Project Title: **The effect of social determinants of health on decisions to get COVID-19 boosters among predominantly Black and Latino communities with and without long COVID in NYC: Preparing for next generation of COVID vaccines.**

Preferred Scholar On-Site Project Dates: Flexible 8-10 weeks (June 2024 to October 2024)

Project Site: New York, New York (Columbia Research Unit)

Project Overview:

As part of your work with the Columbia Research Unit, you will collaborate with an interdisciplinary team of clinical research investigators on a project regarding community and household level factors as well as persistence of long COVID impacting the decision to accept COVID vaccines and boosters among predominantly Black and/or Latino community members accessing care at Columbia University Irving Medical Center.

The goal of the project is to understand social determinants of health and household level factors that impact decision to get COVID boosters. Decisions to get the booster may be a good proxy for decisions about testing and implementation of next generation COVID vaccines. The project specifically seeks to understand potential associations between history of COVID-19 (presence or absence of persistent symptoms, post-acute sequelae of SARS-CoV-2/ Long-COVID), social determinants of health (individual level factors such as access to clinical care and health literacy, access to technology, food insecurity as well as discrimination) as well as household level factors (eg. Neighborhood and household composition) and uptake of vaccine in order to better understand barriers to ongoing COVID vaccination. This information collected via questionnaires, will provide the basis for developing and refining outreach strategies and educational materials for engaging diverse communities in next generation COVID vaccine and by extension, HIV vaccine studies.

As a member of the research team, you will spend 8-10 weeks learning how to recruit, consent, and enroll community members into a survey-based prospective cohort study. You will learn how to review study data and work with the clinical research team, epidemiologists, and statisticians to analyze data and complete a manuscript to describe study findings. You will work with the investigators and the community education team to develop social media content [Columbia research unit blog and fliers] to support increasing awareness about next generation COVID vaccine research and uptake of new formulation of COVID vaccines.

This project involves working onsite at our research unit in New York City. If COVID-19 restricts travel, the project can be done remotely with secured access to electronic health records and other media for communication. Specific responsibilities may change (for example, focus on literature reviews, chart review and development of recruitment/educational materials related to HIV/COVID and sexual health, and on-line or phone recruitment/screening for this study as well as HIV vaccine studies)

Project Summary:

This project aims to understand social determinants of health and household level factors that impacted decision to get vaccinated in order to pave the way for testing and implementation of next generation COVID vaccines. The catchment community and patient population accessing CUIMC is comprised of predominantly Black and Latino patients, who have been disproportionately affected by the COVID-19 pandemic. We will enroll community members in a prospective study using longitudinal online surveys. Participants will complete online surveys regarding demographic information, social determinants of health, household composition, history of COVID-19 infection, history of COVID-19 vaccination, post-

COVID symptoms. You will work with the community engagement team to develop social media material based on findings from the surveys.

Study hypotheses and objectives include:

Hypothesis 1: In this sample, people diagnosed with long-COVID (post-acute sequala of COVID or PASC) or reporting persistent symptoms will take up COVID-19 boosters at different levels than those who had COVID-19, but no PASC diagnosis or persistent symptoms or never had COVID-19 at all.

Hypothesis 2: If an association between, PASC/persistent symptoms and decision to get COVID-19 vaccine booster is observed, the associate will differ by individual- household- and or structural-level demographic factors and other social determinants of health at the, including household and community factors.

Objective 1 and 2: Use quantitative survey data collected via the electronic questionnaire conducted at least 9 months after infection. Sequelae self-reported in the electronic questionnaire will be defined several ways using several variables on history of infection and symptoms; 1) as a binary variable (yes/no), 2) as a linear variable measuring severity of symptoms, and 3) >2 symptoms self-reported.

Use quantitative survey data to assess self-reported COVID booster uptake stratified by presence or absence of Long COVID. We will compare among the following groups COVID+/PASC vs. COVID+/no PASC vs. never COVID.

Objective 3: Use data collected from questionnaires to tailor social media and outreach materials (blog and fliers) to promote awareness of next generation COVID vaccines.

Regulatory requirements for the project and plans for completing them:

This project has been approved by the Columbia University Irving Medical Center Institutional Review Board. RAMP Scholar will need to complete CITI and other required IRB trainings to be added to the IRB protocol. We will assist in completing all the necessary modules, and IRB modifications to add personnel are approved quickly.

All participants will be assigned a PID, and data will be collected using the PID. Data will be coded using the PID. A linkage file that matches the name and PID will be created; it will be a password-protected file accessible only to research staff. It will be maintained separately from other study related materials. This file will be accessible only to research staff. Access to this data will be limited to only study personnel who have a need for this information. All electronic data will be maintained only with PIDs within a university server on password-protected computers, certified encrypted endpoint, and REDCAP.

Expected Deliverables:

1. HVTN – presentation
2. Scientific Abstract and Manuscript for submission
3. Learn about HIV prevention methods including approved methods and investigational strategies; learn how to explain research studies to potential participants and community members
4. Learn the informed consent process for research studies and specifically for the primary project
5. Learn data collection using questionnaires and electronic medical records [if appropriate] to answer the research question.
6. Develop analysis plan and carry out data analysis with appropriate support

7. Develop health education tools and disseminate research findings: Work with the Community Education and recruitment team and the mentors to develop materials that explain and disseminate study findings and promote awareness of upcoming COVID vaccine studies
8. Prepare and deliver a presentation of preliminary and final study results to the Columbia HIV Prevention CAB and site staff [staff meeting]
9. Participate in drafting of abstract, and a manuscripts

Project Contact Person(s) (Name, Email):

Dr. Delivette Castor (dc2022@cumc.columbia.edu)

Dr. Magdalena Sobieszczyk (mes52@cumc.columbia.edu)

Dr. Deborah Theodore (dat2132@cumc.columbia.edu)