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Albert Einstein College of Medicine

Note: The research projects included in this report are those that were active during the calendar period 2021-2022 and in which a DEPH faculty member played a key role, as indicated parenthetically beside the title of the project.

CHAIRMAN'S INTRODUCTION

I am pleased to introduce this research report, which summarizes work undertaken by members of the Department of Epidemiology and Population Health (DEPH) at Einstein during the 2021-2022 calendar period. (More information about the department is available on our website at epi.montefiore.org). The challenges of COVID notwithstanding, departmental members have demonstrated ingenuity and initiative in order to maintain their productivity. I am grateful to all faculty and staff for their outstanding contributions to the department.

Thomas E. Rohan, MBBS, PhD, DHSc
Professor and Chairman
January 2023

DEPARTMENTAL MISSION STATEMENT

The mission of the Department of Epidemiology and Population Health is to generate and disseminate knowledge, and to inform policy and practice, in order to improve the health of the individual and society.

OFFICE OF THE CHAIRMAN MISSION

The Office of the Chairman is responsible for overall administration of the departmental research and educational programs. The Office also hosts and collaborates on a number of ongoing research projects. Current projects are focused on cohort investigations of the roles of genetic/molecular and environmental factors in the etiology and molecular pathogenesis of various cancers (e.g., breast, colon, endometrium, ovary).

FUNDED RESEARCH

Thomas E. Rohan, MBBS, PhD, DHSc

Molecular Markers of Risk of Subsequent Invasive Breast Cancer in Women with Ductal Carcinoma In Situ (MPI)

NIH/National Cancer Institute; 9/15/17-7/31/23

The goal of this project is to study molecular markers of risk of progression from ductal carcinoma in situ of the breast to invasive breast cancer.

TMEM, MENA^{calc}, and MENA^{INV} as Prognostic Markers for Breast Cancer Metastasis in a Multi-Ethnic Population (PI)

Breast Cancer Research Foundation; 10/1/20-9/30/21; 10/1/21-9/30/22;
10/1/22-9/30/23

The goal of this project is to examine the association between TMEM/MENA^{calc}/MENA^{INV} and risk of distant metastasis in a multi-ethnic cohort of breast cancer patients.

TMEM, Mena^{calc}, and Mena^{INV} as Prognostic and Predictive Markers for Breast Cancer Metastasis (MPI)

NIH/National Cancer Institute; 7/1/20-6/30/25

The major goal of this project is to examine the association of markers of dissemination competent tumor cells (Mena^{calc}/Mena^{INV}) and intravasation (TMEM) with risk of distant metastasis.

DIVISION OF

BIOMEDICAL & BIOETHICS RESEARCH TRAINING

MISSION

The Mission of the Division of Biomedical and Bioethics Research Training is to foster the training of clinical researchers and bioethics practitioner-scholars for the Einstein and Montefiore community, and for the larger community of New York City.

The Division offers a range of educational programs. The Certificate Program in Bioethics and the Medical Humanities, ongoing for nearly thirty years, trains doctors, lawyers, nurses, scientists, social workers, law and medical students and recent college graduates in a year-long introductory bioethics course. The Master of Science in Bioethics offers an innovative program of small seminars, all virtual, and can be completed on a full-time or part-time basis. The program draws students from across the country and Canada. Courses focus on how to provide more just and satisfactory interactions for patients, families, providers and research participants. The Clinical Research Training Program (CRTP), in association with Einstein's Institute for Clinical and Translational Research (supported by the CTS Award), offers both an MS and a PhD in Clinical Investigation, within Einstein's PhD and MD-PhD (MSTP) Graduate Division programs.

PROGRAMS and FUNDED RESEARCH

Tia Powell, MD, Division Head

Tia Powell is Director of the Montefiore Einstein Center for Bioethics and of the Certificate and Master of Science programs in Bioethics. Her scholarship focuses on bioethics issues related to dementia, end of life care, LGBT issues and public health disasters.

Program in Biomedical Ethics (Program Director)

Trachtenberg and Frackman Family Endowment; 7/1/16-open

Dr. Powell is the Trachtenberg Frackman Faculty Scholar, with responsibility for teaching and research in bioethics, organizing an annual lecture at Einstein by a distinguished scholar in the field, and for conducting an annual essay contest for undergraduate students on selected topics in bioethics.

Lauren Flicker, JD, MBE

Lauren Flicker is Associate Director of the Center for Bioethics and of the Einstein Cardozo Master of Science program in Bioethics, and Director of the Certificate Program in Bioethics and Medical Humanities. Her research interests include reproductive ethics, end of life care, and ethics education.

Adira Hulkower, JD, MBE

Adira Hulkower is the chief of the Bioethics Consultation Service for Montefiore Health Systems. She teaches bioethics to medical students, residents, and bioethics students. Her research interests include safe discharge planning, end of life planning for unbefriended patients, and narrative medicine.

Aileen P. McGinn, PhD

Aileen McGinn is the Director of the Clinical Research Training Program (CRTP), an intensive two-year Master's program designed for those pursuing a career in investigator-initiated, hypothesis-driven clinical research. Her research interests include educational research and investigating hormonal, inflammatory, and metabolic influences on risk of cardiovascular disease.

Ellie Schoenbaum, MD

Ellie Schoenbaum was Director of Medical Student Research in the Office of Medical Education until her retirement in September 2021. Her work also focused on grant writing workshops. She initiated the “Reach for the First R01” course and taught grant writing to T32 scholars in the Department of Surgery.

DIVISION OF BIOSTATISTICS

MISSION

Biostatistics is the development and application of quantitative methods to address questions arising in medicine, biology, and public health. The goal of the Division of Biostatistics is to advance knowledge in these fields by using mathematics, statistics, and computational approaches in all stages of research to ensure that scientific evidence is gathered, analyzed, and interpreted in a valid and efficient manner. Methodologic research areas include clinical trials, epidemiologic methods, survival analysis, longitudinal data analysis, machine learning algorithms, frailty models, measurement error, and statistical genetics and genomics. Collaborative research activities include studies in cancer, AIDS, aging, cardiovascular disease, neurology, rheumatology, health behaviors, and environmental health.

PROGRAMS and FUNDED RESEARCH

Mimi Y. Kim, ScD, Division Head

In addition to being Head of the Division of Biostatistics in DEPH, Dr. Kim is Associate Director of the Einstein-Montefiore Institute of Clinical and Translational Research (ICTR), and Director of the ICTR Biostatistics, Epidemiology, and Research Design resource. Dr. Kim’s research interests include clinical trials methodology; effects of misclassification and measurement error; interval-censored survival data, and multivariate survival data. She also collaborates extensively on studies in lupus, pregnancy outcomes, cancer, and other fields.

Clinical and Translational Science Award (MPI)

National Center for Advancing Translational Sciences; 5/1/18-2/28/23

The mission of this award is to enhance clinical and translational research by promoting multidisciplinary collaboration, addressing translational “blocks” in research, providing infrastructure and collaborative support, and enhancing training, education, and career development.

Adverse Pregnancy Outcomes in Women with Systemic Lupus Erythematosus: Improving and Validating Risk Prediction (MPI)

NIH/National Institute of Arthritis, Musculoskeletal and Skin Diseases; 9/1/20-8/31/22

The goal of this project was to develop and externally validate an accurate and clinically useful prediction model for adverse pregnancy outcomes in SLE patients.

TNF-alpha Blockade with Certolizumab to Prevent Pregnancy Complications in High-Risk Patients with APS (Subcontract PI)

NIH/National Institute of Arthritis, Musculoskeletal and Skin Diseases; 8/15/16-8/31/23

This study is conducting the first trial of a biologic therapy to prevent adverse pregnancy outcomes (APOs) in high-risk antiphospholipid antibody syndrome (APS) pregnancies.

Surveillance and Treatment to Prevent Fetal Atrioventricular Block Likely to Occur Quickly (STOP BLOQ) (Subcontract PI)

NIH/National Institute of Arthritis, Musculoskeletal and Skin Diseases; 9/1/20-6/30/25
This study will assess whether the level of anti-Ro/SSA can predict fetuses at greatest risk of atrioventricular block (AVB), if mothers can themselves identify reversible fetal cardiac injury by home monitoring, whether expeditious treatment of fetal incomplete AVB can restore normal rhythm, and if weekly echocardiographic testing is necessary to surveil for AVB.

