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Grant Title	Principal Investigator	Start – End	Preferred	Study Summary
(Award Number)		Dates	Candidate-Level	
Next generation functional genomics of hematology traits 1R01HL146500-01A1 NHLBI	Alexander Reiner apreiner@uw.edu	9/1/2019 – 8/31/2024	Graduate Post-doc	This project will lead to improved insight into the genetic basis of hematologic traits and red blood cell disorders. Finding the risk factors and causes of these disorders or traits will lead to new insights into why they occur, and, potentially, how they can be treated. This project will create a renewable resource for the scientific community for research into human red blood cell production and how this goes awry in disease.
Novel Statistical Inference for Biomedical Big Data 1R01GM133848-01A1 NIGMS	Ali Shojaie ashojaie@uw.edu	7/1/2020 – 6/30/2024	Graduate Post-doc	Public Health Relevance Biomedical big data (BBD), including large collections of omics data, medical imaging data, and electronic health records, offer unprecedented opportunities for discovering disease mechanisms and developing effective treatments. However, despite their tremendous potential, discovery using BBD has been hindered by computational challenges, including limited advances in statistical inference procedures that allow biomedical researchers to investigate uncon- founded associations among biomarkers of interest and various biological phenotypes, while integrating data from multiple BBD sources. The current proposal bridges this gap by developing novel statistical machine learning methods and easy-to-use open-source software for statistical inference in BBD, which are designed to facilitate the integration of data from multiple studies and platforms.
Statistical methods to enhance reproducible microbiome discovery 5R35GM133420-02 NIGMS	Amy Willis adwillis@uw.edu	7/1/2019 – 6/30/2024	Undergraduate Graduate Post-doc	The human microbiome, which plays an important role in many diseases, is generally characterized using high throughput genome sequencing, which can induce measurement noise due to sequencing depth, batch effects, and laboratory protocols. The overall goals of this research are to develop new statistical methods and software that explicitly model batch and technical variation, allowing us to distinguish, rather than conflate, biological signal and non- biological noise. These methods will enable biomedical scientists to increase the

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				reproducibility of microbiome research, facilitating the identification of the specific biological elements within the microbiome that influence human health.
Person-centered decision making: Developing a choice-based preference tool for transitions in dementia care 1R01AG066957-01 NIA	Anne Turner amturner@uw.edu	4/1/2020 – 3/31/2025	Graduate Post-doc Junior faculty	As older adults with Alzheimer's disease and related dementias (ADRD) decline, they are increasingly omitted from decisions regarding care. The goal of this research is to keep older adults with dementia involved in decision-making through better understanding their decision-making processes and creating a novel tool to identify preferences related to transitions in care.
Systems Analysis and Improvement Approach to Optimize the Task- Shared Mental Health Treatment Cascade (SAIA-MH): A Cluster Randomized Trial 1R01MH123682-01A1 NIMH	Bradley Wagenaar bwagen@uw.edu	4/1/2021 – 3/31/2026	Graduate Post-doc Junior faculty	This implementation research project aims to test the effectiveness of an implementation strategy entitled: "Systems Analysis and Improvement Approach" for use in global mental health systems improvement (SAIA- MH). This approach targets helping health workers in low-resource settings globally improve the delivery of outpatient mental healthcare. For example, helping workers improve patient retention in care, medication adherence, and improvement of function.
NIMHExpanding and scalingTwo-way texting (2wT)to reduce unnecessaryfollow-up and improveadverse eventidentification amongvoluntary medical male	Caryl Feldacker cfeld@uw.edu	7/1/2020 – 6/30/2025	Graduate Post-doc Junior faculty	Through a randomized control trial and subsequent stepped-wedge designed study in high- volume facilities providing male circumcision (MC) in South Africa, we will demonstrate that two- way texting (2wT) between providers and patients increases adverse event (AE) ascertainment while reducing provider workload as compared to routine, in-person follow-up. Implementation science methods and costing analysis will rigorously evaluate 2wT, determining how to

