In June 2025, the Nonprofit Corporation reported \$357,853,666 total revenues during the 2024 reporting period including interest income and other miscellaneous receipts.

More About NCIRE

[History of NCIRE](#)

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NCIRE Research

NCIRE supports more than 200 Principal Investigators and researchers who are dually appointed at the University of California, San Francisco (UCSF) and the San Francisco VA Health Care System (SFVAHCS).

Our research portfolio is deeply rooted in the relationship between scientists and the patients they serve and is catalyzed by the evolving needs of the Veteran population.

Clinicians and researchers care for patients, conceptualize more effective treatment and prevention strategies, and collaborate with basic scientists to create durable and translational interventions.

We are training current and future generations of researchers and providers in Veterans' health.

Alzheimer's Disease and Dementia Prevention

Research by NCIRE-supported scientists on Alzheimer's disease and related dementias is broad and impactful. Their work has laid a foundation for scientists around the world who are developing treatments for a disorder that kills 1 in 3 older adults.

Michael Weiner, MD, former and founding director of the VA Advanced Imaging Research Center (VAARC)—formerly known as the Center for Imaging and Neurodegenerative Diseases (CIND)—at the SFVAHCS, developed and enhanced the use of magnetic resonance imaging (MRI), positron emission tomography (PET), and blood-based biomarkers to diagnose Alzheimer's. He heads the largest observational study in the world—[Alzheimer's Disease Neuroimaging Initiative \(ADNI\)](#)—to understand how normal aging can take a biological twist and progress to Alzheimer's disease. He launched the internet-based [Brain Health Registry](#), whose large pool of participants informs and helps speed clinical trials of neurological diagnostics and treatments. Most recently, he has been developing Conversational AI voice agents to assess cognitive aging and dementia.

Duygu Tosun-Turgut, PhD, founding director of the [Medical Imaging Informatics and Artificial Intelligence](#) lab at the SFVAHCS, leads a team of neuroscientists, biomedical engineers, computer scientists, and biostatisticians who are piecing together “pictures” of the complex brain changes and patterns that cause neurodegeneration. These images give clinicians a glimpse



into the future of their patients' health, so they may possibly intercept diseases at their most vulnerable stage.

Kristine Yaffe, MD, is Chief of Neuropsychiatry and Director of the Memory Evaluation Clinic at the SFVAHCS, where she leads an interdisciplinary care model for Veterans with cognitive concerns. The clinic brings together neurology, psychiatry, geriatrics, neuropsychology, nursing, and social work expertise to provide comprehensive evaluation, care planning, and support for Veterans and their families.

An internationally recognized expert in the epidemiology of dementia and cognitive aging, Yaffe has helped shape the modern understanding of modifiable risk factors for Alzheimer's disease and related dementias. Her research spans neurology, psychiatry, geriatrics, and epidemiology, with a focus on translating population-based evidence into prevention strategies that can improve brain health across diverse communities. Her work has examined the roles of physical activity, cardiovascular risk, sleep disorders, traumatic brain injury, posttraumatic stress disorder, and other life-course exposures in cognitive aging and dementia risk.

Yaffe's contributions have been widely recognized. She received the American Academy of Neurology's Potamkin Prize for Alzheimer's Research in 2017, was elected to the National Academy of Medicine in 2019, received the National Institutes of Health (NIH) Robert S. Gordon, Jr. Award in Epidemiology in 2021, and was awarded the Department of Veterans Affairs' John B. Barnwell Award for Achievement in Clinical Research in 2022. The VA Office of Research and Development noted that her discoveries have contributed to improved dementia screening among older adults and helped lay the foundation for prevention strategies for Veterans and others.

In addition to her scientific leadership, Yaffe is recognized as an influential mentor to junior investigators, many of whom have gone on to become leaders in dementia and cognitive aging research. Through her research, clinical leadership, and commitment to mentorship, she continues to advance NCIRE's mission to improve health outcomes for Veterans and the broader community.

Cardiovascular

Jorge Kizer, MD, MSc, Chief of Cardiology at the SFVAHCS, heads a research program that combines molecular epidemiology and cardiovascular imaging to identify risk factors for heart disease, stroke, and metabolic disorders. His research also aims to understand the mechanisms by which these diseases develop, which could perhaps lead to therapies or low-cost screening tests.



Two of his studies focus on compelling, high-risk groups:

U.S. Hispanics/Latinos, who are prone to a cluster of metabolic disorders that can lead to cirrhosis and liver cancer and are fast becoming the most common causes of liver transplant in the U.S. His study of more than 1,600 Latino adults evaluates how acculturation, lifestyle, psychosocial, and sociocultural factors interact with genetics in the development of fatty liver disease.

People living with HIV are surviving longer yet are experiencing heart disease and its complications at faster rates than people without HIV. Kizer's research among women with HIV receiving antiretroviral treatment has identified worse heart function and greater heart muscle inflammation and scarring as compared with sociodemographically similar women without HIV.

