

UCSF FRESNO CLINICAL RESEARCH CENTER

UCSF Fresno Medical
Education Program
School of Medicine

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NIH PETAL NETWORK

The NIH-funded Prevention & Early Treatment of Acute Lung Injury (PETAL) Network includes academic hospitals in fourteen regions across the U.S. The California region includes UCSF (lead site) and four satellite sites at UCSF Fresno, UC Davis, UCLA and Stanford.

The PETAL VIOLET study is a randomized, double-blinded, placebo-controlled, phase III trial examining the effect of early administration of high-dose vitamin D3 in reducing mortality in patients with low vitamin D levels (<20 ng/mL) who are at high risk for Acute Respiratory Distress Syndrome (ARDS).

The study is led locally by Co-Principal Investigators **Patil Armenian, MD**, Emergency Medicine, and **Eyad Almasri, MD**, Pulmonary and Critical Care Medicine. Janna Blaauw is the UCSF Fresno PETAL Network coordinator and also provides oversight of VIOLET study activities at UCLA and UC Davis.



NEUROSCIENCE RESEARCH CONSORTIUM

Faculty in neurosurgery, neurocritical care and neurology are working together to develop a multi-disciplinary research program. The effort is being led by **Arash Afshinnik, MD**, Director of Neurocritical Care, **Yu-Hung Kuo, MD, PhD**, Vice Chief of Neurosurgery, and **Mark Stecker, MD**, Chief of Neurology. The Neuroscience Research Consortium (NRC) includes principal investigators conducting NIH and industry-sponsored clinical trials, population-based studies and basic science research with the goal of bringing top quality Neuroscience research and clinical trials to UCSF Fresno.

FEDERALLY-FUNDED RESEARCH

The NRC currently participates in three StrokeNet trials. StrokeNet is an NIH-funded network whose aim is to conduct small and large clinical trials to advance acute stroke treatment, stroke prevention, and recovery and rehabilitation following a stroke. Our current studies include DEFUSE-3, CREST-2 and recently added ARCADIA.



Dr. Afshinnik is the local PI of DEFUSE-3.

This study is a randomized trial of patients with acute anterior circulation stroke symptoms between 6-16 hours. The goal is to test advanced CT perfusion based software to help selection of which patients may benefit from endovascular clot retrieval.



Amir Khan, MD, is the local PI of CREST-2. This study assesses medical management plus interventional treatment (carotid stenting or endarterectomy) versus medical management alone in patients with asymptomatic carotid stenosis. The endarterectomy arm of this study is led by UCSF Fresno vascular surgeon **Kamell Bernard, MD**. Assessments are performed at six-month intervals for up to four years post-procedure.



William Likosky, MD, is the local PI of ARCADIA. This study compares apixaban to aspirin for prevention of recurrent stroke in patient with cryptogenic stroke and atrial cardiopathy.

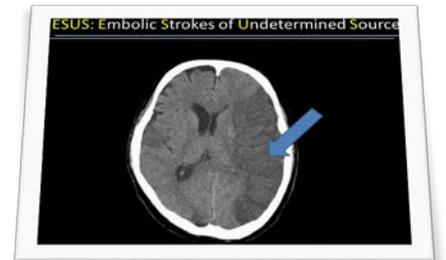
Yu-Hung Kuo, MD, PhD, is the local PI for the TRACK Spinal Cord Injury study, sponsored by the Department of Defense. This study is being conducted in collaboration with Michael Beattie, PhD, at UCSF. This prospective study enrolls spinal cord injury (SCI) patients at Community Regional Medical Center to generate a holistic SCI data repository. Assessments are performed by the study team throughout the patient's hospitalization with follow-ups done at six and 12 months.



INDUSTRY-SPONSORED CLINICAL TRIALS

The NRC is also participating in a number of industry-sponsored trials.