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circumcision (VMMC) clients in the Republic of South Africa 1R01NR019229-01 NINR				optimize 2wT-2-SCALE within routine MC program settings. It is expected that 2wT-2-SCALE will be a cost-effective method to improve MC efficiency and AE ascertainment at scale, enabling rapid, sustainable improvement in the quality of MC services at the population level.
Expanding and Scaling Two-way Texting to Reduce Unnecessary Follow-Up and Improve Adverse Event Identification Among Voluntary Medical Male Circumcision Clients in the Republic of South Africa 1R01NR019229-01 NINR	Caryl Feldacker cfeld@uw.edu	6/12/2020 – 3/31/2025	Graduate Post-doc Junior faculty	Through a randomized control trial and subsequent stepped-wedge designed study in high- volume facilities providing male circumcision (MC) in South Africa, we will demonstrate that two- way texting (2wT) between providers and patients increases adverse event (AE) ascertainment while reducing provider workload as compared to routine, in-person follow-up. Implementation science methods and costing analysis will rigorously evaluate 2wT, determining how to optimize 2wT-2-SCALE within routine MC program settings. It is expected that 2wT-2-SCALE will be a cost-effective method to improve MC efficiency and AE ascertainment at scale, enabling rapid, sustainable improvement in the quality of MC services at the population level.
Two-way Texting (2wT) to Improve Patient Retention While Reducing the Healthcare Workload in High- Burden Public HIV Clinics in Malawi R21TW011658-02	Caryl Feldacker cfeld@uw.edu	9/11/2020 – 6/30/2025	Graduate Post-doc Junior faculty	In sub-Saharan Africa (SSA), where need and resource constraint are highest, sub-optimal antiretroviral treatment (ART) retention threatens to derail global HIV epidemic control efforts. Through a quasi- experimental, pre-post designed test of an mHealth innovation and subsequent scale-up in two, high-volume, public ART clinics with over 35,000 ART clients in Malawi, we aim to demonstrate that interactive, two-way texting (2WT) can increase ART retention in a routine setting while providing distinct advantages in terms of data quality, costs, and reduced healthcare worker burden over routine

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FIC				retention efforts. User-centered assessment of successful 2WT integration into the existing electronic medical records system facilitates transfer from research to routine practice, enabling scale-up of this mHealth intervention to improve ART retention across Malawi and SSA.
The Community-based ART REtention and Suppression (CARES) App: an innovation to improve patient monitoring and evaluation data in community-based antiretroviral therapy programs in Lilongwe, Malawi R21MH127992-01A1	Caryl Feldacker cfeld@uw.edu	1/1/2022 – 12/31/2024	Graduate Post-doc Junior faculty	In sub-Saharan Africa, differentiated service delivery (DSD) for antiretroviral therapy (ART) is scaling rapidly; however, poor patient monitoring and evaluation (M&E) in DSD settings compromises DSD patient care and program evaluation. We employ user-centered design to guide development, testing, and assessment of a battery-powered App for real-time, point-of-care patient M&E in public, community- based DSD settings in Malawi, optimizing outcomes and reducing workload. Implementation science methods and costing analysis rigorously assess how the App ensures DSD patient care that aligns with integrated care guidelines and provides DSD program evidence towards 95-95-95 milestones.
Effects of human milk oligosaccharides and gut microbiome on growth and morbidity in HIV- exposed uninfected infants 5R01HD096999-02 NICHD	Christine McGrath mcgrathc@uw.edu	4/1/2019 – 3/31/2024	Graduate Post-doc Junior faculty	More than one million HIV-exposed uninfected infants are born each year, and have substantially higher risk of infectious morbidity and growth faltering than HIV-unexposed uninfected infants. We propose a prospective cohort study to evaluate the association between maternal HIV infection, human milk oligosaccharide (HMO) composition, and the infant gut microbiome, and identify HMO-mediated pathways associated with morbidity and linear growth in HIV-exposed uninfected infants in Kenya. Results from this longitudinal study will provide critical data for the design of interventions to optimize growth and health outcomes in HIV-exposed uninfected children in Africa, a vulnerable and growing population.

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Non-invasive diagnosis of adult pulmonary tuberculosis 5R01AI139254-02 NIAID	Gerard Cangelosi gcang@uw.edu	4/1/2019 – 3/31/2024		This project will characterize and validate oral swab analysis (OSA) as a novel, non-invasive means to diagnosis tuberculosis (TB). If successful, OSA could simplify TB diagnosis relative to existing methods, improved the care of certain types of TB patients, and enable active case-finding strategies that reduce TB transmission. Thus, this project could transform the global fight against TB.
HEU outcomes: population-evaluation and screening strategies (HOPE) 1R61HD103079-01 NICHD	Grace John Stewart gjohn@uw.edu	7/1/2020 – 6/30/2025	Undergraduate Graduate Post-doc Faculty	Globally there is an increasing number of HIV-exposed but uninfected children and adolescents (HEU). We propose to evaluate HEU in Kenya, spanning from infancy to adolescence using different epidemiologic approaches to determine whether HEU have increased risk of adverse neurodevelopmental or mental health outcomes. We plan to screen a large population of HEU nationally and work collaboratively with stakeholders to review this data to inform approaches to screen, identify, and refer HEU with adverse outcomes, that could be used programmatically.
PrEP and dPEP: Doxycycline post- exposure prophylaxis for prevention of sexually transmitted infections among Kenyan women using HIV pre-exposure prophylaxis 1R01AI145971-01A1 NIAID	Jared Baeten jbaeten@uw.edu	7/1/2019 – 6/30/2024	Graduate	Doxycycline post-exposure prophylaxis (dPEP) use following sexual contact has been shown to be effective at reducing acquisition of curable sexually transmitted infections (STIs; chlamydia, gonorrhea, and syphilis) among men having sex with men taking HIV pre- exposure prophylaxis (PrEP). In this timely and important study, we propose a trial of dPEP for women in an African setting, who have a high and disproportionate burden of morbidity and mortality from STIs. We hypothesize that dPEP will be effective in reducing incident STIs in African women and will be feasible, acceptable, safe, and cost effective and will not contribute to substantial additional antimicrobial resistance.