Endocrine/Osteoporosis

Anne Schafer, MD, Chief of Endocrinology at the SFVAHCS, conducts research focused on bone metabolism and skeletal health. She studies the relationships between bone, fat, and glucose metabolism, including the effects of obesity and diabetes on bone.

Physician **Kelly Wentworth, MD**, investigates a rare and painful bone disease—fibrous dysplasia (FD)—which makes bones fragile and prone to fractures and deformities. There currently are no FDA-approved therapies for this genetic disorder. In the lab, she scrutinizes a causative genetic mutation to identify potential therapeutic targets, not only for FD, but also more common diseases of impaired bone growth, including osteoporosis and delayed fracture healing.

While osteoporosis mostly affects women, some two million men in the U.S. have osteoporosis; and 600,000 men suffer fractures annually due to their low bone mass. Osteoporosis is common and problematic for male Veterans, who in addition to injuries, have a greater risk for vascular insufficiency, diabetes, gastrointestinal disorders, and smoking and alcohol-related diseases—all of which can cause vitamin D and calcium deficiencies, and thus bone fracture risks.

“The consequences of osteoporotic fractures are more severe in men than women. And hip fractures in men are particularly devastating. Mortality for a man with a hip fracture is nearly 38 percent in the first year after that fracture.”



Dolores Shoback, MD



Although there are several drugs to treat osteoporosis in women, few therapies have been studied in men. Physician-scientist **Dolores Shoback, MD**, is testing a new combination drug regimen that has the potential to improve bone mass and structure in men.

Geriatrics

An estimated 40 percent of U.S. adults 65 and over take five or more prescription drugs. And that does not include over-the-counter drugs and supplements. The more medications taken, the greater chance of an adverse effect.

Michael Steinman, MD, is a national leader in improving the quality of medication prescribing for older people. Much of his research focuses on “deprescribing,” which is the systematic process of reducing problematic medicines in a way that is safe, effective, and improves the health and well-being of older people.

People living with dementia can remember songs when they can no longer speak. Engaging in music can be deeply meaningful for their care partners. **Theresa A. Allison, MD, M. Music, PhD (musicology)**, studies the impact of music on well-being for people living with dementia and their care partners. Her team is conducting a longitudinal observational study, which has found that people who listen to music every day are less likely to report being lonely. They have learned how going to music performances can support caregiving relationships and that newer technology, including streaming services and advanced hearing aids, can actually create barriers to music listening.

Gulf War Illness

An estimated 250,000 Veterans suffer from Gulf War Illness, a cluster of chronic symptoms that include fatigue, respiratory disorders, headaches, joint pain, insomnia, dizziness, and memory problems.

Linda Chao, PhD, has studied more than 1,000 Gulf War Veterans (GWVs), including more than 300 GWVs at the VAARC, where she conducts neuropsychological and cognitive testing of Veterans and analyzes the most precise MRI images of their brains. Her various research projects focus on how the Gulf War has affected their brain health. She has studied the effects of nerve gas on brain structure and function and Parkinson’s Disease-like symptoms in GWVs.

Currently, Chao is conducting a Department of Defense-funded study comparing hippocampal volume and parietal cortex thickness—two hallmarks for Alzheimer’s disease (AD) pathogenesis—in GWVs with and without mild cognitive impairment (MCI). That study is also



looking at AD blood biomarkers. Another study investigates the effectiveness of behavioral intervention to treat obstructive sleep apnea and insomnia in GWVs.

Infectious Diseases

J. Daniel Kelly, MD, MPH, PhD, is a seasoned and highly accomplished infectious disease researcher. In 2014, while serving as a UCSF infectious diseases fellow, he traveled to Sierra Leone at the height of the largest Ebola outbreak in history to provide clinical care, train health care workers in infection prevention and control, and conduct research on a disease that ultimately claimed more than 11,000 lives in West Africa.

After the crisis subsided in 2016, Kelly returned to the Bay Area, where he continues to advance scientific understanding of emerging infectious diseases. When the COVID-19 pandemic struck in 2020, he applied insights from his Ebola research to study the natural history of SARS-CoV-2, including approaches to diagnosis and treatment of Long COVID.

At the SFVAHCS, Kelly leads a robust big-data research program evaluating vaccine effectiveness against COVID-19 and respiratory syncytial virus (RSV), a significant threat to older Veterans with chronic health conditions. He also directs an NIH-funded study investigating a long-term complication affecting up to one-third of Ebola survivors, research that may help inform future treatment strategies.

Phyllis Tien, MD, Chief of Infectious Diseases at the SFVAHCS, investigates how HIV contributes to long-term organ injury in adults. Her work places particular emphasis on midlife women participating in the Multicenter AIDS Cohort Study/Women's Interagency HIV Study Combined Cohort Study (MWCCS). MWCCS is one of the largest and longest running NIH-funded cohorts of adult men and women with and without HIV in the U.S. To some, the SFVAHCS may seem an unlikely place for research on women with HIV. Yet over the years, it has become the research home for several NCIRE-supported scientists who study HIV, its treatment and immune effects on metabolic perturbations, and non-AIDS co-morbidities including kidney, cardiac, and liver disease. As an infectious disease specialist, Tien is a leader in national efforts to study the progression of HIV in women.