Jaeun Choi, PhD

Dr. Choi is a biostatistician who collaborates with investigators in the Department of Pediatrics and the Institute of Clinical and Translational Research at Montefiore Medical Center/Albert Einstein College of Medicine. She is also involved in observational preterm-cohort studies at the NIH’s Environmental influences on Child Health Outcomes (ECHO) Program. Her research interests include statistical methods for causal inference, comparative effectiveness research, survival analysis, correlated response and longitudinal data analysis.

Hillel W. Cohen, DrPH, MPH

Dr. Cohen heads the Biostatistics Core for the Clinical Research Center which is part of the Institute for Clinical and Translational Research (ICTR). He provides consultations for Einstein investigators through the Biostatistical Consultative and Services Support Resource of the ICTR, teaches Biostatistics I and II in the Clinical Research Training Program (CRTP), and leads seminars in biostatistics for faculty, residents, fellows and post-docs. In addition, he provides biostatistical support as a collaborating co-investigator on several clinical research grants.

Melissa Fazzari, PhD

Dr. Fazzari collaborates with investigators in the Department of Medicine and the Center for AIDS Research. She also serves as a statistical mentor and course developer for the CRTP and the PhD in Clinical Investigation program. Dr. Fazzari’s statistical research interests include predictive modeling and machine learning methods to identify subgroups in clinical trials.

Qi Gao, PhD

Dr. Gao is a biostatistician collaborating with investigators in various departments, such as Pediatrics, Family and Social Medicine and the Einstein Aging Center. Her main research interests include studying the associations between the aging brain and various risk factors, as well as behavior changes. She is also interested in examining the potential effects of integrative medicine interventions on patients’ outcomes. .

Angel Garcia de la Garza, PhD

Dr. Garcia de la Garza is a biostatistician interested in analyzing high-dimensional structured data. His research interests include dimension reduction methods for functional data analysis and machine learning to analyze large-scale epidemiological surveys. He currently works on Einstein’s Study of Aging (EAS).

Charles B. Hall, PhD

Incidence, Latency, and Survival of Cancer following World Trade Center Exposure (MPI)

National Institute of Occupational Safety and Health/CDC; 9/1/16-8/31/22

Combining follow-up from all three cohorts of World Trade Center (WTC) rescue/recovery workers, this study updated estimates of the effect of WTC-exposure on cancer

incidence, studied in detail the latency period between exposure and cancer incidence, and studied the effect of WTC-exposure and other prognostic factors on survival after cancer diagnosis in this population.

Mortality Among World Trade Center Rescue/Recovery Workers (MPI)

National Institute for Occupational Safety and Health/CDC; 7/1/17-6/30/23

Preliminary analyses based on comparisons with the general population showed reduced mortality among WTC rescue and recovery workers, which may be due to selection of healthy workers into the cohorts. In this study, we plan to perform a number of analyses of a combined database comprising three WTC cohorts to address the possible 'healthy worker effect' and to investigate whether there is any indication of a possible effect of WTC exposure on mortality of these workers.

Treatment Response of WTC Related Airway Injury (Subcontract PI)

National Institute of Occupational Safety and Health/CDC; 7/1/19-6/30/22

Exposure to dust and smoke at the WTC collapse site has caused ongoing loss of lung function and reduced quality of life. The effectiveness of medications in treating accelerated decline in lung function is unclear. This grant defined how effective current treatments are, information essential to direct future therapy.

Cognition and Neuropathology in World Trade Center-Exposed FDNY, NYPD, and Construction Worker Responders (MPI)

National Institute of Occupational Safety and Health/CDC; 7/1/21-6/30/26

This study will examine cognitive symptoms, blood-based biomarkers, and Beta-Amyloid and Tau burden using positron emission tomography (PET) combined with magnetic resonance neuroimaging (MRI) in a group of FDNY responders exposed to the dust and smoke at the World Trade Center collapse site.

Air Pollution and Cognitive Function (Project Leader)

National Institute of Aging/NIH; 4/1/22-3/31/27

This study will collect person-level data on exposure to fine particulate matter (PM1, PM2.5) air pollution in a cohort of healthy elderly volunteers in Bronx County, NY. Those data will be used to study the effects of this pollution on cognition and risk for Alzheimer's Disease and Related Dementias (ADRD), biomarkers of AD/ADRD, and social determinants of health.

Ryung S. Kim, PhD

Patients Receiving Integrative Medicine Effectiveness Registry

(PRIMIER) (Subcontract PI)

Bravewell Collaborative; 7/1/22-6/30/23

The major goals of this project are to help to launch PRIMIER (Patients Receiving Integrative Medicine Interventions Effectiveness Registry), and use the data to conduct innovative research by comparing the impact of various integrative therapies on patient-reported and clinical outcomes.

Prognostic Factors of Type 2 Diabetes Among Patients with Gestational Diabetes Mellitus (MPI)

NY-CDTR; 11/1/22-10/31/24

We aim 1) to construct a de-identified electronic cohort of GDM from three data sources: EMR in Montefiore Health System, EMR in Mount Sinai, and HCHS/SOL cohort, and to test the association between key predictors and T2D incidence among patients with GDM, 2) to build a prognostic model for T2D incidence among patients with GDM by machine learning, and 3) test whether race/ethnicity and social determinants such as health insurance and preferred language modify the association between the key factors

and the T2D incidence among patients with GDM.

Juan Lin, PhD

Dr. Lin is a biostatistician who collaborates with Albert Einstein Cancer Center investigators and provides statistical support for medical students' research projects. Her research interests are in high dimensional data analysis and in HIV-related cardiovascular disease epidemiology.

Yungtai Lo, PhD

Dr. Lo collaborates with investigators in the Departments of Orthopedics, Pathology, and Rehabilitation Medicine on the design and analysis of clinical trials and epidemiologic studies. His methodological research interests focus on developing methods for determining the number of components in mixture models, applications of mixture models in biomedical research, and two-part models for longitudinal semi-continuous data.

Jee-Young Moon, PhD

Host Genetics and Gut Microbiome (PI)

BioData Catalyst Fellowship; 3/1/21-8/30/22

The major goal of this project was to identify the gut microbial features regulated by host genetics and further examine the circulating metabolites downstream of this regulation, using whole genome sequencing (WGS), fecal metagenomics, and blood metabolomics data.

Wenzhu Mowrey, PhD

Dr. Mowrey collaborates on projects in the areas of radiology, psychiatry, neurology, neurosurgery, neuroscience, rheumatology, allergy/immunology and nephrology. Her statistical methodology interests include analysis of neuroimaging data from all modalities (PET, MRI, fMRI, DTI, EEG, MEG and optical imaging), sparse clustering, dimension reduction of high dimensional data, and survival and longitudinal data analysis.

Abdissa Negassa, PhD

Comparative Effectiveness of Biologic Agents in Ethnic Minorities with Colorectal Cancer (MPI)

NIH/National Institute of Aging; 6/1/18-5/31/21

This study sought to determine whether the beneficial effect of the addition of biologic agents in the management of metastatic colorectal cancer was limited to the Caucasian patient population. This study also expanded the cohort of Hispanic patients by including hospitals in Bronx County and, combined with the SEER database, derived a more precise effect estimate of biologic agent use in the Hispanic patient population.

Kith Pradhan, PhD

Collaboratory for Atlasing Cell Type Anatomy in the Female and Male Mouse Brain (Subcontract PI)

NIH/National Institute of Mental Health; 9/20/17-5/31/22

The work yielded a comprehensive characterization of single cell anatomy for over 80 selected cell types across the entire female and male mouse brain. Furthermore, all microscopy and computational methods were made freely available to the neuroscience community and established "how-to" manuals to facilitate their use.