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Impact of Universal Free Meals on Childhood Obesity Risk and Obesity Disparities 1R01HD105666-01 NICHD	Jessica Jones-Smith jjoness@uw.edu	7/1/2021 – 6/30/2025	Graduate Post-doc	This study will assess the impact of a major change to school food policy—the Community Eligibility Provision—which allows high- poverty schools to provide free meals to all children regardless of individual income. We will assess whether the universal free meals under this policy impact child obesity and obesity disparities.
Integrating expedited partner STI therapy during PrEP delivery for young women 1R01AI155000-01A1 NIAID	Jennifer Balkus jbalkus@uw.edu	9/22/2020 – 8/31/2025	Graduate	Sexually transmitted infections (STIs) are highly prevalent in adolescent girls and young women and, in many regions of the world, diagnostic testing is not widely available; therefore, women only receive treatment if they report symptoms. However, the majority of women with an STI do not experience symptoms, resulting in persistent infections that can have serious consequences for reproductive health. In this proposal, we will assess the acceptability of point-of-care STI testing plus expedited partner treatment and its impact on the incidence of common curable STIs among women at risk for STIs and HIV, providing critical information to national policy makers and reducing the burden of STIs in women.
Evaluating infant PrEP exposure during pregnancy and breastfeeding (PRIMA EXTENSION) 5R01HD100201-02 NICHD	Jillian Pintye jpintye@uw.edu (contact) Grace John-Stewart gjohn@uw.edu	7/1/2019 – 6/30/2024	Any level	Pregnancy and breastfeeding are periods of high HIV acquisition risk for African women. The World Health Organization recommends offering oral pre-exposure prophylaxis (PrEP) to HIV-negative pregnant and postpartum women in HIV high-burden settings, while advocating for continued comprehensive longitudinal safety evaluation during implementation. Our proposed work will provide important new data by systematically quantifying infant pre- and postnatal PrEP exposure and assessing birth, bone, growth, and neurocognitive, outcomes following PrEP exposure through the child's 5th birthday in the largest PrEP in pregnancy evaluation to date.

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mWACh-PrEP: A SMS- based support intervention to enhance PrEP adherence during pregnancy and breastfeeding 1R01NR019220-01A1 NINR	Jillian Pintye jpintye@uw.edu	9/18/2020 – 6/30/2025	Any level	Pregnancy and breastfeeding are periods of high HIV acquisition risk for African women. Oral pre-exposure prophylaxis (PrEP) can prevent HIV infection, yet PrEP adherence during pregnancy and postpartum is sub- optimal due to specific issues women face during this period that could be addressed by real-time SMS communication with a health worker. We propose a randomized trial to determine the effect of a bidirectional SMS communication tool (mWACh-PrEP) on PrEP adherence during pregnancy and postpartum and we will collect data on implementation and cost to expedite translation into routine practice.
SOLAir: Environmental Factors and Diabetes Development in Latinos 1R01ES030994-01A1 NIEHS	Joel Kaufman joelk@uw.edu	9/22/2020 – 6/30/2025		The link between adiposity and the development of Type 2 diabetes (T2DM) is well characterized, but less is known about the impact of environmental factors on risk of T2DM. Research increasingly implicates traffic-related air pollutants (TRAP) with increased risk of T2DM. Other community-scale environmental factors, including aspects of the built and natural environment are also potential risk or protective factors for T2DM and may act through interactions with physical activity, diet and visceral adiposity. This study will incorporate state-of-the-art environmental exposure assessment with detailed health measures and data on potential confounders, including genetic susceptibility, to study these relationshipsin a comprehensive framework—focusing on a fast-growing population at disproportionate risk of T2DM risk, through the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) cohort.
PrEP adherence- concentration thresholds associated with HIV protection among African women	Kenneth Mugwanya mugwanya@uw.edu	9/1/2020 – 8/31/2024	Undergraduate Graduate Post-doc Faculty	The minimum protective tenofovir diphosphate (TFV-DP) concentrations, the active form of tenofovir-based PrEP, in the blood and the level of adherence required to achieve those concentrations may differ depending on the route and frequency of exposure to HIV. Using our combined complementary expertise in HIV prevention research in women and antiretroviral pharmacology, we will define