Kidney Disease

Chronic kidney disease is often called a “silent” disease because it can progress for years with few or no symptoms, leaving many patients unaware of their condition until kidney damage is advanced. For decades, kidney disease research has received less attention than other major chronic conditions, including cardiovascular disease and diabetes. NCIRE-supported scientists



are helping address these gaps in kidney disease research and clinical care, says **Michelle Estrella, MD, MHS**, Renal Section Chief at the SFVAHCS.

Estrella also serves as the Executive Director of the SFVAHCS-based [Kidney Health Research Collaborative](#), a multidisciplinary group of clinician investigators and trainees working to improve kidney health worldwide. The collaborative emphasizes prevention, early detection, mentorship, and team science, while also conducting health services research to better understand how care delivery and policy affect people at risk for or living with kidney disease.

Mental Health and Posttraumatic Stress Disorders (PTSD)

NCIRE-supported researchers—from psychiatrists and clinical psychologists to neurobiologists and behavioral scientists—address a wide range of mental health challenges affecting Veterans. Their interdisciplinary work advances understanding of trauma, stress, addiction, chronic pain, sleep, and serious mental illness, while helping develop and evaluate treatments that can improve Veterans' health and quality of life.

Brian Borsari, PhD, is a Psychologist Clinician Investigator at the SFVAHCS. He has been continuously funded by the NIH, Department of Defense, VA RR&D, California Tobacco Related Disease Research Program (TRDRP) and other funding sources since 2001. He has published more than 215 peer-reviewed articles over the past 25 years on topics such as alcohol use in university settings, the assessment and treatment of addictive behaviors, in-session processes of motivational interviewing that are related to behavior change, the development and implementation of brief motivational interventions addressing a variety of target behaviors in a number of different populations, and the development and evaluation of motivational interventions using mobile technology such as chatbots and apps.

Daniel Mathalon, PhD, MD, co-director of the Brain Imaging and EEG Laboratory at the SFVAHCS, uses advanced electroencephalography (EEG), magnetic resonance imaging (MRI), and functional MRI (fMRI) methods to study brain abnormalities associated with schizophrenia and psychosis risk. His research aims to improve early identification of warning signs, identify biomarkers that predict progression to psychosis and support earlier interventions for young people at clinical risk.

Aoife O'Donovan, PhD, studies how traumatic and enduring psychological stress contributes to mental and physical health conditions, including psychiatric, cardiovascular, autoimmune, and neurodegenerative disorders. Her team examines stress-related changes in biological systems.



Thomas C. Neylan, MD, directs the PTSD Clinic and the Stress and Health Research Program at the SFVAHCS. His research focuses on the role of sleep in emotion regulation, cognitive function, and metabolic health among patients with PTSD and aging populations with neurodegenerative disorders.

Sabra S. Inslicht, PhD, investigates the biological and psychological mechanisms underlying traumatic stress and PTSD. Her research integrates fear conditioning and extinction models, psychophysiology, sleep, and autonomic regulation to identify mechanisms that contribute to persistent PTSD symptoms and inform novel treatments. Her current work includes studies examining whether targeting the orexin system with suvorexant can improve sleep, reduce hyperarousal, strengthen fear extinction, and ultimately improve PTSD symptoms and functioning in Veterans with PTSD and insomnia.

Beth Cohen, MD, MA, focuses on health outcomes among patients with PTSD. She is Principal Investigator of the Mind Your Heart Study, a prospective cohort study examining the relationship between PTSD and cardiovascular health. She also conducts substance use research on tobacco and cannabis and is currently developing a tobacco cessation intervention for Veterans with co-use of tobacco and cannabis.

Chronic pain is one of the most common and disabling health concerns among Veterans and frequently co-occurs with PTSD and other mental health conditions. **Karen Seal, MD, MPH**, Chief of Integrative Health Service at the SFVAHCS, leads research to improve chronic pain care through whole-person, nonpharmacologic approaches that address the interconnected effects of pain, mental health, and functioning.

Seal co-led the national Whole Health Options and Pain Education (wHOPE) randomized clinical trial, which demonstrated that a VA Whole Health Team approach produced significantly greater reductions in pain interference than cognitive behavioral therapy for chronic pain or usual care. Veterans receiving Whole Health Team care also reported greater overall improvement and satisfaction with care, with benefits sustained over 12 months.



Karen Seal, MD, MPH

“Our research shows the effectiveness of combining a wide variety of non-pharmacologic therapies for improving chronic pain outcomes in Veterans.”



These findings provide important evidence that integrated, patient-centered Whole Health approaches can meaningfully improve daily functioning for Veterans living with chronic pain and complex co-occurring conditions, including PTSD, and have helped inform ongoing efforts to integrate Whole Health and nonpharmacologic approaches into VA pain care.