Shankar Viswanathan, DrPH

Dr. Viswanathan collaborates with investigators in the Department of Radiation Oncology and in the Albert Einstein Cancer Center. Dr. Viswanathan's research interests include multivariate survival analysis, longitudinal data analysis, methods for analyzing

missing data, and agreement statistics. His applied areas of interest are obesity, injury epidemiology and infectious disease epidemiology.

Cuiling Wang, PhD

Correction of Bias in Estimating Risk of Alzheimer's Disease and Cognitive and Mobile Decline Using Auxiliary Information (PI)

NIH/National Institute of Aging; 9/15/17-5/31/21

The goal of this project was to examine how various auxiliary data can help reduce bias in the estimation of risk of disease and change in longitudinal outcomes from non-random missing data through extensive simulation studies, followed by application to the incidence of Alzheimer's disease and the decline of cognitive and mobile performance in aging cohorts.

Statistical Core, The Einstein Aging Study (Core Director)

NIH/National Institute of Aging; 12/1/21-11/30/26

The Einstein Aging Study is a prospective cohort study of community dwelling elderly individuals in the Bronx, NY. The Statistical Core is responsible for the statistical analyses and related methodological development for all cores and projects of the program project grant.

Tao Wang, MD, PhD

Statistical Analysis of Large Genomic Data Sets (Site PI)

NIH/National Human Genome Research Institute; 5/8/20-2/29/24

The goal of this study is to develop novel statistical methods and software tools for analyzing multiple correlated traits using existing summary statistics to address the causal relationships among complex traits, for prioritizing genetic variants sensitive to interaction effects, for estimating the overall contribution of interactions to a phenotype, and for detecting rare genetic variants from whole genome sequencing data..

Xianhong Xie, PhD

Dr. Xie is a biostatistician who works on the Women's Interagency HIV Study (WIHS). His research interests include methods for analyzing longitudinal data with missing values and measurement errors, survival analysis, image data analysis, and nonparametric smoothing splines.

Xiaonan Xue, PhD

Dr. Xue is the Director of the Biostatistics Shared Resource of the Montefiore Einstein Cancer Center and is a member of the Institute for Clinical and Translational Research. She collaborates on epidemiologic and clinical studies of cancer, cardiovascular disease, and infectious disease. Dr. Xue's methodologic research interests include survival analysis, longitudinal studies, and cancer screening and the analysis of health data obtained from electronic devices.

Kenny Ye, PhD

Structure and Function of Neonatal Social Communication in Genetic Mouse Models of Autism (Subcontract PI)

NIH/National Institute on Deafness and Other Communication Disorders; 8/1/20-7/31/23

The goals of this project are to: determine if CNVs result in atypical vocalization structure during the neonatal period and if they are correlated with autism spectrum disorder (ASD)-like behaviors; determine the impact of atypical neonatal vocalization on maternal care; and measure the effect of altered maternal care on the severity of ASD-like behaviors and CNV gene expression and epigenetic modification.

Genetic Contribution of Autism (Subcontract PI)

Simons Foundation; 1/1/20-12/31/22

The major goal of this project was to identify the genes involved in autism using sequencing technology and to model the genetic causes of autism.

Predicting the Developmental Trajectories of Cognitive and Motor Dimensions from Preterm Neonatal Vocalizations (Subcontract PI)

NIH/National Institute of Child Health and Human Development; 7/1/21-6/30/23

The goal is to establish a predictive model using neonatal vocalization as predictors for various social and motor behaviors.

DIVISION OF EPIDEMIOLOGY

MISSION

The broad aims of the Division of Epidemiology in the Department of Epidemiology & Population Health are to conduct studies in human populations to determine the burden of disease, the behavioral/environmental and molecular etiologic risk factors that underlie disease development and outcomes, as well as actionable targets for screening, prevention, and treatment, and the effectiveness of these interventions..

PROGRAMS and FUNDED RESEARCH

Howard D. Strickler, MD, MPH, Division Head

Next Generation of HPV and Cervical Cancer in HIV+ Women (MPI)

NIH/National Cancer Institute; 7/11/18-6/30/23

This study will use recently developed next generation sequencing assays to study for the first time in HIV(+) women: the natural history and role of HPV reactivation in cervical disease, the effects of HPV DNA methylation on precancer risk, and the impact of the cervicovaginal microbiome on risk of HPV infection and its persistence.

Beta-/Gamma-HPV and Their Relation with Cervical Precancer in HIV+ Women (PI)

NIH/National Cancer Institute; 7/1/20-6/30/22

This study examined β -/ γ -HPV natural history and its relation with cervical precancer/cancer in the Women's Interagency HIV Study (WIHS).

Investigations into The Molecular Pathogenesis of Cervical Glandular Neoplasias (MPI)

NIH/National Cancer Institute; 7/2/20-6/30/25

This study will determine the natural history of cervical HPV and adenocarcinoma (ADENO) precursors (i.e., samples prior to the diagnosis of ADENO and from adenocarcinoma in situ (AIS)) with the goal of defining molecular precursors of ADENO.

Ibir Agalliu, MD, ScD

Genetics of Prostate Cancer in Africa (Subcontract PI)

NIH/National Cancer Institute; 9/7/15-8/31/21

The goal of this study was to undertake genetic association studies of prostate cancer etiology and aggressiveness as well as evaluate African ancestral relationships in five regions in Africa.

Associations of BRCA1/2 Mutations and Genetic Variations with Prostate Cancer Risk and Mortality in Men of Ashkenazim Descent (MPI)

Albert Einstein Cancer Center; 7/1/22-6/30/24

The goal of this study is to further examine the contribution and performance of rare *BRCA1/BRCA2* variants vs. common genetic variants (SNPs) generated through next-generation sequencing in predicting risks of overall prostate cancer and aggressive disease, as well as risks of all-cause and cancer-specific mortality among men of Ashkenazi descent.

Perfluoroalkyl Substances (PFAS) and Liver Cancer Risk in the United States (Site PI)

NIH/National Cancer Institute; 7/1/22-6/30/26

The goal of this study is to comprehensively examine the associations between serum circulating levels of PFAS and liver cancer risk in a pooled nested case-control study in the NCI cohort consortium and the Hispanic Community Health Study (HCHS/SOL) cohort.

Peter T. Campbell, PhD

Case GI SPORE (Subcontract PI)

NIH/National Cancer Institute; 8/1/21-7/31/22

The goal of this study was to understand the relationship between aspirin use and expression of proteins related to prostaglandin metabolism and related processes on colorectal cancer risk.

David B. Hanna, PhD, MHS

Prediction of Heart Failure in HIV-Infected Individuals (PI)

NIH/National Heart, Lung, and Blood Institute; 4/1/17-12/31/21

The goal of this project was to characterize the role of HIV infection in heart failure with preserved ejection fraction and heart failure with reduced ejection fraction in the modern antiretroviral therapy era, among patients receiving care in the Montefiore Health System.

Machine Learning-Based Profiles of Atherosclerosis to Predict Disease Outcomes in Older HIV-Infected Women and Men (PI)

NIH/National Institute on Aging; 8/1/18-4/30/22

The goal of this project was to use machine learning methods to identify HIV-specific phenotypes of atherosclerosis and their association with clinical and functional disease outcomes, including traditional geriatric outcomes, among men and women in the MACS-WIHS Combined Cohort Study (MWCCS).

Arterial Stiffness, Brain Morphology, Cognition, and Dementia in U.S. Hispanics/Latinos (Subcontract PI)

NIH/National Institute on Aging; 2/15/19-11/30/22

This study examined the relationship of stiffening of the arteries and damage to small vessels in the brain, reduced cognitive function, mild cognitive impairment, and Alzheimer's disease-associated dementias in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL).

Clinical Research Sites for the MACS/WIHS Combined Cohort Study (MACS/WIHS-CCS) (MPI)

NIH/National Heart, Lung, and Blood Institute; 3/1/19-3/31/26

This project follows our large numbers of well-characterized women previously enrolled in the Bronx Women's Interagency HIV Study, as well as newly recruited men and women with or at-risk for HIV, allowing us to investigate the impact of age, sex, race/ethnicity, and health disparities on HIV-related comorbidities and HIV disease progression across the lifespan.

