

## **ADVANCE LEADERSHIP DEVELOPMENT PROGRAMME (LDP) 2023 COHORT 2**

### **Uganda**

#### **Anne Kapaata**



Anne Kapaata, BSc, MSc, PhD. has been with the MRC/UVRI & LSHTM since 2006 as a laboratory technologist in Uganda, upgraded to an MSc in 2012 with funding from the MRC and later obtained her Ph.D. in May 2022 which was supported by International AIDS Vaccine Initiative (IAVI). For her PhD. she examined Genotypic and Phenotypic Characterization of HIV-1 transmitted/founder viruses and their effect on cytokine profiles and disease progression among acutely infected Ugandans. Subtype analysis of inferred transmitted/founder viruses showed a high transmission rate of inter-subtype recombinants (69%) involving mainly A1/D, while pure subtype D variants accounted for one-third of infections (31%). The signal peptide-C1 region and gp41 transmembrane domain were hotspots for A1/D recombination events. Using a novel protein domain approach, she documented diversity in the functional protein domains across the Gag-Pol region and identified differences in the Gag-p6 domain that were frequently associated with higher in vitro replication. HIV-1 subtype D exhibited significantly higher median concentrations of cytokines than subtype A. cytokines IL-12/23p40 and IL-1 $\alpha$  were associated with faster CD4+T cell count decline while basic fibroblast growth factor was associated with maintenance of CD4+T cell count above 350cells/microliter. This work was funded by IAVI and supervised by Professors Pontiano Kaleebu, Eric Hunter and Moses Joloba, and Dr. Jesus Salazar Gonzalez. She is currently a post-doctoral scientist on the virus surveillance project funded by IAVI where she is currently looking at identifying HIV-1 transmission signatures associated with HIV-1 transmitted/founder viruses in East Africa.

#### **Annet Nanvubya**



Dr. Annet Nanvubya is a practicing Medical Doctor and researcher currently working with the UVRI-IAVI HIV Vaccine Program as the Clinical Trials Manager in Uganda. She holds a Ph.D. in Medical Sciences from the University of Antwerp in Belgium. She oversees the conduct of clinical trials at the UVRI-IAVI HIV Vaccine Program. This includes registration of the study protocols with local and international regulatory bodies and ensuring that Good Clinical Practices according to the International Conference on Harmonization are followed. She takes part in recruiting trial participants, ensures that participants meet protocol requirements, and gives their informed consent to participate. She also monitors their safety throughout their participation in the clinical trials. She ensures that appropriate data collection tools and clinical SOPs are in place. She monitors and tracks progress and obstacles during clinical trials and responds to day-to-day problems. In the past, she participated in epidemiological studies in high-risk fishing communities and clinical trials which evaluated the safety and immunogenicity of various vaccine and drug candidates. She has also served as a co-Principal Investigator for two-phase I/II HIV Vaccine trials, and she is currently part of the clinical team that is conducting the first phase III PrEP trial evaluating the safety of cabotegravir among high-risk women in fishing communities. She is currently a Principal Investigator of a Phase III COVID-19 trial that is evaluating the safety and efficacy of the Moderna vaccine in Africa and is a member of the Executive management committee for the UVRI-IAVI HIV Vaccine Program.

### **Paul Kato Kitandwe**



Paul is a Ph.D. fellow with the MRC/UVRI & LSHTM Uganda Research Unit (MUL). His Ph.D. research which is being done under the London School of Hygiene and Tropical medicine is focused on the development of a self-amplifying RNA (saRNA) vaccine against Rift Valley fever. Paul is also working on an IAVI ADVANCE-funded project to establish the capacity for the conduct of preclinical research on mRNA HIV vaccines at MUL. Before joining MUL, Paul worked at the UVRI-IAVI HIV Vaccine Program Laboratory as a Laboratory Technologist, Quality Assurance Manager, and Laboratory Manager. In these roles, he performed and oversaw the conduct of safety and immunogenicity testing for several HIV vaccine candidates in phase I and II clinical trials. Paul's career goal is to become an internationally recognized scientist in the area of preclinical research and development of mRNA vaccines against HIV and other emerging, re-emerging, and neglected infectious diseases and to build local capacity for the conduct of such research.