Neurology and Stroke

Type 2 diabetes is a major risk factor for stroke and is associated with worse outcomes after stroke. In mouse models, **Jialing Liu, PhD**, studies how diabetes-related inflammation and vascular dysfunction affect stroke injury and recovery. Her laboratory has found that diabetic mice can experience impaired blood flow after stroke, which may increase vulnerability to additional brain injury. The lab has also observed greater post-stroke fibrosis in diabetic brains than in non-diabetic brains. Further studies will examine the signals that drive this profibrotic inflammatory response and identify potential therapeutic targets to reduce post-stroke fibrosis in the brain.

Lessons from a naturally resilient animal—the Arctic ground squirrel—may help inform new approaches to protecting the brain after stroke and other critical neurologic injuries, says **Neel Singhal, MD, PhD**. Arctic ground squirrels can tolerate dramatic reductions in blood flow and oxygen during hibernation and then recover without apparent brain injury. Singhal uses basic and translational research models, including studies of ischemia tolerance and neuroresilience, to identify pathways that may one day lead to therapies that protect brain cells during stroke.

Bruce Ovbiagele, MD, MSc, MAS, MBA, MLS, Chief of Staff at the SFVAHCS, brings a global health lens to stroke prevention and recovery. His research focuses on developing, disseminating, and translating evidence-based interventions to improve outcomes for vulnerable populations globally. He is Principal Investigator of studies aimed at strengthening post-stroke care in sub-Saharan Africa, where stroke burden is substantial and access to long-term prevention and recovery services can be limited and where it has the worst survival outcomes from stroke in the world. The recently concluded PINGS II study (Phone-Based Intervention Under Nurse Guidance After Stroke II) published in the journal, *Circulation* (Circulation. 2026 Jun 16;153:1890-1902), showed that leveraging a mobile health intervention with minimal sophistication and task shifting to nurses on top of usual care safely improved blood pressure control among stroke survivors in a low-resource setting. The SMAART II study (Stroke Minimization Through Additive Anti-atherosclerotic Agents in Routine Treatment II) evaluates the effectiveness and real-world implementation of a cardiovascular “polypill” for secondary stroke



prevention in under-resourced health care settings. The CLARITY-AFRICA trial (CiLostAzol for pRevention of recurrent sTroke in Africa) evaluates whether cilostazol may provide an affordable, accessible option for reducing recurrent stroke risk in the region.

Precision Oncology

Many Veterans face elevated cancer risk, including lung and prostate cancer, because of factors such as age, smoking history, environmental exposures, and other health conditions. Precision oncology uses information from a patient's tumor, genes, and clinical profile to help guide more individualized cancer screening, diagnosis, treatment, and clinical trial opportunities.

Sunny Wang, MD, Chief of the Division of Hematology and Oncology at the SFVAHCS, and **James K. Brown, MD**, who founded the SFVAHCS Lung Cancer Screening Program in 2014, are Principal Investigators supporting VA lung precision oncology efforts. Under this program, lung cancer screening has expanded to include 120 different VA facilities across the nation. Brown, who continues to direct the SFVAHCS Lung Cancer Screening Program, also co-directs the Veterans Health Administration's national screening program along with Dr. Renda Wiener (from Boston VA). Lung cancer screening is critical because low-dose computed tomography screening usually detects lung cancer at an early stage, treatable by thoracic surgical resection or radiation therapy. The VA Lung Cancer Precision Oncology Program has also increased access to biomarker testing, precision treatment options, and clinical trials for Veterans with lung cancer, including those who live in rural and remote areas in Fresno, Sacramento, and Reno.

Germline testing, which identifies inherited gene variants, is an important component of precision oncology for metastatic prostate cancer. Results can help identify patients who may benefit from targeted therapies and can inform cancer-risk assessments for family members. Yet adoption of germline testing in VA care has remained limited. To help close this gap, **Daniel Kwon, MD**, and **Maren Scheuner, MD, MPH**, Director of Clinical Genetics at the SFVAHCS, conduct studies to increase appropriate use of germline testing for Veterans with metastatic prostate cancer. Their work evaluates practical delivery models and implementation strategies that help frontline oncology teams offer testing more consistently across VA facilities nationwide.

Pulmonary

Nearly 16 million U.S. adults have been diagnosed with chronic obstructive pulmonary disease (COPD), and many more may have the disease without knowing it. COPD remains an important concern for Veterans, who may face increased risk because of tobacco, age, and military-related environmental exposures. Tobacco smoking remains a leading cause of COPD, and smoking



prevention and cessation continue to be essential strategies for reducing COPD burden.

Not all people with COPD have a history of smoking. National estimates suggest that about one-quarter of people with COPD have never smoked. For Veterans, respiratory risk may also be shaped by occupational and deployment-related exposures, including sand and dust, burn pit emissions, fuels and vehicle exhaust, blast materials, and other airborne hazards encountered during military service.