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1R01AI155086-01A1 NIAID				cisgender women-specific adherence- concentration-efficacy benchmarks for TFV moieties in a novel directly observe study of TDF/FTC PrEP in African women, a priority population for HIV prevention. We will then link the newly defined thresholds to the Partners PrEP Study clinical cohort to estimate TFV-DP concentrations associated with HIV protection for women and the minimum adherence level (doses per week) required to achieve these levels.
Integrating PrEP delivery in family planning clinics in Kenya 1 R01MH123267-01 NIMH	Kenneth Mugwanya mugwanya@uw.edu	4/1/2020 – 3/31/2025	Undergraduate Graduate Post-doc Faculty	Pre-exposure prophylaxis (PrEP) is a highly effective user-controlled HIV prevention strategy, with tremendous potential for high impact to reduce incident HIV infections among at-risk African women if delivered with high coverage and taken with sufficient adherence. In this highly innovative study, we propose to catalyze integration of optimized universal screening and counseling for HIV risk behaviors and PrEP provision for at-risk women accessing public health family planning clinics in Kisumu, Kenya – a region with an HIV prevalence of up to 28% among young women– using step-wedged randomized design. We hypothesize that family planning clinics will offer a cost- and time-efficient, less stigmatizing, and sustainable woman-centered 'one-stop' access point for PrEP and FP services, with culminating in great reach and impact for PrEP of reducing incident HIV infection in this setting.
Polygenic Risk Score Diversity Consortium Coordinating Center	Kenneth Rice kenrice@uw.edu	6/1/2021 – 5/31/2026	Graduate Post-doc Faculty	Polygenic Risk Scores (PRS) combine information across numerous genetic variants to improve disease prediction; however, lack of diversity in PRS research to date threatens applicability in non- European ancestry individuals. The NHGRI Polygenic Risk Score
1U01HG011697-01 NHGRI				Diversity Consortium will conduct collaborative data integration, analysis, and methods development in existing research cohorts to improve PRS prediction across diverse populations. As Coordinating Center for the Consortium, we will perform genotype and phenotype

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				data harmonization, lead collaborative analysis, contribute to methods development, help identify Ethical, Legal, and Social Implications (ELSI) of PRS, facilitate data sharing, and coordinate program logistics and outreach.
Cumulative burden of Chlamydia trachomatis and Mycoplasma genitalium in the US: implications for screening guidelines and antimicrobial resistance 1R01AI161019-01 NIAID	Lisa Manhart lmanhart@uw.edu	4/1/2021 – 3/31/2026	Graduate	Defining the lifetime risk of Chlamydia trachomatis in men and characteristics associated with infection in the US population will provide critical information to either support or change current chlamydia screening guidelines. Determining the lifetime risk of Mycoplasma genitalium in the US, whether it is associated with pelvic inflammatory disease, and the extent of antimicrobial resistance in the population will guide nascent national testing and treatment recommendations for M. genitalium.
Structural and nucleotide variation as genomic risks for venous thrombosis: TOPMed and INVENT Collaboration 1R01HL154385-01 NHLBI	Nicholas Smith nlsmith@uw.edu	7/1/2020 — 6/30/2024	Graduate Post-doc Junior faculty	Venous thrombosis (blood clots in the legs and/or lungs) is a cardiovascular condition that is influenced by a person's DNA characteristics. Human DNA differs among people in many ways, and this project will look at 2 ways in which DNA differs among adults to see if these differences are associated with the risk of developing clots in the legs or lungs. We will first determine if the insertions of extra DNA material or deletions of DNA material are associated with risk; we will then determine if substitutions in DNA material are associated with risk.