Collaborative Data Science to Address Social and Structural Determinants of Health in PLWH (MPI)

NIH/National Institute of Allergy and Infectious Diseases; 9/1/22-4/30/23

Our project partnership with two community organizations will use cognitive interviewing and machine learning methods to improve our understanding of the relationship of social and structural determinants of health with health outcomes in people living with HIV.

Sex Differences in the Role of Multi-Omics in HIV-Associated Carotid Artery Atherosclerosis (MPI)

NIH/National Heart, Lung, and Blood Institute; 8/1/22-4/30/23

Our study will integrate human gut microbiome data, metabolomics, proteomics, and sex hormone levels to advance our knowledge of the etiology of atherosclerosis in women and men living with HIV in the MACS-WIHS Combined Cohort Study (MWCCS).

Dean Hosgood, III, PhD, MPH

Assessing the Relative and Absolute Risk for Site-Specific Cancer Mortality Attributed to Household Air Pollution (PI)

NIH/National Cancer Institute; 9/1/20-8/31/23

The major goal of this project is to study pivotal questions relating to the adverse health effects of household air pollution (HAP), including (1) if biomass (i.e., wood) use is associated with lung cancer mortality, and (2) if HAP is associated with increased risk of cancers other than lung cancer. Using 13 cohort studies for a combined sample size of >550,000 subjects, we will be the first to prospectively evaluate cancer site-specific mortality and HAP.

Data management for InterLymph (PI)

NIH/National Cancer Institute; 4/27/20-4/26/21

The major goal of this project was to support ongoing research within InterLymph.

Information Technology Support to Extract Interview Tablets and Servers in a Multi-Center Hospital-Based Case-Control Study of AsiaLymph (PI)

NIH/National Cancer Institute; 9/25/20-9/24/21

The major goal of this project was to support an ongoing study of hematopoietic malignancies in Asia.

Tablet-based Mobile Health Ultrasound for Point-of-Care Breast Cancer Diagnosis in Nigeria (Subcontract PI)

NIH/National Cancer Institute; 7/1/19-6/30/21

The goal of this study was to develop and validate a competency-based mobile health ultrasound-guided breast biopsy-training program for radiologists in low- and middle-income countries.

Point of Care, Real Time Urine Metabolomics Test to Diagnose Colorectal Cancers and Polyps in Low- and Middle-Income Countries (Subcontract PI)

NIH/National Cancer Institute; 5/1/20-6/30/23

The research, development, and validation of a urine metabolomic test to diagnose colorectal cancer and polyps in high-risk patients such as those with bloody stools, first degree relatives of those diagnosed with colorectal cancer, and colorectal cancer survivors.

Core Support for Cancer Center (Program Co-Leader)

NIH/National Cancer Institute; 7/1/19-6/30/23

The goal of the Center is to foster basic, clinical, population-based and translation research that addresses all aspects of the cancer problem.

Outdoor Air Pollution and Non-Small Cell Cancer (NSCLC) in the Bronx (PI)

Montefiore Einstein Cancer Center Pilot Project Award; 9/15/22-8/31/23

The major goal of this project is (1) to study the relationship between the outdoor air pollution (OAP) exposures and progression-free and overall survival among NSCLC patients in the Bronx and (2) generate a novel murine model to provide mechanistic insights between OAP exposure and NSCLC.

Expanding Cancer Research Capacity in Nigeria with Team Science (Subcontract PI)

NIH/National Cancer Institute; 3/1/22-2/28/27

The major goals of this project are to establish an international research training program aimed at creating a cohort of highly skilled Nigerian investigators able to lead independent oncology research programs, foster team science, bolster research administration capacity in Nigeria, and create long-term research partnerships between Nigerian and US cancer researchers.

Robert C. Kaplan, PhD

Hispanic Community Health Study – Study of Latinos (Bronx Field Center) (PI)

NIH/National Heart, Lung, and Blood Institute; 6/1/14-11/30/25

The scientific aims of the renewal of the HCHS-SOL are to: 1) identify putative causes for diseases and conditions highly prevalent in Hispanics (e.g., diabetes, left ventricular hypertrophy, and gestational diabetes mellitus), 2) describe the transformation of health-related risk and protective factors related to migration, acculturation, and length of time living in the US, and 3) assess the impact of changes in socioeconomic factors, cultural values, risk behaviors, and medical care access on health in Hispanics.

Immunophenotyping for Precision Medicine for Cardiovascular Disease in People Living with HIV (MPI)

NIH/National Heart, Lung, and Blood Institute; 8/1/19-7/31/23

The overarching goal of this proposal is to understand the genetic and molecular programs that link inflammation, abnormal response to lipids, and disordered coagulation to cause HIV-related CVD. By identifying genetic pathways that intersect two or all three of these mechanistic factors, we will identify evidence-based targets for precision use of existing drugs and for development of new drugs.

Peripheral Artery Disease Study of SOL (PASOS) (MPI)

NIH/National Heart, Lung, and Blood Institute; 8/1/19-7/31/24

This study will examine the relationship among physical activity, movement patterns and peripheral artery disease/PAD among Hispanic adults. The results will attempt to clarify the most effective population-based screening approaches for identifying individuals with PAD.

Epidemiology of the Gut Microbiome, Prediabetes and Diabetes in Latinos (MPI)

NIH/National Institute on Minority Health and Health Disparities; 7/8/16-2/28/23

This proposal will examine the determinants and outcomes of gut microbiome alterations among Hispanic/Latino adults participating in HCHS-SOL. The overarching hypothesis is that the makeup of the gut microbiome contributes to elevated risk of diabetes mellitus among Hispanics.

Community-Based Evaluation of Sudden Cardiac Death in Hispanics/Latinos (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute; 7/1/19-6/30/24

Incorporating data from the HCHS-SOL cohort along with other Hispanic and non-Hispanic participants from other study sites will allow development of methods for

improved sudden cardiac arrest (SCA) prediction and prevention.

Collaborative Cohort of Cohorts for COVID-19 Research (C4R) (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute; 10/1/20-5/31/22

C4R leveraged longitudinal data and deep phenotyping in fifteen US prospective cohort studies to ascertain all cases of COVID-19 infection, to evaluate risk factors for infection, and to track the prognosis of both those with and those without infection.

Cardiometabolic Outcomes in Multi-Ethnic Physical Activity & Sedentary Behavior Study (COMPASS) (MPI)

NIH/National Heart, Lung, and Blood Institute; 12/15/16-11/30/22

This study was conducted in HCHS-SOL and the Framingham Heart Study (FHS) Third Generation and Omni Gen 2 (FHS Gen3/Omni2) cohorts. The principal aims of the study were to: 1) identify physical activity and sedentary behavior patterns associated with conversion to diabetes over up to 12 years in 18 to 80 years old individuals by adding a second accelerometry measure to HCHS/SOL.; 2) identify the relationship of moderate-vigorous physical activity, light physical activity and sedentary behavior with incident cardiovascular events and mortality, in order to define the magnitude of risks and dose-response for duration, intensity and bout length; 3) investigate demographic and psychosocial correlates associated with 6+ year changes in patterns of physical activity and sedentary behavior in Hispanics/Latinos and non-Hispanics/Latinos with pre-diabetes.

Role of IL-32 as a Predictor and Mediator of Premature Aging Phenotypes in HIV Infection (Subcontract PI)

NIH/National Institute on Aging; 4/1/22-3/31/27

The objective of this proposal is to study the potential impact of IL-32 on bone health and frailty, which may establish a link between HIV-mediated inflammation and premature aging of organs other than those involved in the immune response.

Integrated Analysis of CVD Risk in HIV: Gut Microbiota, Immune Function and Metabolites (PI)

NIH/National Heart, Lung, and Blood Institute; 1/15/18-12/31/21

This study focused on the contributions of gut microbiota to host inflammation and immune activation and metabolomics profiles which are closely involved in the development of cardiovascular disease.

Trans-omics Analysis to Unravel Molecular Underpinnings of Heart, Lung and Blood Disorders (PI)

NIH/National Heart, Lung, and Blood Institute; 5/1/18-4/30/25

This project leverages resources from HCHS-SOL and other cohorts, including existing whole genome sequencing (WGS) data, metabolomics profiles, multiple disease and biometric traits, and multi-ethnic populations. The aim is to integrate genetic, metabolomic, epigenetic, phenotypic, and other data to understand the etiology of heart and vascular diseases.