Mehrdad Arjomandi, MD, Director of the Environmental Medicine Clinic at the SFVAHCS and Director of the [SFVAHCS Airborne Hazards and Burn Pit Center of Excellence](#), studies how inhalational exposures—including pollutants, toxicants, tobacco smoke, and deployment-related airborne hazards—affect lung and heart health. His research seeks to understand why some people are more susceptible to COPD and other respiratory diseases while others appear more resilient, and to translate those insights into improved prevention, diagnosis, and care for Veterans. He also studies links among COPD, chronic lung inflammation and lung cancer, with the goal of informing better preventive and therapeutic strategies for both diseases.

Salomeh Keyhani, MD, investigates the health effects of cannabis use, with particular attention to older adults and Veterans. Her work addresses an important evidence gap as cannabis use has increased with expanding legalization for medical and adult use. In a large population-based study of U.S. adults, Keyhani and colleagues found that more frequent cannabis use was associated with higher odds of myocardial infarction and stroke, even after accounting for tobacco use and other factors. Her research helps clinicians and patients better understand potential cardiovascular and respiratory risks as cannabis products become more widely used.

Rheumatology

For physician-scientist **Renuka Nayak, MD, PhD**, the gut microbiome offers a powerful window into rheumatic disease and treatment response. Her laboratory team at the SFVAHCS uses patient specimens, microbiology, next-generation sequencing, and gnotobiotic mouse models to study how gut microbes influence health, autoimmune disease, and response to therapies for conditions such as rheumatoid arthritis.

To learn more about the research NCIRE supports, visit our Research Portfolio [here](#).



Research Spotlight

"Quest to eliminate prostate cancer disparities": a focus on research with Dr. Franklin W. Huang



Franklin W. Huang, MD, PhD

*Associate Professor in Residence
Department of Medicine
University of California, San Francisco*

*Principal Investigator
SFVAHCS/UCSF Precision Oncology
Center of Excellence*

In a genetics lab, scientists analyze DNA persistently to understand the causes of diseases like cancer. Investigations are challenging, and there are more research misses than hits.

Yet in 2012, physician-scientist Dr. Franklin W. Huang—then a fellow in hematology and oncology at the Dana-Farber Cancer Institute in Boston—hit a home run while searching for gene mutations that might drive cancer.

Huang discovered within the “dark matter” of the cancer genome a new mutation that had never been found in cancer-related mutations. The mutation affects the “promoter region” that regulates expression of the telomerase gene (TERT). Telomerase, which is expressed in over 90 percent of cancers, adds telomeres to the ends of chromosomes and promotes cell immortality, a hallmark of cancer.

While Huang and his colleagues identified the mutation in melanoma tumors, the study

findings have offered important insight into other cancers, explaining how they develop and grow. The discovery also uncovered possible targets for cancer prevention or treatment.

Focusing on prostate cancer

Huang’s landmark study laid the groundwork for his current laboratory research, which examines genetic differences between cancer cells and normal tissue, aiming to determine what makes certain tumors more aggressive, including prostate cancer.

Huang’s research passion extends beyond the laboratory. His goal is to use the science learned in the lab to reduce cancer health disparities.

His particular focus is on African American men and Veterans. African American men have the highest risk of developing prostate cancer in the U.S., and they are twice as likely to die of the disease as white men. Prostate cancer is the most frequently diagnosed cancer among Veterans, representing 30 percent of all cancers detected in that group.

His devotion to prostate cancer research stems from his medical residency and hematology/oncology fellowship days at Harvard from 2010 to 2014. “I chose to focus on prostate cancer as I thought there was a major unmet need in addressing the disparities seen in this disease, particularly given the high prevalence of prostate cancer in African American men,” said Huang.

Huang moved to San Francisco in 2018 to start his lab, and the city’s diverse population refueled his desire to improve cancer treatment for underserved and understudied populations.

At the SFVAHCS, he treats and studies Veterans with advanced prostate cancer. “Caring for the Veterans and meeting their families in my clinic inspires my research and helps me ask the questions that drive my lab’s research

to determine why some cancers are much more aggressive than others for unknown reasons,” said Huang. “While we have some effective therapies, inevitably our Veterans with metastatic prostate cancer become resistant to these therapies, and we need to find new effective treatments.”

His research lab at UCSF also seeks to understand the molecular mechanisms that confer immortality on cancer cells. It is a collaborative lab that works at the intersection of cancer genomics, disparities, and molecular biology, and it is focused on improving cancer care for all and ensuring that underrepresented populations are included in genomics studies.

Key studies

- Huang is the Principal Investigator of the Prostate Cancer Foundation (PCF) Precision Oncology Center of Excellence at the SFVAHCS. The public-private collaboration aims to deliver the best precision oncology treatments to Veterans.
- The RESPOND Study (Research on Prostate Cancer in Men of African Ancestry: Defining the Roles of Genetics, Tumor Markers, and Social Stress) is a multi-institutional effort funded by the National Cancer Institute, National Institute of Minority Health, and the Prostate Cancer Foundation. Huang is a UCSF site Investigator for the study, which is one of the first to analyze how social stressors such as discrimination and lack of health care access interact with tumor biology and genetics in African American men with prostate cancer.
- Huang is also the Principal Investigator of a VA-funded study looking at the molecular mechanisms of aggressive prostate cancer in African American Veterans. His lab performs state-of-the-art sequencing of prostate cancers from African American men to determine the genetic changes that are associated with ancestry and aggressive prostate cancers. The study aims to inform new strategies to reduce prostate cancer disparities.