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Genetic Discovery and Functional Validation to Identify Precursors of Clot Embolization in those with a Deep Vein Thrombosis 1R01HL147894-01A1	Nicholas Smith nlsmith@uw.edu	4/1/2021 – 3/31/2025	Graduate Post-doc Junior faculty	The aim of this proposal is to better understand why venous clots in the legs sometimes dislodge and travel to the lungs. These clots block circulation to the lungs and are life-threatening. We are interested in identifying inherited factors that lead to clots traveling to the lung and learning how the inherited factors change the biologic function that causes a clot to dislodge.
NHLBIThe role of entericpathogens andantimicrobial resistancein driving clinical andnutritional deterioration,and azithromycin'spotential effect, amongchildren discharged fromhospital in Kenya1R01AI150978-01NIAID	Patricia Pavlinac ppav@uw.edu	4/1/2020 – 3/31/2025	Any level	To reduce the risk of death, re-hospitalization, and growth faltering following hospitalizations among children living in Sub-Saharan Africa, it is critical to understand mechanisms underlying this risk, including how azithromycin affects these outcomes. Utilizing samples and data from an ongoing placebo-controlled RCT of azithromycin for post-discharge morbidity and mortality, we will characterize enteric pathogens and antibiotic resistance utilizing highly sensitive molecular diagnostic tools to determine the role of these enteric pathways on post-discharge outcomes and azithromycin's effect.
Lactoferrin and lysozyme to promote nutritional, clinical, and enteric recovery: A factorial placebo- controlled randomized	Patricia Pavlinac ppav@uw.edu	1/1/2021 - 11/30/2025	Any level	To improve the long-term consequences of diarrhea, including malnutrition, recurrent diarrhea, and enteric dysfunction, it is critical to identify new, non-antibiotic interventions to reduce underlying intestinal damage and enteric pathogen carriage. This placebo- controlled, four-armed randomized control trial aims to determine the efficacy and mechanisms of action of two safe and inexpensive milk-

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trial among children with diarrhea and malnutrition (LACTOLYZE) 1R01HD103642-01 NICHD				derived nutritional supplements, lactoferrin and lysozyme, administered for 16-weeks to Kenyan children recovering from medically attended diarrhea and wasting.
NICHDSimplifying HIVtreatment and monitoring(STREAM2): Point-of-care urine Tenofoviradherence and viral loadtesting to improve HIVoutcomes in SouthAfrica5R01AI147752-02NIAID	Paul Drain pkdrain@uw.edu	7/1/2019 – 6/30/2024	Undergraduate Post-bac Graduate Post-doc Faculty	Effective management of patients on antiretroviral therapy (ART) is essential to improve patient outcomes and prevent HIV transmission, but monitoring life-long ART for over 13 million HIV-infected people has become a challenge, particularly in low- and middle-income countries (LMICs). In this study, we will evaluate a combined implementation of clinic-based point-of-care HIV viral load testing and task shifting among healthcare workers as a novel and effective strategy for managing chronic HIV care in LMICs. Our intervention will allow the most highly-trained professionals and laboratories to focus on people with new HIV diagnoses, those starting ART, and those with complication of HIV or ART, which will facilitate the expansion of ART to reach the estimated millions people who are eligible.
A novel REverSe Transcriptase Chain Termination (RESTRICT) assay for near-patient, objective monitoring of long-term PrEP adherence 1R01AI157756-01	Paul Drain pkdrain@uw.edu	9/1/2020 – 8/31/2025	Undergraduate Post-bac Graduate Post-doc Faculty	The lack of an objective PrEP adherence monitoring tool has led to inefficient counseling and poor supportive care. We recently developed a novel enzymatic assay that semi-quantitatively measures the concentration of TFV-DP by measuring inhibition of reverse transcriptase, which is the cellular target of oral PrEP drugs. In this proposal, we will optimize the REverSe TRanscrIptase Chain Termination (RESTRICT) assay to measure TFV- DP concentrations in PrEP clients, validate the assay to meet CLIA requirements, and conduct a feasibility and acceptability study among PrEP clients and providers.

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NIAID				
Implementation science research on PrEP delivery and costing within MAT and NSP services for PWUD in Uganda 1R01DA051796-01 NIDA		6/1/2020 – 5/31/2025	Undergraduate Graduate Post-doc	For people who use drugs in Uganda, services for harm reduction as well as HIV prevention remain in their infancy, despite a growing epidemic and potential for up to 45% of drug users to be living with HIV. The proposed work leverages methods from implementation science to develop, pilot, and determine the cost of two approaches to integrated harm reduction and PrEP delivery – a facility-based model within a medication-assisted treatment program and a community- based model for needle and syringe exchange. Results will have implications for the Ugandan context, as well as communities in the US, by demonstrating co-location of PrEP and harm reduction services and novel data on PrEP adherence and retention among people who use drugs.
A sequential, adaptive model of differentiated service delivery to reach persons living with HIV who are lost-to-follow- up or who have detectable viral load 1R01MH124465-01A1	Ruanne Barnabas rbarnaba@uw.edu	9/1/2020 – 8/31/2025	Undergraduate Graduate Post-doc Faculty	Globally there is an increasing number of HIV-exposed but uninfected children and adolescents (HEU). We propose to evaluate HEU in Kenya, spanning from infancy to adolescence using different epidemiologic approaches to determine whether HEU have increased.
NIMH				