### **Ali Ssetaala**



Ali is a medical doctor with a keen interest in improving women, and children's health, and preventing HIV among hard-to-reach marginalized most at-risk populations. He has over 10 years of research experience in conducting epidemiological research in fishing communities on Lake Victoria focusing on maternal health and HIV prevention. Currently pursuing a Ph.D. in Health Sciences at Ghent University. He heads the community studies department for UVRI-IAVI HIV Vaccine Program, in Entebbe, Uganda. A Community-based HPV screening implementation in low-income countries (CHILI project. <https://chili-hpv.com/>), as the lead investigator for Uganda. Community Health Workers improving maternal health in fishing communities on Lake Victoria, as the lead investigator. PURPOSE 1 trial (co-investigator), HPTN-084 trial (trial physician), and Multi-site Adolescent girls and young women project as an investigator.

### **Emily Ninsiima**



Emily Ninsiima (BMLS, DPPM, MPH) is currently the Laboratory Manager at UVRI-IAVI HIV Vaccine program in Entebbe, Uganda. Her major role is to oversee the clinical safety testing and provide clinical diagnostic support services to all the site clinical studies and trials. She has 15-year experience in clinical trials, laboratory management, quality management, mentorship, and leadership. She ensures that studies are conducted in compliance with study protocols, analytical plans, and GCLP principles and is involved in the evaluation of the safety and immunogenicity of vaccine candidates and other study products in Clinical trials. She hopes to provide the necessary leadership and scientific expertise to find a solution to the HIV epidemic.

## **Kenya**

### **Daniel Muema**



Daniel is a Scientist at the KAVI Institute of Clinical Research at the University of Nairobi in Kenya. He holds honorary affiliations with the University of KwaZulu-Natal and the Africa Health Research Institute. His work mainly entails characterizing immune responses to guide the development of HIV vaccines. He is currently involved in the evaluation of antibody responses in the IAVI G003 clinical trial with the aim of determining if eOD-GT8 is immunogenic in the African population when

administered on an mRNA platform. He is also investigating the factors that could influence the responsiveness of African populations to eOD-GT8 and other HIV vaccine candidates at the population level. In addition, he studies HIV-infected individuals who have naturally developed broadly neutralizing antibodies to determine the B-cell profiles that need to be induced to increase the likelihood of eliciting broadly neutralizing antibodies upon vaccination, and has a special interest in training upcoming researchers; he is currently supervising two Ph.D. students and two masters students.

### **Sharon Owour**



Sharon's broad scientific vision and interest is understanding the interdisciplinary approaches to vaccine discovery towards the identification of an HIV vaccine, with special focus on an antibody-based approach. The field of HIV/AIDS is of particular interest to her because Africa is disproportionately burdened by the epidemic. Forty years later, the search for an effective HIV vaccine continues and this revolves around the virus, host, host genetics and the environment. She states "We have seen the advances in HIV research find practical application in other related diseases, specifically with the recent COVID-19 pandemic, where similarities between HIV and COVID-19 guided the pandemic containment. COVID-19 vaccine rollout and administration were faster in the west. This distribution was partly informed by regional health inequalities as evidenced by disparities in confirmed COVID-19 related deaths. The expertise applied in designing the HIV native trimer BG505, informed the design of the SARS-CoV-2 spike protein which was expressed in some COVID-19 vaccines. The Moderna COVID-19 vaccine uses the mRNA approach; like the G003 HIV clinical trial approach. Health disparities saw Africa experience massive delays in vaccine roll-out, yet the continent has been resilient." Her research interests include interest in Bioinformatics as a tool that is indispensable in analyzing sequencing data for answering key research. As she works towards becoming an independent researcher, she is keen to acquire the appropriate set of skills that will help her to attain her goal. "This Leadership Development Programme is going to be of extreme benefit to my career".