CHARGE Consortium: Gene Discovery for CVD and Aging Phenotypes (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute; 7/1/18-6/30/26

This study provides support for collaboration of the HCHS-SOL cohort with the CHARGE consortium. Expertise is provided on the design of the SOL genotype and phenotype data resources, and the project fosters participation of the SOL group in writing and analyzing data for CHARGE consortium publications.

Cognitive Aging, Brain Morphology, and Arrhythmias in Hispanics/Latinos: Implications for Prevention and Management of Alzheimer's Disease-Related Dementias (*Subcontract PI*)

NIH/National Institute of Neurological Disorders and Stroke; 4/1/22-3/31/27

This grant seeks to define the prevalence and neurocognitive impact of arrhythmias, and identify factors that may mitigate the neurocognitive impact of arrhythmias in community-dwelling Hispanic/Latino middle-aged and older adults.

Erin Lewis, MD, MPH

Dr. Lewis' interests focus on clinical translational investigations - primarily in the fields of trauma and critical care surgery - with studies in observational, outcomes, comparative effectiveness and injury prevention research intersecting with systems biology approaches to genome/phenome interactions.

Kara Michels, PhD, MPH

Dr. Michels is a molecular epidemiologist who studies women's health. Much of her research centers on the etiology of endometrial and ovarian cancers. She is particularly interested in characterizing cancer risks and metabolic changes associated with hormonal and microbial exposures.

Brandilyn A. Peters-Samuelson, PhD

The Lung Microbiome, Peripheral Immunity, and Lung Cancer Recurrence (*PI*)

AACR-AstraZeneca Immuno-oncology Research Fellowships; 7/1/19-6/30/21

The overall objective of this project was to relate the lung microbiome to recurrence-free survival and peripheral immune gene expression in non-small cell lung cancer patients, and to identify lung bacterial biomarkers which can improve the performance of a lung cancer recurrence prediction model.

Menopause and Hormonal Influences on the Gut Microbiome for CVD Risk in HIV (*PI*)

NIH/National Heart, Lung, and Blood Institute; 9/15/21-8/30/25

This study will investigate longitudinal changes in the gut microbiome by menopausal status in women with and without HIV; examine relationships of sex steroid hormones with the gut microbiome and soluble CD14 (sCD14), a biomarker of microbial translocation; and examine the associations of menopause- and sex hormone-related gut microbiome/microbial translocation features and subclinical CVD.

Qibin Qi, PhD

Integrated Analysis of CVD in HIV: Gut Microbiota, Immune Function and Metabolites (*MPI*)

NIH/National Heart, Lung, and Blood Institute; 1/15/18-12/31/22

The goal of this study was to examine the contributions of the gut microbiota to host immune activation and metabolomics profiles, and the implications for cardiovascular disease (CVD) among HIV-infected individuals.

Dietary Patterns and Risk of Cardiovascular Disease (*MPI*)

NIH/National Heart, Lung, and Blood Institute; 4/1/18-3/31/23

The goal of this study is to evaluate three different dietary patterns and their relationships with CVD in diverse US populations, with particular focus on racial/ethnic differences.

Metabolic Signatures Underlying Cardiac Function for Heart Failure in Multi-Ethnic Populations (*Subcontract PI*)

NIH/National Heart, Lung, and Blood Institute; 4/1/18-3/31/23

The goal of this study is to perform comprehensive metabolomics profiling to identify

metabolic signatures of cardiac function and heart failure in diverse populations of European Americans, African Americans, and US Hispanics.

Food-Based Biomarkers, Diet Quality, and Cardiometabolic Health (*Subcontract PI*)

NIH/National Institute of Diabetes and Digestive and Kidney Diseases; 4/1/19-3/31/24

The goal of this project is to identify and validate novel urinary biomarkers for dietary intake using metabolomics approaches. This project will examine the association between newly identified food biomarkers and CVD risk.

Metabolomics Signatures Underlying Diet, Lifestyle and Gut Microbiota for Diabetes (*PI*)

NIH/National Institute of Diabetes and Digestive and Kidney Diseases; 3/26/19-2/28/23

The goal of this project is to identify metabolomic signatures for type 2 diabetes and examine how diet, lifestyle and gut microbiota influence the signatures.

Human Gut Microbiome and Incident Diabetes Risk in U.S. Populations (*MPI*)

NIH/National Institute of Diabetes and Digestive and Kidney Diseases; 1/19/21-12/31/24

The goal of this project is to examine the prospective associations between human gut microbiome and incident diabetes in diverse US populations including Hispanics and other non-Hispanic populations.

Human Dietary Etiologies of Heart Disease (*Subcontract PI*)

NIH/National Heart, Lung, and Blood Institute; 9/1/21-6/30/25

The goal of this project is to examine the relationship between microbial translocation biomarkers and risk of coronary heart disease in US Hispanic and non-Hispanic populations.

Leveraging Omics Data to Understand Sleep Health and its Consequences Among Diverse Hispanics/Latinos (*Subcontract PI*)

NIH/National Heart, Lung, and Blood Institute; 7/1/22-6/30/27

The goal of this project is to characterize the biological mechanism underlying the relationship between sleep and incident cardiometabolic and neurocognitive outcomes using a comprehensive dataset of diverse Hispanic/Latino populations.

Zheng Wang, PhD

Dr. Wang's research focuses on human microbiome and the functional components associated with microbiota-metabolites-host interactions. His current research interests include the gut microbiome, microbial genomics, integrative omics such as metagenomics, metabolomics and proteomics, in relation to human chronic diseases including cardiovascular diseases, obesity, diabetes, and HIV infection.

Sylvia Wassertheil-Smoller, PhD, FAHA

Hispanic Community Health Study – Study of Latinos (Bronx Field Center) (*Co-PI*)

NIH/National Heart, Lung, and Blood Institute; 6/1/14-11/30/25

The scientific aims of the renewal of the HCHS-SOL are to: 1) identify putative causes and protective factors for diseases and conditions highly prevalent in Hispanics (e.g., diabetes, left ventricular hypertrophy, and gestational diabetes mellitus), 2) describe the transformation of health-related risk and protective factors related to migration, acculturation, and length of time living in the US, and 3) assess the impact of changes in socioeconomic factors, cultural values, risk behaviors, and medical care access on health in Hispanics.

Women's Health Initiative (WHI) Extension 3 and 4: 2015-2020, 2020-2027
The Women's Health Initiative Regional Field Center Program (WHI) (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute – University of Buffalo; 10/1/15-9/30/27
WHI, initiated in 1993, consists of a set of multi-center Clinical Trials and an Observational Study to address the health problems of post-menopausal women. This extension study continues follow-up of the WHI cohort and serves as the infrastructure for multiple ancillary studies, especially including the WHI-Long Life Study, which focuses on research in aging, cognition, cardiovascular disease and cancer in older women.

Mayris P. Webber, DrPH, MPH

Maintenance and Extension of a Cohort of Career Firefighters as a Non-WTC Exposed Comparison for the FDNY Firefighter Cohort (PI)

National Institute of Occupational Safety and Health/CDC; 9/1/16-8/31/23

This project seeks to address the James L. Zadroga 9/11 Health & Compensation Act research mandate to answer critical questions about physical and mental health conditions in FDNY firefighters related to the World Trade Center (WTC) terrorist attacks by establishing a comparison cohort of firefighters who did not respond to the WTC attacks.

Rachel Zeig-Owens, DrPH, MPH

Detection and Incidence of Thyroid Cancer among Three Cohorts of WTC-Exposed Rescue and Recovery Workers (PI)

National Institute of Occupational Safety and Health/CDC; 7/1/18-6/30/21

This project investigated the method of detection of thyroid cancer among World Trade Center (WTC) exposed rescue/recovery workers and a non-WTC-exposed reference population to determine the rate of thyroid cancer cases diagnosed incidentally and identified reasons for the elevated risk of thyroid cancer among WTC-exposed populations.