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Leveraging cross-cancer shared heritability to better understand the genetic architecture of cancer 5R01CA194393 NCI	Sara Lindstroem saralind@uw.edu	8/1/2015- 7/31/2024	Graduate Post-doc Junior faculty	Leveraging cross-cancer shared heritability to better understand the genetic architecture of cancer Although we have identified hundreds of genetic variants associated with cancer, much of the genetic contribution to increased cancer risk remains unknown. Building on our previous work that established a shared genetic component across cancers, we aim to identify novel genetic variants associated with multiple cancers, and quantify the relative contribution of low- frequency and common genetic variation to the familial aggregation of cancers. These results will provide additional insights into the shared and unique biological processes leading to different cancers, and provide guidance on the design and analysis of future sequencing studies.
Integration of genetic, gene expression and environmental data to inform biological basis of mammographic density 1R01CA244670-01A1	Sara Lindstroem saralind@uw.edu	2/4/2021- 1/31/2025	Graduate Post-doc Junior faculty	We propose to conduct a series of large-scale genetic association studies to identify genetic risk factors for mammographic density and breast cancer. The proposed research will highlight underlying biological mechanisms and identify novel targets for breast cancer risk prediction and prevention.
NCI				
Air pollution exposures in early life and brain development in children	Sarah Benki-Nugent benki@uw.edu (contact)	6/1/2020 – 5/31/2025	Undergraduate Graduate Post-doc	Research in high income countries demonstrates the neurotoxicity of ambient and household air pollution on brain development, yet data are lacking from sub-Saharan Africa (SSA) where exposure magnitudes are among the highest worldwide. We develop a prospective cohort
1R01ES032153-01 NIEHS	Grace John-Stewart gjohn@uw.edu			and capacity building to understand early life exposure sources and impacts on child healthy neurodevelopment in Nairobi. We leverage a foundation of linkages between the University of Washington and academic and governmental stakeholders in Kenya to establish a

				sustained program to inform future clinical trials, screening tools, program and policy.
Identity by descent in population data 2R01HG005701-08 NHGRI	Sharon Browning sguy@uw.edu	7/1/2021 – 6/30/2025	Graduate Post-doc	Individuals share segments of their DNA identical by descent due to inheritance of the DNA from a shared ancestor such as a great- grandparent. These identity by descent (IBD) segments can be detected using genotype data, and they can then be used to improve our understanding of human biology and relationships between individuals and populations. We propose to develop three new IBD-based analyses that will enable improved understanding of the role of genetics in human health.
Cardiometabolic risk development and management in changing neighborhoods: The Jackson Heart Study 1R01HL148431-01A1 NHLBI	Stephen Mooney (contact) sjm2186@uw.edu Sharrelle Barber smb483@drexel.edu	8/4/2020 – 6/30/2025		The overarching goal of this project is to use the Jackson Heart Study— a state-of-the-art cohort study of African American adults— to investigate longitudinal associations between features of the neighborhood physical, social, and healthcare environment and cardiometabolic risk development and management over a 20-year period. Understanding these associations independently and synergistically is critical for the prevention and management of cardiovascular disease risk factors in African Americans and the reduction of racial health inequalities.
National Alzheimer's Coordinating Center 1U24AG072122-01 NIA	Walter Kukull kukull@uw.edu	7/1/2021 – 6/30/2026	Graduate Post-doc Junior faculty	Narrative NACC (as U01 AG016976, at University of Washington — now seeking renewal as a U24) has been active since 1999, and has established a standardized, longitudinal clinical database of over 42,000 individuals (with neuropathology data on over 6,100), as well as cross-sectional, retrospective data on roughly 66,000 individuals seen at ADRCs between 1984 and 2005. NACC has made these data freely available to researchers worldwide, resulting in hundreds of publications. We will modernize and intensify our informatics approach, making data access and use more efficient; will grow

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communication and coordination capabilities with the ADRCs and collaborating NIA projects; will develop and apply big-data research tools for the field; and will provide competitive, peer-reviewed research support for several new investigators each year. Together with the field's leaders, NACC will innovate, develop, and drive solutions to meet the changing needs of the field as well as the NIA ADRC
program.