Going global

In addition to his research and clinical titles, Huang is the co-founder and president of Global Oncology (GO), a volunteer non-profit organization dedicated to improving cancer care and research in the developing world.

Huang co-founded GO in 2012 with Dr. Ami S. Bhatt, now a Stanford professor, while they were hematology/oncology fellows at Harvard Medical School. Their objective was to achieve more equitable cancer care in even the most resource-constrained settings by creating and fostering active, dynamic partnerships between skilled professionals worldwide and cancer providers in developing countries.

Since its inception, GO has engaged its volunteer corps in North America and abroad who have partnered with cancer providers in Nigeria, India, Botswana, Rwanda, Haiti, Belize, and other countries.

On the home front

Huang reflected on research accomplishments and long-term goals. “Over my career, I’ve been fortunate to be a part of some exciting science, such as when we discovered the mutations in the promoter of the telomerase gene, which are among the most common mutations in cancer,” said Huang. “Recently, we discovered a new target in bladder cancers and developed a chimeric antigen receptor (CAR) T-cell therapy against this target, which shows promising activity; and we hope to develop it into a therapeutic that could be useful in a number of cancers.”

“I hope that our long-term research results can help eliminate the disparities in prostate cancer that we see, and that we can develop new treatments based on our research,” he said.

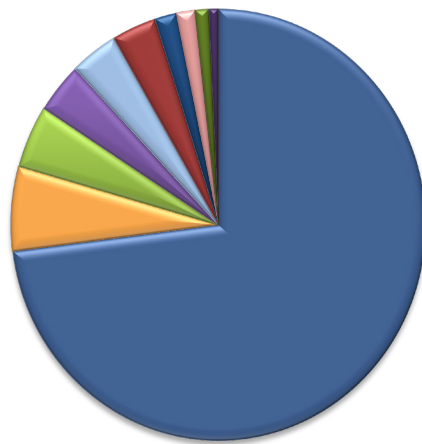
For more information about Dr. Huang's research and the vital work done through Global Oncology, visit:

<https://www.globalonc.org/>



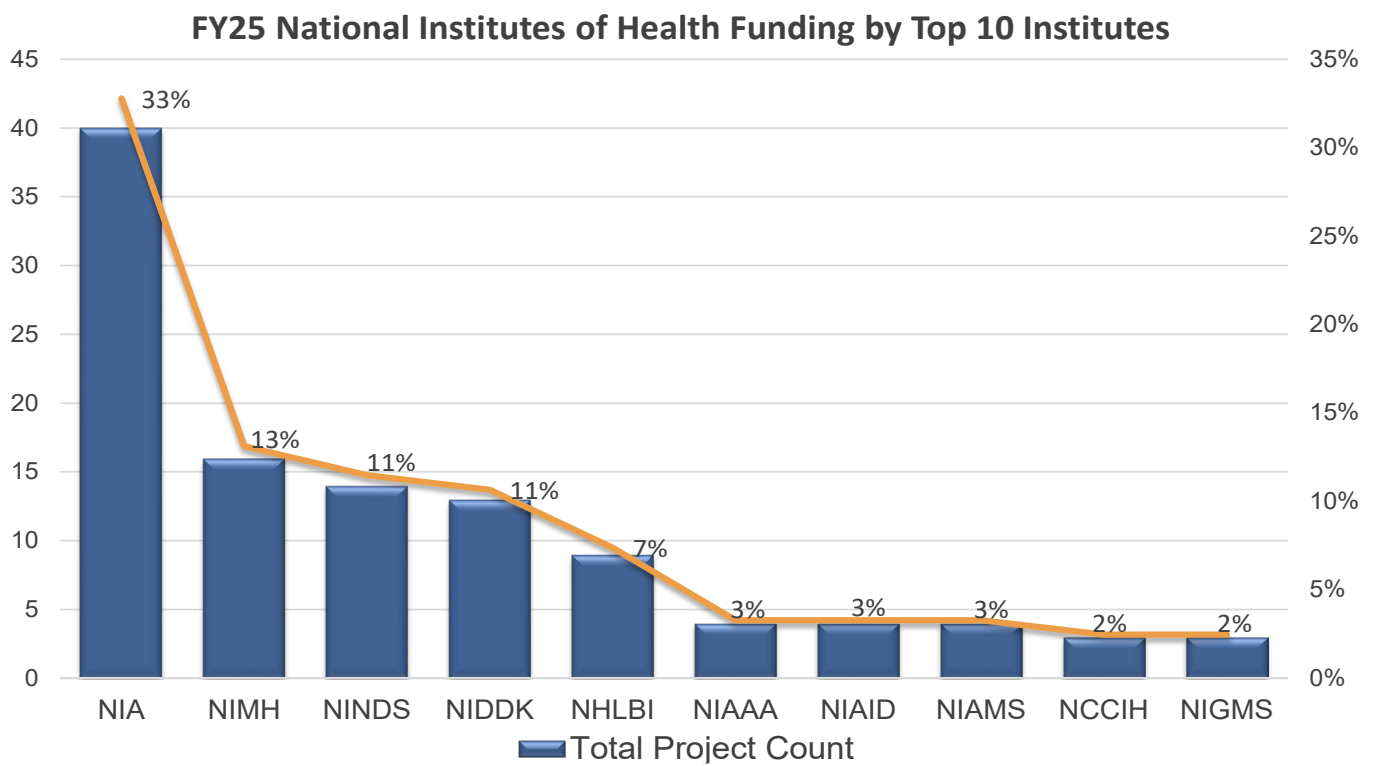
NCIRE Research by the Numbers

FY25 National Institute of Health Funding by Top 10 Institutes



■ National Institute on Aging	72.3%
■ National Institute of Mental Health	6.2%
■ National Institute of Diabetes and Digestive and Kidney Diseases	4.7%
■ National Institute of Neurological Disorders and Stroke	3.8%
■ National Institute on Drug Abuse	3.7%
■ National Eye Institute	3.4%
■ National Institute of Environmental Health Sciences	1.7%
■ National Heart, Lung, and Blood Institute	1.5%
■ National Institute of Allergy and Infectious Diseases	1.0%
■ National Institute of General Medical Sciences	0.7%

NCIRE Research by the Numbers





NCIRE 2025 New Research Awards

Barbara Bensing, PhD

Project Title: PRG4/Lubricin glycoform variants associated with endocardial infections and sepsis
Sponsor: National Institutes of Health

Beth Cohen, MD, MA

Project Title: Evidence-based Treatment for PTSD and Cardiovascular Disease Risk
Sponsor: National Institutes of Health via subaward from the University of California, Los Angeles

Jenny Cohen, MD, MPH

Project Title: Development of a peer supported network for US Veterans in the VA national tele-oncology program undergoing advanced cellular therapies for hematologic malignancies
Sponsor: The Leukemia & Lymphoma Society, Inc. via subaward from the Institute for Medical Research

Carolyn Gibson, PhD

Project Title: Improving Identification of Obstructive Sleep Apnea in Women
Sponsor: National Institutes of Health

Franklin W. Huang, MD, PhD

Project Title: A Phase 3, Two-part, Randomized, Open-label, Adaptive Study Comparing BMS-986365 versus Investigator's Choice of Therapy Comprising Either Docetaxel or Second Androgen Receptor Pathway Inhibitor (ARPI), in Participants with Metastatic Castration-resistant Prostate Cancer (mCRPC) – recharge
Sponsor: Bristol Meyers Squibb ([NCT06764485](#))

Sabra S. Inslicht, PhD

Project Title: Suvorexant: Targeting Orexin to Augment Exposure Therapy in Veterans with PTSD and Insomnia
Sponsor: Department of Defense

J. Daniel Kelly, MD, MPH, PhD

Project Title: Long-term ocular sequelae and biological determinants of post-acute Ebola virus disease
Sponsor: National Institutes of Health

Alfred Kuo, MD, PhD

Project Title: Unilateral Powered Knee Orthosis for Knee Pain and Instability Intervention with the VA Population
Sponsor: Department of Defense via subaward from Roam Robotics

Daniel Kwon, MD

Project Title: Improving delivery of germline testing in Veterans with advanced prostate cancer
Sponsor: Department of Defense

Sei Lee, MD, MAS

Project Title: Deprescribing Cardiovascular Medications among Persons with and without Alzheimer's Disease and Related Dementias in Long Term Care
Sponsor: National Institutes of Health via subaward from the Palo Alto Veterans Institute for Research

Jialing Liu, PhD

Project Title: Type 2 diabetes induced chronic inflammation on stroke outcome
Sponsor: National Institutes of Health

Thomas C. Neylan, MD

Project Title: Phase IIa Trial of a Selective Glucocorticoid Receptor Antagonist (CORTI 08297) in the Treatment of Veterans with Posttraumatic Stress Disorder (PTSD)
Sponsor: Corcept Therapeutics ([NCT04452500](#))

Kathleen Sarmiento, MD, MPH

Project Title: Linking Health care Education, Access, and Leadership Opportunities for Underrepresented Students
Sponsor: Gilead Foundation via subaward from 10,000 Degrees

Maren Scheuner, MD, MPH

Project Title: The VA Genomics Learning Health System: Implementing genomic medicine across diverse veteran communities
Sponsor: National Institutes of Health via subaward from the Boston VA Research Institute

Michael Shlipak, MD, MPH

Project Title: Kidney Tubular Damage and Dysfunction in Autosomal Dominant Polycystic Kidney Disease

Sponsor: National Institutes of Health via subaward from the University of California, San Diego

Raymond Swanson, MD

Project Title: Genetic variants conferring susceptibility to toxicant-induced Parkinson's disease