Myeloma Precursor Disease Among WTC Responders (MPI)

National Institute of Occupational Safety and Health/CDC; 7/1/20-6/30/23

This project is investigating the association between WTC exposure and precursor disease for multiple myeloma and monoclonal gammopathy of undetermined significance (MGUS) among WTC Health Program rescue/recovery workers.

Early Detection of Clonal Hematopoiesis and Leukemia Associated Mutations in WTC Exposed Firefighters after the 9/11 Attacks (MPI)

National Institute of Occupational Safety and Health/CDC; 7/1/21-6/30/24

This project aims to detect mutations associated with early signs of clonal hematopoiesis and blood cancers in samples from first responder firefighters who were exposed to the WTC dust after the 9/11 terrorist attack.

DIVISION OF
HEALTH BEHAVIOR RESEARCH &
IMPLEMENTATION SCIENCE
MISSION

Individual behaviors, lifestyle, socioeconomic status, environment, policy, and other social-ecological factors play critical roles in disease prevention and control. Access to evidence-based interventions and high-quality health information and care can provide a foundation for eliminating health disparities. Our mission is to:

- 1. Advance understanding of behavioral, socio-economic, nutritional, and environmental factors, as well as policies that affect physical health and psychosocial well-being.**
- 2. Increase dissemination and implementation of effective community-engaged approaches for improving care at the local and global level, with emphasis on promoting health equity.**

PROGRAMS and FUNDED RESEARCH

Adebola A. Adedimeji, PhD, MPH, MBA, Division Head

Dr. Adedimeji's research interests are in behavioral epidemiology, social determinants of health, implementation science and health equity. He maintains programmatic interest in optimizing the delivery of healthcare through intervention development, community collaboration and monitoring and evaluation of health interventions among vulnerable and marginalized populations. He contributes to collaborative research such as the Central Africa International Epidemiologic Database to Evaluate AIDS, the Einstein-Rwanda-DR Congo HIV/HPV Malignancies Research Consortium, the Combined Cohort Study of MACS/WHIS, Cancer Prevention and various training and capacity building programs in different countries in sub-Saharan Africa, North America, and Western Europe.

Einstein/Rwanda/DRC Consortium for Research in HIV/HPV/Malignancies (MPI)
NIH/National Cancer Institute; 9/1/20-8/31/25

HPV-associated cancers are significant causes of morbidity and mortality and are not decreasing with the use of antiretroviral therapy, as has been seen with other HIV-associated malignancies. As WHO strives to eliminate cervical cancer globally, and African nations reach out to MSM populations to engage them in care, developing a regional hub for translational research in HPV/HIV-associated cancers in Rwanda and DRC will be a key resource in understanding how to mitigate the impact of HIV and HPV on the health of Africans.

Carmen R. Isasi, MD, PhD

Hispanic Community Health Study – Study of Latinos (Bronx Field Center) (Co-PI)

NIH/National Heart, Lung, and Blood Institute; 6/1/14-11/30/25

The goals of the renewal of the HCHS-SOL are to continue to follow a cohort of 16,000+ Hispanic adults, aged 18-74, participating in a prospective observational study of cardiovascular disease (CVD), respiratory diseases and other chronic conditions.

MRI Measures of Cerebrovascular Injury and Alzheimer's Disease Atrophy in a Study of Latinos (Subcontract PI)

NIH/National Institute of Aging; 7/15/17-6/30/22

By leveraging the HCHS-SOL cohort, this study examined the impact of disparities in vascular risk factors on brain health utilizing cutting edge MRI techniques.

New York Regional Center for Diabetes Translation Research (Associate Director); Life Course Methodology Core (LCMC) (Core Director); Latino Network for Diabetes Translation Research (Core Co-Director)

NIH/National Institute of Diabetes and Digestive and Kidney Diseases; 9/20/16-7/31/26

The center includes 4 cores (Translation core, Life course core, Population Health Core, and Latino national network) to support new diabetes prevention and control research. The LCMC goals are to support new methodologies for the translation of diabetes prevention interventions across the life span.

Preconceptional Health of Latinas and its Association with Child Adiposity (Subcontract PI)

NIH/National Institute of Diabetes and Digestive and Kidney Diseases; 9/18/18-6/30/23

This study will identify preconception and other maternal factors that predict obesity in early childhood in a sample of Latino mother/child dyads.

Social Stress, Epigenetics and Cardio-Metabolic Health Among Latinos (Subcontract PI)

NIH/National Institute of Minority and Health Disparities; 5/3/19-12/31/23

This project will examine the association between social stress across the life course and DNA methylation. Findings from this project will allow us to elucidate important epigenetic pathways that may help explain how stress and resilience influence cardiovascular disease risk.

Social Stress, Epigenetics and Cardiometabolic Health Among Latino Youth (MPI)

NIH/National Institute of Minority and Health Disparities; 5/17/21-2/28/26

Completion of this project will allow us to elucidate the impact that social and economic stressors have on epigenetic and cardiometabolic markers that may help explain how stress shapes persistent population health disparities among young Latino populations.

Non-Alcoholic Fatty Liver Disease and Cardiovascular Disease in Hispanics/Latinos. (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute; 9/1/19-8/31/23

This study will evaluate environmental and/or genetic influences of non-alcoholic fatty liver disease and CVD, assess their interrelationship, and provide information to improve the heart and liver health of this vulnerable population.

Cardiovascular Health of HCHS/SOL Sexual and Gender Minorities in the Hispanic Community Health Study/Study of Latinos (SGM HCHS/SOL) (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute; 3/4/20-2/28/25

The goal of this study is to examine relationships between sexual/gender minority stress, coping, social support, and heart disease, a leading cause of morbidity and mortality among Hispanic/Latinos in the U.S.

Comparing Patient-Reported Impact of COVID-19 Shelter-in-Place Policies and Access to Containment and Mitigation Strategies, Overall and in Vulnerable Populations (Site PI)

Patient-Centered Outcomes Research Institute (PCORI); 10/1/20-9/30/22

This project compared the impact of policy maker COVID-19 shelter-in-place decisions in different states, counties, and health systems across the US, and focused particularly on the impact in communities that are most vulnerable.

Nasal Epithelial Epigenomics and Transcriptomics and Asthma in Hispanic Adults (MPI)

NIH/National Heart, Lung, and Blood Institute; 6/1/21-5/31/26

This proposal will address an important, yet unstudied, aspect of asthma “omics”: the identification of epigenomic and transcriptomic markers and/or determinants of asthma outcomes among adults in two Hispanic subgroups at intermediate to high risk of asthma (Dominicans and Puerto Ricans).

Early and Life Course Socioeconomic Adversity and Dementia Risk in Hispanic/Latinos (PI)

NIH/National Institute on Aging; 7/1/22-6/30/26

The goals of the study are to understand how early and sustained adverse socio-economic conditions shape risk of Alzheimer's disease and related dementias (ADRSs) in a cohort of Hispanics/Latinos adults. We will learn about the most influential factors for ADRDs risk in a population in whom the traditional genetic and educational attainment factors do not predict ADRDs risk well.

Study of Latinos-Investigation of Neurocognitive Aging-Alzheimer's Disease (Subcontract PI)

NIH/National Institute on Aging; 5/15/22-4/30/27

The Study of Latinos-Investigation of Neurocognitive Aging (SOL-INCA) is the only large, representative, and ongoing longitudinal study of CVD, genomics and cognitive aging and ADRD in diverse Latinos. In this SOL-INCA renewal, we will leverage 10-years of deep CVD phenotyping, multi-layered -omics and rich sociocultural data to fill these neglected scientific gaps in our current understanding of ADRD in diverse Latinos.

Myosteosis, Activity Levels and Insulin Resistance/Diabetes Mellitus (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute; 9/8/21-6/30/25

This study will investigate the associations between myosteosis with both cardiometabolic risk factors and T2DM in Hispanic/Latino adults from diverse backgrounds.

