

UNC Lineberger to offer sequencing expertise to NCI clinical trials networks

Personalized medicine holds great promise for delivering targeted treatments to patients based on their unique genetic characteristics. Through a \$3.5 million, five-year grant from the National Cancer Institute (NCI), UNC Lineberger Comprehensive Cancer Center will provide high-throughput RNA and DNA sequencing and regulatory assistance to partner institutions in the NCI's new National Clinical Trials Network (NCTN).

The grant will capitalize on UNC Lineberger's extensive experience and infrastructure in the molecular sequencing of DNA and RNA. As an Integrated Translational Science Center (ITSC) of the NCTN, UNC Lineberger will further expand its capabilities as one of the world's foremost centers for high volume, regulatory compliant clinical genetic sequencing. UNC Lineberger members Charles Perou, PhD, and Neil Hayes, MD, MPH, will oversee the project.

As a state, North Carolina's national strength in sequencing has developed in part through support from the University Cancer Research Fund (UCRF), established in 2007 by the N.C. General Assembly to support cancer research and clinical care for the citizens of North Carolina. UNC Lineberger's expertise has already made the institution a world-leader in RNA sequencing, with center members playing a key role in The Cancer Genome Atlas, a global effort to completely sequence thousands of tumors of more than a dozen different cancers to determine the genetic causes of the disease. Additionally, UNC Lineberger has developed a large sequencing program (UNCseq) for patient care, allowing physicians to determine the genetic profile of a patient's cancer to guide the best course of treatment. As an ITSC, UNC Lineberger will expand its expertise in patient-based cancer sequencing.

“Through participation in large genomic projects such as The Cancer Genome Atlas and NCGenes, UNC has developed world class expertise in the analysis of cancer genomes and is among the most elite genome centers in this regard,” said Dr. Hayes, co-leader of the UNC Lineberger Clinical Research Program, “Through the current award, we get the opportunity to offer this combined expertise directly to the most promising cancer clinical trials organizations.”

The ITSC will offer support for members of the Alliance for Clinical Trials in Oncology and NRG Oncology clinical trials groups. It will also support investigator-led projects developed internally at UNC Lineberger.

The ITSC grant is one of three additional NCI-funded initiatives at UNC Lineberger that will strengthen clinical trials research.

UNC Lineberger will serve as one of 30 NCI Lead Academic Partner Sites (LAPS) to provide scientific leadership in the development and implementation of clinical trials and, as a member of the Experimental Therapeutics Clinical Trials Network (ETCTN), UNC Lineberger has joined with Duke University and Washington University in Saint Louis in an effort to help speed the drug development process by jointly conducting NCI-sponsored early phase clinical trials.



Neil Hayes, MD, MPH and Charles Perou, PhD