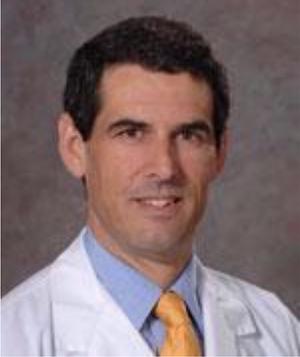


Proposals submitted by three UC Davis School of Medicine researchers have been awarded funds by BGI@UC Davis to conduct projects that will provide preliminary data for new extramural grant submissions and new partnerships that will utilize BGI@UC Davis sequencing and related services. The CTSC congratulates **Christopher Bowlus**, **Luis Carvajal-Carmona**, and **Allen Gao** for their successful proposals.

<p>PI: Christopher L. Bowlus, M.D.</p> <p>Title of project: Whole Exome Sequencing of Primary Sclerosing Cholangitis in African Americans</p> <p>Narrative: The current study will use whole exome sequencing to delineate the HLA region in 16 African Americans with primary sclerosing cholangitis (PSC) as well as scan the exome for potential causative variants in the 15 additional candidate regions identified in genome-wide association studies in European populations. This will be the first detailed analysis of PSC genetics in African Americans and will add new insights about PSC in this population as well as PSC in general. The importance of this research is highlighted by the fact that PSC is one of the few liver diseases for which there is no effective medical therapy. Understanding the genetic basis of PSC may lead to identification of new therapeutic targets for drug development.</p>	
<p>PI: Luis Carvajal-Carmona, Ph.D.</p> <p>Title of project: Identification of Novel Colorectal Cancer Genes using Exome Sequencing in a Population Isolate: A Feasibility Study</p> <p>Narrative: This study will identify novel colorectal cancer (CRC) genes, using exome sequencing, in subjects from an isolated Hispanic population. Specific aims of this study include: 1) sequencing the exome of CRC patients and 2) validating the effects on CRC risk of a set of functional variants in the population. The proposed study is likely to increase the number of known CRC genes and will strengthen our research program on Hispanic CRC genetics and epidemiology. The identification of new CRC genes will be crucial to the advancement of basic and translational research for this common malignancy and will facilitate the establishment effective early detection CRC programs in Hispanics and other populations.</p>	

PI: Allen Gao, M.D., Ph.D.

Title of project: Deep Sequencing to Identify Drug Resistance Mechanisms in Castration-Resistant Prostate Cancer

Narrative: This project will use unique models of docetaxel- and enzalutamide-resistant prostate cancer cells that recapitulate clinical docetaxel- and enzalutamide-resistant disease to comprehensively dissect known and novel adaptive/resistant pathways that are responsible for docetaxel and enzalutamide resistance and to explore therapeutic strategies to overcome docetaxel resistance in advanced castration-resistant prostate cancer. The study will utilize deep sequencing to analyze pathways involved in acquired resistance to chemotherapeutic drugs and will validate them for clinical relevance. The proposed studies would have significant impact on the field of study of drug resistance in prostate cancer.

