



After a competitive application cycle, GHUCCTS has selected 6 new pilot projects to be funded for 2019-2020. The Pilot Translational and Clinical Studies program (PTCS) has been a critical and effective stimulus for collaboration that has inspired the development and implementation of new clinical and translational research (CTR) projects. The PTCS program is designed to bring about further advances that will improve the process of research throughout our CTSA hub and the national CTSA consortium. These contributions will draw upon a range of GHUCCTS capacities from community-based recruitment of underserved populations to the use of high performance computing in the development of therapeutic agents.

Below are descriptions of the principal investigators and their pilot projects.

Laura Anderko, PhD, RN, is a Robert and Kathleen Scanlon Endowed Chair in Values Based Health Care at the School of Nursing & Health Studies at Georgetown University. Dr. Anderko's study is titled "Community-based air quality monitoring and near source screening: Exploring the association between air quality and chronic school absenteeism in children with asthma." In her study, she will establish an innovative school-based model for collecting air quality data, increase knowledge of school nurses on the association between outdoor air quality, asthma and student absenteeism, and evaluate the reliability and validity of EPA Air Quality Index measurements for the geographical location of the school compared to the school-based measures collected.

Kristin Atkins MD, is the Program Director of the Obstetrics and Gynecology Residency Program at Howard University. In her project "Geospatial analysis of birth outcomes in Washington DC, and associations with environmental and community-based factors," Dr. Atkins seeks to understand how birth outcomes – such as preterm birth and low birth weight - spatiotemporally cluster, and how distance to prenatal care and exposure to environmental- and community-based factors affect how these birth outcomes spatiotemporally occur in Washington, DC.

Preethi Chandran, PhD., is an Assistant Professor at Howard University's College of Engineering. She will be conducting her study, "How environmental factors affect N-glycan shield interactions and therefore virus virulence". The goal of the study is to understand how solutes representative of environmental stress affect the physical properties of a virus glycan shield in relation to their effects on single-sugar monolayers, and the consequences thereof for virus aggregation, stability, and virulence.

Aviram Giladi, MD, is a Research Director at The Curtis National Hand Center in MedStar Union Memorial Hospital and also an Assistant Professor at Johns Hopkins University and Georgetown University. His protocol is titled “Identifying Factors that Predict Opioid Overuse in Hand and Upper Extremity Surgery Patients.” Dr. Giladi will build models that will refine his data repository and will begin informatics-centered work that will help build predictive models around risk of opioid overuse after surgery.

Jim Huang, PhD., is a Senior Health Services Research Scientist at MedStar Health Research Institute and an Adjunct Assistant Professor for University of Maryland and Georgetown University School of Nursing & Health Studies. In his study, “Novel Tools for Individualized Prediction of Progression in Glycemic Control Among Patients with Prediabetes,” Dr. Huang will use clinical, demographic, behavioral, and environmental context information to predict patients' future trends in blood sugar levels. He will also develop a tool to present these trends to clinicians so they can better understand the needs and health of their patients.

Matthew McCoy, Ph.D., is a Research Assistant Professor with the Innovation Center for Biomedical Informatics (ICBI) at Georgetown University. His study is titled “A Machine Learning Model to Predict the Impact of Missense Variation on Inhibitor Binding to Janus Kinase 2.” Dr. McCoy hopes to develop a generalizable methodology to predict the impact of missense variation on binding targeted small molecule therapeutics. He is working on SNP2SIM, a computational workflow to standardize the parametrization and execution of molecular simulations of variant protein structures to enable the high throughput, reproducible generation of simulation results.

Congratulations to our 2019-2020 GHUCCTS Pilot Award recipients!

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