Grant Title Award Number NIH Institute	Principal Investigator	Start – End Dates	Preferred Candidate- Level	Study Summary
The High-Intensity Exercise to Attenuate Limitations and Train Habits (HEALTH) in Older Adults with HIV 1R01AG066562-01 NIA	Allison Webel allison.webel@case.edu	4/15/2020- 3/31/2025	Post-doc Faculty	Aging with HIV may be associated with a greater impairment in physical function and worse fatigue, contributing to an impaired health span; few therapies are effective in slowing physical function decline or improving fatigue in people with or without HIV. Here we propose to test two exercise regimens of varying interval and intensity (high-intensity interval training vs continuous moderate- intensity exercise) on changes in physical function, fatigue, and mitochondrial bioenergetics. Furthermore, we will explore the impact of a biobehavioral coaching intervention vs control on adherence to physical activity following the supervised exercise intervention.
Co-benefits of co-delivery of long-acting antiretrovirals and contraceptives 1R01AI155052-01A1 NIAID	Rena Patel rcpatel@uw.edu	4/14/2021 - 3/31/2026	Undergrad Post-bac Grad (Master's) Grad (PhD/MD) Post-doc Faculty	This research will contribute to public health efforts to improve treatment outcomes for adolescent girls and young women living with HIV in resource-limited settings by evaluating the impact of a novel long-acting HIV treatment. Findings from this study will have important implications for HIV care and treatment approaches and guidelines globally. This research has the potential to make important contributions towards addressing some of the key public health problems in sub-Saharan Africa, including attainment of the UNAIDS 90-90-90 targets; prevention of mother to child transmission of HIV; and maternal morbidity and mortality.



Washington National Contact: Deborah Undergrad The Washington National Primate Research Center provides 5/1/2022 -Primate Research Center Fuller (Co-I) 4/30/2027 Post-bac necessary nonhuman primate models for a variety of diseases and Grad (Master's) fullerdh@uw.edu conditions that affect humans such as HIV/AIDS, vision and other Grad (PhD/MD) neurologic disorders, and issues related to reproduction and P510D010425 Post-doc fetal/infant development. The availability of these models allows for Sean Sullivan (PI) the development of preventive and interventional medicine and ORIP Faculty medical techniques to improve public health. Grad (Master's) Quantitative Analysis of G.A. Nagana Gowda 4/1/2021 -Coenzymes and antioxidants mediate hundreds of biochemical Labile Metabolites in ngowda@uw.edu Grad (PhD/MD) reactions and are fundamental to the cellular and mitochondrial 3/31/2025 functions. In this proposal, using nuclear magnetic resonance **Biological Samples** Post-doc (NMR) spectroscopy and mass spectrometry, we seek to develop Faculty 1 R01 GM138465-01A1 methods to reliably measure the coenzymes and antioxidants in blood, cells, mouse tissue as well as subcellular components such as NIGMS mitochondria and cytoplasm. We also seek to develop methods to measure these coenzymes in live cells and mitochondria in real time. Development of robust methods for analysis of metabolites fundamental to the cellular functions offers new avenues for investigations of human health and diseases. Knee osteoarthritis is a common, leading cause of pain-related Randomized controlled trial Kushang Patel 5/1/2019 -Undergrad evaluating an innovative kvpatel@uw.edu 4/30/2024 Post-bac disability in older adults. We propose to evaluate a communitycommunity-based based intervention that combines physical exercise and behavioral Grad (Master's) intervention combining health skills training to improve physical activity in older adults. Grad (PhD/MD) group-based exercise and Given the high burden of pain in the older adult population and Post-doc limited treatment options that are safe and effective, our long-term behavioral health skills-Faculty training for older adults with goal is to establish a low-cost, effective behavioral health program for older adults with chronic musculoskeletal pain that complements painful knee osteoarthritis existing community-based exercise programs and that can be widely disseminated. R01 AG060992 NIA



Fate acquisition and function of type I and II vestibular hair cells in mammals 5R01DC013771-08 NIDCD	Jennifer Stone stoner@uw.edu	4/1/2014 - 3/31/2024	Undergrad Post-bac Grad (Master's) Grad (PhD/MD) Post-doc Faculty	Vestibular hair cells are required for our balance and equilibrium, yet little is known about the specific functions of type I and II hair cells in mammals or how each hair cell type acquires its unique features. This project seeks to understand a newly discovered function of the transcription factor Sox2 in regulating the unique properties of each hair cell type in adult mice and will test how altering proportions of type I and II hair cells affects vestibular neural activity and animal behaviors. The knowledge gained will provide novel insights into mammalian vestibular hair cells that may help investigators develop therapies to restore balance function to human patients.
Genetic, Metabolic and Regulatory Control of MIC and Relapse in M. tuberculosis 5R01AI146194-02 NIAID	David. R. Sherman dsherman@uw.edu	3/10/2020 – 2/28/2025	Any level	We recently discovered that small differences in bacterial susceptibility to TB drugs are important predictors of treatment outcome, but what drives those differences is not known. This project unites three labs with highly complementary expertise to interrogate how M. tuberculosis clinical strains respond to treatment. We will apply with leading edge approaches in genetics, metabolism, gene regulation and network-based modeling to reveal fundamental new knowledge about TB that could lead directly to shorter treatment times and better treatment outcomes.