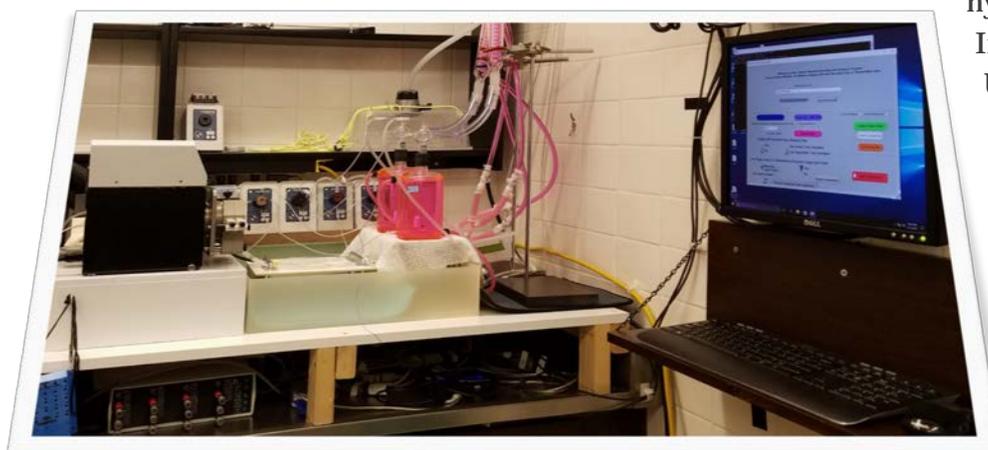
- **Derek Taggard, MD**, is the PI of a study funded by *Vertex Pharmaceuticals* that investigates the application of a cell-regenerating drug applied to the site of spinal cord injury during surgery.
- **Arash Afshinnik, MD**, is the PI of a study funded by *Edge Pharmaceuticals* that investigates the use of IV nimodipine microparticles (via EVD) versus oral nimodipine in patients with aneurysmal subarachnoid hemorrhage.
- **Dr. Afshinnik** is also PI of a study funded by *Hollister Incorporated* to assess the use of a new endotracheal tube fastener to reduce tube occlusion.
- **Amir Khan, MD**, is the PI of a study funded by *Boehringer Ingelheim* that investigates the use of oral dabigatran (thrombin inhibitor) versus aspirin in patients with embolic stroke of undetermined source (ESUS).
- **Dr. Khan** is also the PI of two device trials, sponsored by *Penumbra* and *Stryker*, comparing the use of different coiling systems in the treatment of intracranial aneurysms.



BASIC SCIENCE LABORATORY

By Ana Dutra-Clarke, PhD, Neurophysiology Lab Manager

Mark Stecker, MD, Chief of Neurology at UCSF Fresno, is the Principal Investigator of the Neurophysiology Lab at California State University, Fresno. The lab utilizes an *in vitro* neuropathy model that includes exposing rat sciatic nerve explants to various perfusates and monitoring action potential responses. Circulation of differing perfusates provide exposures to common nerve injury environments, like hypoxia/anoxia and hyperglycemia. The Fresno State Institutional Animal Care and Use Committee have approved all experiments.



Antioxidant treatment aiming to minimize the nerve injury can also be added to the perfusate. In addition, the lab measures sciatic nerve injury markers mediated by

hypoxia/anoxia/hyperglycemia which cause oxidative stress, leading to apoptosis, polyol pathway activation and lipid peroxidation.

Previous work by our lab has shown that hyperglycemic injury can occur over a period of hours and does not require sustained hyperglycemia (Stecker and Stevenson, 2015).

If you would like to learn more about our lab or have a potential project that might utilize an *in vivo* or *ex vivo* rat model, please contact Ana Dutra-Clarke at ADutra-Clarke@fresno.ucsf.edu.

Stecker MM, Stevenson MR. 2015. Anoxia-induced changes in optimal substrate for peripheral nerve. *Neuroscience*. 2015 Jan 22;284:653-67. doi: 10.1016/j.neuroscience.2014.10.048. Epub 2014 Nov 4. <https://www.ncbi.nlm.nih.gov/pubmed/25451283>

SUMMER BIOMEDICAL INTERNSHIP PROGRAM (SBI)

By Robin Whitney, PhD, RN, SBI Program Director

While most students prefer to spend the summer as far away as possible from academics, nine high school students are working side-by-side with faculty physicians at UCSF Fresno to research health issues and examine data. The students are taking part in the 30th UCSF Fresno Summer Biomedical (SBI) Internship Program, which pairs selected students, who are going into their senior year of high school, with faculty members to work on research projects for two months over the summer.



Faculty-student research projects involve: cancer incidence in the Central Valley's geriatric population (**Robin Whitney, PhD, Paul Mills, PhD**); cardiovascular risk factors in the rural Japanese American population (**Gordon Honda, MD, Paul Mills, PhD**); effects of a hip-fracture protocol on length of stay, in-patient complications and 30-day re-admissions (**Jason Davis, MD**); the effects of attachment priming on health outcomes (**Roger Mortimer, MD,**

Patrick Macmillan, MD); HIV/AIDS in the Hmong population (**Susan Hughes, MS**); role of Vitamin B12 in perceived energy levels (**Sireesha Reddy, MD**); and a comparison of treatment outcomes for carpometacarpal suspension arthroplasty (**Cary Tanner, MD**).