Coronary Artery Calcium (CAC) and its Association with Protective/Risk Factors and Epigenetic Patterns in Diverse US Hispanic/Latino Adults (Subcontract PI)

NIH/National Heart, Lung, and Blood Institute; 6/1/21-5/31/25

This multicenter study aims to generate critical new data on the presence/absence and extent of CAC (assessed via coronary CT scan) and CT-derived plaque volume, density, and distribution in Hispanic/Latino adults from diverse ethnic backgrounds, and to examine relationships with potentially protective sociocultural factors specific to Hispanic/Latino populations, traditional CVD risk factors, lifestyle factors, and genetic and epigenetic patterns.

Breanne E. Lott, PhD, MPH

Dr. Lott is a social behavioral researcher who studies cancer prevention, screening, and service delivery in underserved populations. Her interests include breast and cervical cancer, cancers with infectious etiology such as HPV-related cancers, self-sampling and community-based/mobile screening, patient navigation, social determinants of health, health equity, patient-reported outcomes, culturally responsive behavioral interventions, and implementation science.

David W. Lounsbury, PhD

Bronx Community Health Network Program Evaluation and Quality Improvement Services (PI)

Bronx Community Health Network Project; 7/1/20-8/31/21

This project informed a novel approach to organizational capacity building for Bronx

Community Health Network (BCHN), integrating tenets of systems thinking and participatory program evaluation.

Modeling to Inform the Future of Food in Your Neighborhood (*Subcontract PI*)

Foundation for Food & Agriculture Research; 4/1/18-3/31/22

In partnership with Case Western Reserve University, the goal of this project was to apply participatory system dynamics modeling to identify and address structural challenges to developing sustainable, accessible community-based healthy food systems.

Participatory Systems Dynamics vs. Audit and Feedback: A Cluster Randomized Trial of Mechanisms of Implementation Change to Expand Reach of Evidence-Based Addiction and Mental Health Care (*Subcontract PI*)

Veterans Administration (VA) Palo Alto Health Care System; 9/1/20-8/31/24

NIH/National Institute on Drug Abuse; 2/1/19-12/31/23

The goal of this project is to test a team-based systems change intervention with VA mental health providers, to improve delivery of evidence-based psychotherapy and pharmacology to patients within the VA health care system.

Provider-Targeted Communications Strategies to Reduce Stigma and Promote PrEP Uptake (*PI*)

NIH/National Institute of Mental Health; 7/1/20-4/30/21

Einstein Center for AIDS Research (CFAR) Supplement; 7/1/20-4/30/21

This intervention study applied a novel crowdsourcing approach to advance HIV health communications research to promote PrEP uptake among MSM of color.

Optimizing Study Design to Test a Community-Level Intervention to Reduce Intersectional Stigma and Increase HIV Testing and Prevention Among African-American/Black MSM (*Site PI*)

NIH/National Institute of Mental Health; 7/9/19-5/31/22

This study responded to the identified need for design and testing of interventions to reduce intersectional stigmas related to HIV that reduce uptake of and access to HIV testing and biomedical prevention, particularly among African-American/Black gay, bisexual and other MSM.

Alyson B. Moadel-Robblee, PhD

Bronx Oncology Living Daily (BOLD Living) Program (*Founding Director*)

NYC DOHMH; 7/1/20-6/30/23

Website: www.einsteinmed.edu/cancercenter/support; Twitter: @BOLDLiving1;

FB: @BOLDProgram; YouTube: <https://tinyurl.com/boldpgmvideo>; IG: @

boldlivingprogram;

The *BOLD Living Program* was launched in 2008 in response to a psychosocial needs assessment of Bronx cancer patients and family members towards developing a patient-centered, culturally-informed, and evaluable psycho-oncology clinical research program. With the support of Komen, NYC DOHMH, LLS and other grants, the BOLD Cancer Wellness Program provides free wellness workshops, BOLD Buddy peer navigators for patients, and BOLD Brothers/Sisters peer mentors for their kids. In addition, the *BOLD Sidewalks-to-Screening* program addresses prevention and early detection through community outreach and assessment of barriers to screening. A focus on cancer health equity through outreach to marginalized and hard-to-reach subcommunities who experience significant barriers to optimal care across the spectrum of cancer care is at the heart of the program. Measurable impact includes barriers to care, quality of life, posttraumatic growth, medical mistrust, and cancer care and mental health care engagement.

Psychosocial Oncology Program (PSOP) (*Program Director*)

Montefiore Einstein Cancer Center; 2006-ongoing

The PSOP is a clinical service program that offers no-cost counseling and support to anyone affected by cancer in the Bronx and surrounding areas. Services are delivered by mental health counseling graduate students (interns) under the supervision of Dr. Moadel-Robblee. Training and self-care groups for oncology staff and trainees are also provided to promote adaptive communication and stress management skills.

Psychosocial Risk Assessment and Tele-Navigation for Hematologic Cancer Patients Treated during the COVID Era (*PI*)

Leukemia & Lymphoma Society; 10/1/20-12/31/22

This project examined the impact of a virtual psychosocial assessment and peer navigation initiative on quality of life and treatment adherence among underserved hematologic oncology patients diagnosed during the pandemic.

Increasing Access to Lung Cancer Screening in the Bronx in Latinx and African American Communities (Project URBANA) (*MPI*)

Lungevity Foundation / Bristol Myers Squibb Health Equity Grant; 4/1/22-3/31/24

This initiative will develop a culturally sensitive care coordination program with layered peer-to-professional patient navigation for promoting lung cancer screening (LCS) among high-risk residents of the underserved Bronx community.

Pilot Study of Medical Reiki for Women Undergoing Surgery for Breast Cancer: Impact on Quality of Life, Medical Recovery Metrics, and Cortisol (*MPI*)

Medical Reiki Works™; 3/2/20-6/20/23

This pilot study will examine the impact of Reiki healing among women undergoing breast cancer surgery on pain, fatigue, distress, recovery, and stress hormones.

Yasmin Mossavar-Rahmani, PhD, RD

Multicultural Healthy Diet (MHD) to Reduce Cognitive Decline & Alzheimer's Disease Risk (*PI*)

NIH/National Institute on Aging; 9/15/17-4/30/23

This pilot study is designed to investigate whether an anti-inflammatory dietary pattern can be adapted for a multicultural middle aged (40-65 yr), middle income cohort in the Bronx, New York and whether it improves cognition compared to consuming a usual diet.

Cardiometabolic Outcomes in Multi-Ethnic Physical Activity & Sedentary Behavior Study (COMPASS) (*MPI*)

NIH/National Heart, Lung, and Blood Institute; 12/15/16-11/30/22

This study was conducted in the Hispanic Community Health Study/Study of Latinos (HCHS-SOL) and the Framingham Heart Study (FHS) Third Generation and Omni Gen 2 (FHS Gen3/Omni2) cohorts to identify physical activity and sedentary behavior patterns associated with cardiometabolic outcomes.

Sleep in Neurocognitive Aging & Alzheimer Research (SANAR) (*Subcontract PI*)

NIH/National Institute on Aging; 2/1/21-1/30/26

The goal of this study is to conduct ambulatory blood pressure monitoring and an overnight sleep study to assess the relationship of sleep to neurocognitive aging in HCHS-SOL.

Seattle Dietary Biomarker Development Center (Intervention Core)

(*Subcontract PI*)

US Dept. of Agriculture (USDA); 9/1/21-8/31/26

The central mission of the Seattle Dietary Biomarker Development Center (DBDC) is to

advance the science of measuring complex dietary exposures by rigorous identification and validation of dietary biomarkers that improve upon measurement error prone self-reported diet.

Application of predictive biomarkers of sugars and animal protein for investigation of dietary measurement error and its effect on diet-disease associations (*Subcontract PI*)

NIH/National Cancer Institute; 9/16/22-8/31/26

The aim of this study is to examine the measurement error of self-reported total sugars and protein intake using urinary and serum biomarkers, respectively, and examine associations between measurement error-corrected (i.e., calibrated) intake and cardiovascular disease mortality and type 2 diabetes risk in two prospective cohorts.