Understanding the role of TP53 mutation in genetic susceptibility to ovarian cancer 1R01CA259384-01 NCI	Rosana Risques rrisques@uw.edu	4/1/2021 – 3/31/2026	Grad (PhD/MD) Post-doc Faculty	The biological mechanisms that drive genetic susceptibility to ovarian cancer are not well understood. This grant will use ultra- sensitive sequencing to characterize with high resolution TP53 mutations in fallopian tube during normal aging and in women with susceptibility to ovarian cancer to determine whether elevated risk of ovarian cancer is associated with increased somatic TP53 clonal evolution. This research will increase our understanding of ovarian carcinogenesis and enable to develop better strategies for ovarian cancer prevention and prediction.
Acceptability of Sustained- Release Antiretrovirals for Treatment in the US and sub-Saharan Africa 5R01MH121424-02 NMH	Jane Simoni jsimoni@uw.edu	9/17/2019- 7/31/2024	Post-doc Faculty	The development of sustained-release or long-acting injectable antiretroviral therapy (LAI ART) is an important technological advance that could increase ART uptake and adherence by providing new options to support viral load suppression. The proposed work will advance LAI ART product development efforts by providing key estimates of acceptability and patient preferences, enabling funders, product developers, and policy makers to optimize products for the greatest likelihood of uptake, adherence, and long-term viral suppression.
Rural comorbidity and HIV consequences of opioid use research and treatment initiative (Rural cohort) 1U24DA048538-01 NIDA	Heidi Crane hcrane@uw.edu	4/1/2019 – 3/31/2024		Longitudinal studies are key to understand the evolving and increasingly rural opioid epidemic in the United States. Individual studies are addressing key questions regarding opioid use and its consequences in the United States but cannot address many of the important questions related to HIV risk and other consequences which require larger sample sizes and greater generalizability. By integrating and linking data across studies we will achieve the sample sizes needed to better understand the consequences, impacts, and other lessons that can be learned regarding opioid use in rural communities.



Grant Title Award Number NIH Institute	Principal Investigator	Start – End Dates	Preferred Candidate- Level	Study Summary
Coordinating Center for Population-based Research to Optimize Cancer Screening (PROSPR) U24CA221936-04 NCI	Christopher Li cili@fredhutch.org	4/15/2018 – 3/31/2024	Graduate Post-doc	This PROSPR II Coordinating Center proposal builds upon the numerous successes of our leadership of the PROSPR I Statistical Coordinating Center. Our outstanding multidisciplinary team of investigators has considerable experience both in leading multiple coordinating centers and in conducting research on screening for cervical, colorectal, and lung cancers. The specific aims of our proposal are to: 1. Provide administrative coordination for the PROSPR Network, 2. Lead the development of common measures for systems-level factors that impact the screening process and screening quality, 3. Facilitate trans-PROSPR research, and 4. Develop and implement processes to share PROSPR data.
Genetic requirements of Helicobacter pylori infection 2R01AI054423-16 NIAID	Nina Salama nsalama@fredhutch.org	12/2/2003- 1/31/2026	Undergrad Post-bac Grad (PhD/MD) Post-doc Faculty	Helicobacter pylori infect the human stomach of 50% of the world's population where it can cause mild inflammation, ulcer disease and even gastric cancer, depending in part on the genetic diversity of the infecting strain. In this project we study the genes and mechanisms contributing to chronic colonization to identify the mediators of persistent infection. Our studies of genetic variation during stomach infection will show how these mediators adapt during the chronic inflammation that leads to severe disease (cancer).

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#### NIH Diversity Supplement: Eligible Grant List

Grant Title Award Number NIH Institute	Principal Investigator	Start – End Dates	Preferred Candidate- Level	Study Summary
Multilevel Interventions to Increase Adherence to	Karen Wernli karen.j.wernli@kp.org	7/15/2021 – 6/30/2026	Pre-doc Post-doc	Screening for lung cancer has the potential for a profound public health benefit. Repeat annual screening is necessary for early
Lung Cancer Screening	, r 6			detection of lung cancer. We will test two interventions which include patient education and reminders to improve adherence to
1R01CA262015-01				lung cancer screening.
NCI				