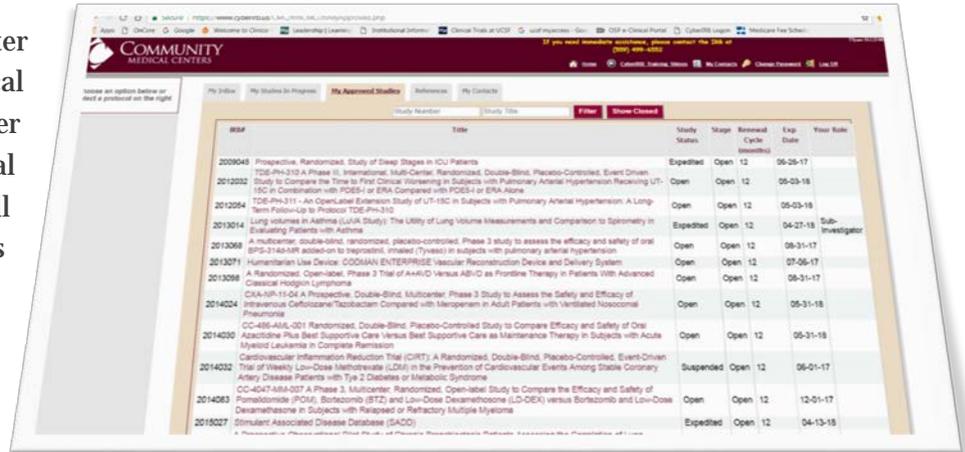
This is a unique opportunity for hard-working students to gain an understanding of the biomedical sciences through hands-on experiences. The hope is that by introducing them to careers in health and the health sciences, the students will be inspired to pursue related careers that enable them to put their education and talents to work to help improve health in the Valley.

I consider myself proof that the SBI program works. I participated in the SBI Program as an Edison High School student in 1999. My mentor was Paul Mills and our research at that time focused on the incidence of cancer in children exposed to pesticides. I recently completed my PhD in Nursing Science and Health Care Leadership and am currently an assistant professor at UCSF Fresno. In addition to overseeing the SBI program, I am also the Research Director for the Hillblom Center on Aging (RWhitney@fresno.ucsf.edu).

COMMUNITY MEDICAL CENTER CYBER-IRB

By Anabel Jayme, CMC IRB Analyst

The Community Medical Center (CMC) IRB currently provides clinical research regulatory oversight for over 350 studies. This includes clinical research at all CMC facilities as well as research involving CMC patients and CMC patient data. The CMC IRB also provides clinical research regulatory oversight for clinical studies of UCSF Fresno's Medical Education Program.



The new user-friendly software, CyberIRB, assists faculty and personnel at UCSF Fresno with their submissions to the CMC IRB. CyberIRB has built-in tools and features to help guide users through the IRB submission process, while keeping users informed of the status of their submissions. Some of the features include a quick overview regarding the various phases of the submission, built-in helpful pop-ups that provide on the spot assistance, a reference tab that contains frequently used templates and useful resources, and an “E-mails” tab that provides a history of all email correspondence regarding each IRB submission.

CMC CyberIRB is equipped with an informational training video designed to provide users with all the necessary tools to begin the submission process. CyberIRB also provides users with preliminary feedback to facilitate a more streamlined review process. If users have any questions, they are encouraged to contact the CMC IRB office. Our staff will be happy to assist via phone or in-person. Please contact the CMC IRB Office at (559) 499-6552 or email Anabel Jayme at AJayme@communitymedical.org for more information or to set up a CyberIRB account.

The **Clinical Research Center** at UCSF Fresno provides cutting-edge therapies to San Joaquin Valley residents. Patients now have the opportunity to participate in clinical trials without leaving Fresno. Here’s a list of ongoing clinical trials at UCSF Fresno.

Type II Diabetes	Respiratory Syncytial Virus	Acute Myeloid Leukemia
Valley Fever	Human Metapneumovirus	Multiple Myeloma
Asthma	Community Acquired Pneumonia	B-Cell Lymphoma
Heart Failure	Hospital Acquired Pneumonia	Renal Cell Carcinoma
Coronary Artery Disease	Ventilator Associated Pneumonia	Urothelial Carcinoma
Pulmonary Hypertension	Acute Lung Injury	Small Cell Lung Cancer
Cystic Fibrosis	Ischemic Stroke	Breast Cancer
Non-Alcoholic Steatohepatitis	Intracerebral Hemorrhage	Pancreatic Adenocarcinoma
Bipolar Disorder	Traumatic Spinal Cord Injury	Colorectal Cancer
Panic Disorder	Cerebral Aneurysm	Glioma

In addition to these clinical trials, UCSF Fresno researchers are conducting population-based studies examining gene-environment interactions in cancer causation, the role of air pollution in the development of allergies and inflammation, or the efficacy of a lung nodule program on cancer diagnosis, treatment and outcomes.