Sponsor: Department of Defense via subaward from the Gladstone Institute

Raymond Swanson, MD

Project Title: Investigating Novel Genetic Variants that Confer Susceptibility to Pesticide-induced Parkinson's Disease in Human Neurons

Sponsor: National Institutes of Health via subaward from the Gladstone Institute

Elaine Tseng, MD

Project Title: Transfusion Requirements in Younger Patients Undergoing Cardiac Surgery (TRICS IV): A Randomized Controlled Trial

Sponsor: Unity Health Toronto ([NCT04754022](#))

Phyllis Tien, MD

Project Title: Stimulant and Polysubstance use, Inflammation and Sex Effects on Myocardial Disease in HIV (SPISE)

Sponsor: National Institutes of Health

Duygu Tosun-Turgut, PhD

Project Title: Autopsy-informed integrated clinical and imaging models for prediction of non-AD co-pathologies in AD

Sponsor: National Institutes of Health

Duygu Tosun-Turgut, PhD

Project Title: The Progressive Supranuclear Palsy Clinical Trial Platform (PTP)

Sponsor: National Institutes of Health via subaward from the University of California, San Francisco

Duygu Tosun-Turgut, PhD

Project Title: Clarifying the association of depressive symptoms with cortico-limbic tau, cerebral blood flow, neurodegeneration and cognitive decline in individuals with MCI

Sponsor: National Institutes of Health via subaward from the University of California, San Francisco

An Vu, PhD

Project Title: Circumventing the pharmacokinetic/ pharmacodynamic limitations of antioxidant therapy for Parkinson's Disease by nose to brain delivery of N-acetylcysteine

Sponsor: National Institutes of Health via subaward from Neuronasal, Inc.

Sunny Wang, MD

Project Title: A Phase III, Randomized, Double-blind, Multicenter, Global Study of Rilvegostomig or Pembrolizumab in Combination with Platinum-based Chemotherapy for the First-line Treatment of Patients with Metastatic Squamous Non-small Cell Lung Cancer Whose Tumors Express PD-L1 (ARTEMIDE-Lung02)

Sponsor: AstraZeneca Pharmaceuticals LP ([NCT06692728](#))

Sunny Wang, MD

Project Title: A Phase III, Randomized, Double-blind, Multicenter, Global Study of Rilvegostomig or Pembrolizumab in Combination with Platinum-based Chemotherapy for the First-line Treatment of Patients with Metastatic Non-squamous Non-small Cell Lung Cancer Whose Tumors Express PD-L1 (ARTEMIDE-Lung03)

Sponsor: AstraZeneca Pharmaceuticals LP ([NCT06627647](#))

Kristine Yaffe, MD

Project Title: Early mid-life environmental toxicant exposures and AD/ADRD risk in CARDIA

Sponsor: National Institutes of Health via subaward from the University of Pennsylvania

Joseph Yang, MD

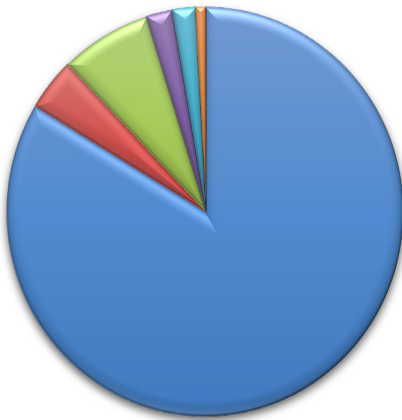
Project Title: A Phase III, Randomised, Double-blind Study to Evaluate the Effect of Balcinrenone/ Dapagliflozin, Compared with Dapagliflozin, on the Risk of Heart Failure Events and Cardiovascular Death in Patients with Heart Failure and Impaired Kidney Function

Sponsor: AstraZeneca Pharmaceuticals LP ([NCT06307652](#))

This list is not all inclusive, proprietary information has been omitted.

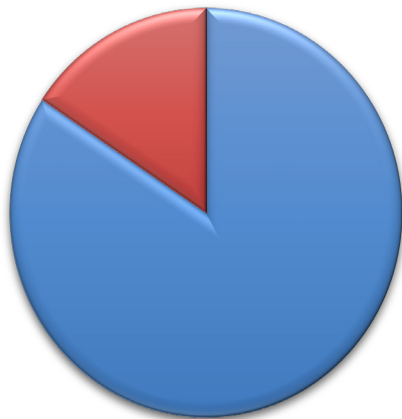


Financial Summary



FY2025 Operating Revenue

■ NIH Funds	\$57,824,226	83.6%
■ DoD Funds	\$2,904,996	4.2%
■ Other Federal Funds	\$5,108,040	7.4%
■ Clinical research	\$1,472,303	2.1%
■ Foundation and Contributions	\$1,327,689	1.9%
■ Other Income and interest	\$515,971	0.7%
■ Total	\$69,153,225	



FY2025 Operating Expenditures

■ Research program	\$58,615,131	84.3%
■ Management and general	\$10,899,651	15.7%
■ Total	\$69,514,782	

[FY2025 Audited Financial Report](#)





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