

UC Davis College credit opportunities are available for students interested in pre-med, pre-vet, or scientific medical research. Faculty in the Department of Pathology and Laboratory Medicine at UC Davis School of Medicine invite qualified undergraduate students to enroll in the **PMD 199** course, which provides credit for participating in scientific research. This course allows students to gain valuable research or pre-medical experience with state-of-the-art equipment and techniques while receiving course credit. Additionally, if you are not interested in receiving course credit, volunteering is an option as well. Time contributed by volunteers can sometimes be used as internship credits by some programs. A list of interested faculty and their research areas are:

- **James Chan, PhD** Contact: james.chan@cbst.ucdavis.edu
 Dr. Chan's research focuses on developing and applying novel biophotonic techniques for applications in cytopathology, single cell analysis, and bio- and chemical sensing. The optical techniques used include nonlinear microscopy, vibrational spectroscopy, and auto-fluorescence.
- **Verónica Martínez-Cerdeño, PhD** Contact: vmartinezcerdeno@ucdavis.edu
 The goal of Dr. Martínez-Cerdeño's laboratory is to determine the etiology and pathology of certain forms of autism. In addition, her lab studies the role of stem cells in the development, evolution, and pathogenesis of the mammalian cerebral cortex. The anatomy and pathology of autism and related diseases in postmortem brains are studied and based on the findings, animal models are developed for autism research. Laboratory website: www.ventricular.org
- **Kuang-Yu Jen, MD, PhD** Contact: kyjen@ucdavis.edu
 UC Davis Health performed the highest number of kidney transplants in the country in 2016, and remains on pace to do the same in 2017. Consequently, we have a large archive of transplant kidney biopsies that are available for research. Dr. Jen focuses on clinical research, correlating pathological findings on kidney biopsies to transplant patient outcomes. The methods involved are largely microscopic examination of kidney biopsies and patient chart review, using basic statistical methods for data analysis.
- **Ralph Green, MD, PhD, FRC PATH** Contact: rgreen@ucdavis.edu
 Dr. Green studies the roles of micronutrients in the maintenance of normal health and how nutrients and their pathways contribute to the pathogenesis and manifestations of disease. A major focus has been the characterization of B vitamin status in acquired and genetic diseases. Recently, his laboratory has performed studies on sickle cell anemia, cancer and degenerative neurological disorders, including Parkinson's Disease and Alzheimer Disease and population studies on declining cognitive status in the elderly. Methods used in the laboratory include hplc, enzyme immunoassays (ELISA) and multiplex proteomic assays.
- **Konstantinos Zarbalis, PhD** Contact: kzarbalis@ucdavis.edu
 The Zarbalis laboratory focuses on the genetic and environmental causes of craniofacial and neurodevelopmental disorders. Both in vivo and in vitro models are used to reveal the effects of gene mutation in pathological processes leading to congenital abnormalities. A wide variety of techniques is employed in the process, including methods in molecular biology, molecular histology, protein biology, biochemistry, and bioinformatics.
- **Denis Dwyre, MD** Contact: dmdwyre@ucdavis.edu
 Dr. Dwyre focuses on clinical research in the areas of coagulation, apheresis, and hematology.
- **Dr. Yu-Jui Yvonne Wan, PhD** Contact: yjywan@ucdavis.edu
 Study the role of gut microbiota in contributing to and preventing obesity and metabolism-associated health issues including fatty liver, systemic inflammation, skin disease, mental and neurological issues, and cancer aiming to uncover means for treatment.

If you are interested in working with any of these faculty members on research, please contact them through email. For PMD 199, two or three hours per week correspond to one unit. Most of the professors are located at the School of Medicine and UC Davis Health campus in Sacramento; however, busing for students is available between the two campuses.

Please contact Christine Bertini, 916-734-2350 or cbertini@ucdavis.edu, if there are any questions.