Bruce D. Rapkin, PhD

Reshaping Women's Cancer Prevention, Diagnosis and Treatment Initiation via an Innovative, Collaborative, Sustainable Community Academic Care Delivery Model (*Site PI*)

Merck Foundation; 1/1/17-12/31/21

The major goal of this project was to improve the coordination of care for low income patients of federally qualified health centers when they are diagnosed with cancer. The study uses a stepped wedge design, phasing in a novel care coordination intervention at 18 inner city clinics. Optimization of intervention implementation at each clinic was achieved using comprehensive dynamic trial methodology. Outcomes included improved delivery of care according to guidelines, patient adherence, retention and quality of life.

Promoting Asthma Guidelines and Management through Technology-Based Intervention and Care Coordination (PRAGMATIC) (*Site PI*)

NIH/National Heart, Lung, and Blood Institute; 7/1/16-4/30/21

The goal of this project was to test the impact of an intervention consisting of multi-level strategies on healthcare provider adoption of asthma management guidelines and clinical outcomes.

Einstein-Rockefeller-CUNY Center for AIDS Research (*Co-PI*)

NIH/National Institute of Allergy and Infectious Disease; 5/1/17-4/30/22

The ERC-CFAR stimulated, coordinated, and supported an integrated multi-disciplinary research agenda to achieve its mission to arrest the AIDS epidemic through improving utilization of current treatments and developing new therapies for prevention; improving treatment outcomes among infected individuals; and eradication of HIV reservoirs.

Core Support for Cancer Center (*Program Co-Lead*)

NIH/National Cancer Institute; 7/1/19-6/30/24

With its clinical partner, the Montefiore Health System, and its community outreach and engagement capabilities, the Montefiore Einstein Cancer Center seeks to understand the basis for and ameliorate cancer disparities that affect the 1.4M, largely minority population of the Bronx, the Center's catchment area.

Minority-Based Community Oncology Program (*MPI*)

NIH/National Cancer Institute; 8/1/19-8/31/25

This project seeks to advance the prevention, diagnosis, treatment, and management of early and advanced cancer. Our goals are to: 1) accrue at least 80 subjects to trials sponsored by the NCI Community Oncology Research Program (NCORP) research bases, 2) provide scientific and administrative leadership to the ECOG-ACRIN, NRG and Alliance research bases; 3) expand our capacity for cancer care delivery research

(CCDR) to include at least 3 active CCDR protocols; 4) train and mentor young investigators in all areas of NCORP research; and 5) contribute expertise in novel methodology to address cancer health disparities, including patient engagement, trial design and outcomes measurement.

Healing Communities Study (formerly called CHASE) (*Subcontract PI*)

NIH/National Institute on Drug Abuse; 4/17/19-3/31/23

The goal of this study is for community engagement and outreach to ensure coordination, communication and opportunities for shared decision making to support implementation of CHASE in the selected communities - 15 NYS counties.

Engaging Cancer Patients in Informed Decision Making Through the "What Matters to Me" Tool (*Co-PI*)

CancerCare; 4/1/20-9/30/21

This project tested the feasibility and benefits of CancerCare's What Matters to Me tool, an easy and efficient way for patients to communicate their personal quality-of-life priorities to providers in advance of making cancer treatment decisions.

Judith Wylie-Rosett, EdD, RD

New York Regional Center for Diabetes Translational Research (CDTR) (*MPI*)

NIH/National Institute of Diabetes and Digestive and Kidney Diseases; 9/20/16-7/31/21

The CDTR is designed to expand the resources to support diabetes translational research related to the prevention and control of diabetes and its complications. The CDTR services are provided by four cores that include: a) Translational Intervention Methodology Core, b) Life Course Methodology Core, c) Population Health and Health Systems Core, and d) Latino Network for Diabetes Translation Research: A National Resource Core.

Testing the Efficacy of a Technology-Assisted Weight Management Intervention within Patient-Centered Medical Homes: The GEM (Goals for Eating and Moving) Study (*Subcontract PI*)

NIH/National Institute of Diabetes and Digestive and Kidney Diseases; 9/20/16-8/31/22

The GEM intervention is based on the 5As approach and promotes weight loss, behavior change, and participation in intensive programs such as the MOVE! program from the Veteran's Affairs (VA) and the Diabetes Prevention Program (DPP), offered at Montefiore Medical Group (MMG) Centers. The study is evaluating the efficacy of the GEM intervention in a cluster randomized controlled 12-month trial, which is being conducted using 16 primary care teams at two urban healthcare systems with Medical Home models of care (VA and MMG) to compare the GEM intervention (intervention arm) with Enhanced Usual Care (educational materials; control arm).

Financial Incentive Strategies for Weight Loss in Obese Patients Living in Socioeconomically Disadvantaged Neighborhoods (*Subcontract PI*)

NIH/National Center on Minority Health and Health Disparities; 2/13/17-6/30/22

The goals of this three-arm randomized controlled trial were to compare: 1) goal-directed financial incentives plus enhanced usual care, comprising provision of a food diary, wearable fitness tracker, exercise and nutrition education materials, and referral information for intensive weight loss programs; versus; 2) outcome-based financial incentives plus enhanced usual care; versus 3) enhanced usual care alone. The study assessed the impact of financial incentives for weight loss on sustained weight loss, use of evidenced-based therapy, and quality of life.

OTHER NOTABLE FACULTY

Eran Bellin, MD, VP Clinical IT Research and Development

Dr. Bellin is VP of Clinical IT Research and Development at Montefiore Information Technology. For 20 years, he led the development of Clinical Looking Glass, a user-friendly self-documenting software system that allows clinicians and administrators to define patient cohorts and track outcomes across time. This novel software supports quality improvement projects, house staff education, and IRB-approved research, setting new standards for transparency and medical care management by objectives. In 2014, commercial development rights were sold to Streamline Health. Dr. Bellin's ongoing research involves the application of new computer-based epidemiologic analytic techniques to observational data in electronic medical records to inform population health policies, interventions, and evaluation.

Paul R. Marantz, MD, MPH

Clinical and Translational Science Award (CTSA) (PI, KL2 and TL1)

NIH/National Center for Advancing Translational Science; 3/22/18-2/28/23

A national consortium of medical research institutions, funded through Clinical and Translational Science Awards (CTSAs), works together and share a common vision to improve the way that biomedical research is conducted across the country, reduce the time it takes for laboratory discoveries to become treatments for patients, engage communities in clinical research efforts, and train the next generation of clinical and translational researchers. This grant supports the Harold and Muriel Block Institute for Clinical and Translational Research (ICTR) at Einstein and Montefiore; the KL2 component supports a career development program for clinical/translational investigators, and the TL1 component supports our PhD in Clinical Investigation.

The Center of Excellence in Promoting LHS Operations and Research at Einstein/Montefiore (EXPLORE) (MPI)

Agency for Healthcare Research and Quality; 9/30/18-9/29/23

This project leverages the educational and research support resources of Einstein's Institute for Clinical and Translational Research (ICTR), the home of our Clinical and Translational Science Award (CTSA), including didactic components of its Master's in Clinical Research, the informatics infrastructure of the Center for Health Data Innovations, and the resources of Montefiore's Network Performance Group (responsible for quality of care, operational excellence, and patient safety at Montefiore Health System), to create a novel K12 career development program in learning health systems (LHS) research.

Education Connecting Laboratory Investigation and Population Science at Einstein (MPI)

Burroughs Wellcome Fund; 2/1/13-6/30/24

This project supports the development and implementation of an innovative predoctoral PhD program to provide interdisciplinary cross-training in laboratory sciences and population sciences. It continues to support, in coordination with the CTSA TL1, Einstein's PhD in Clinical Investigation (PCI).

ADMINISTRATION

Paul Toth, Unified Administrator

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Amy Rodriguez, Administrative Assistant

Margie Salamone, Department Coordinator

Susan Mangot, Administrative Assistant

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Eran Bellin, MD
Paul R. Marantz, MD, MPH
Philip O. Ozuah, MD, PhD*
Steven M. Safyer, MD*

EPIDEMIOLOGY INFORMATICS & STUDY MANAGEMENT UNIT

Mindy Ginsberg, BA

**Has a non-primary appointment and/or is part-time in the
Department. For a listing of all faculty, see DEPH website.*



Albert Einstein College of Medicine

Montefiore

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