### **Teresia Muhomah**



Teresia Muhomah, Ph.D. is a postdoctoral scientist working at KAVI- Institute of Clinical Research, University of Nairobi, Kenya. She holds degrees from Jomo Kenyatta University of Agriculture and Technology and University of Nairobi both in Kenya as well as Okayama University, Japan. Her Ph.D. focused on gut immunology and environmental factors that affect the secretion of secretory immunoglobulin A. Her postdoctoral research work focuses on two main areas; the first is in mucosal immunology where she is working on understanding the mucosal factors that influence HIV infectivity, specifically in the female genital tract, and the second is in preclinical research where she is interested in exploring the African Green Monkey as a model for HIV preclinical investigations. In addition to these focal areas, she is also involved in characterizing the immune responses of the Kenyan population in the context of the circulating SARS-CoV-2 variants. Her career goal is to be an independent researcher who will use basic and translational research to solve maternal, infant, and young child health challenges resulting from HIV/ AIDS.

## Rwanda

### **Felix Musabirema**



Since graduating from university Felix has been carving out a niche in health system strengthening and clinical research. He obtained his medical degree from the University of Rwanda. Felix's clinical and research activities in Rwanda, Haiti, and Madagascar piqued his interest in clinical research, leading him to pursue a Master of Science in health risk management from the Universities of Liege and Libre de Bruxelles in Belgium. He researched multistakeholder collaboration in the fight against neglected tropical diseases in Madagascar while studying in Belgium to support WHO in upgrading its programmatic approach to NTD management. Before joining the Center for Family Health Research in 2021 as a research physician, he worked as a doctor and medical coordinator in Rwandan public and private institutions. He worked as a deputy chief medical officer in Haiti for the United Nations. His clinical and leadership experiences motivated him to pursue a career in clinical research conduct and management and aspire to be a renowned and independent researcher in clinical trials that are meant to address the most pressing and complex health issues of our time.

### **Claudine Umuhoza**



Claudine is a medical doctor by training from the University of Rwanda, she has been working with the Center for Family Health Research (CFHR) since 2020, and she is currently the study coordinator at CFHR for different clinical trials and Data manager for the Ebola vaccine clinical trials in pregnant women. Claudine holds a master's degree in public health from Yonsei University in South Korea and a Master of Science in Preventive cardiovascular medicine from the University of South Wales, she is passionate about clinical research, project, and data management, and making a significant contribution to clinical scientific research in Africa.

## India

### **Ruthu Nagaraju**



Ruthu Nagaraju is a Senior Research Fellow sponsored by the Indian Council of Medical Research (ICMR) and pursuing a Ph.D. (4th year) at the National Institute of Mental Health and Neurosciences (NIMHANS), Department of Neurovirology, Bangalore, India. The title of her Ph.D. thesis is "Immune activation in HIV-1 infection: A comparative study among pre-ART individuals and those on ART with chronic infection". Her research focuses on the factors responsible for the non-restoration of CD4 T cell counts to normal levels in a significant proportion of HIV-1 patients, despite prolonged antiretroviral therapy (ART) and undetectable viremia. In this context, Ruthu's research topic attempts to understand the interactions between various immune cells that possibly contribute to non-restoration of CD4 T cell counts in HIV-1 infected subjects, as low CD4 T cell counts associated with prolonged ART are linked to non-AIDS complications in these patients.

### **Jasvir Kaur**



Jasvir Kaur, Ph.D., is a Senior Nursing Officer at the Vaccination Centre, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India – A designated Centre of Excellence for HIV Care accredited to the National AIDS Control Organisation (NACO), India. She has been involved in COVID-19 vaccination and related research and was awarded a certificate of appreciation from the Director, PGIMER, Chandigarh, for her valuable contribution to COVID-19 vaccination in the Institute since its rollout in 2021. She holds postgraduate degrees in 'Community Health Nursing' and 'Psychology' and completed her Ph.D. in 2019 from the School of Public Health, PGIMER, Chandigarh. Her doctoral work presents theory-guided information technology-enabled novel health promotion intervention evaluated using a randomized controlled trial design in a community setting. Through the Centre for Sexuality and Health Research and Policy (C-SHaRP), Chennai, India, she has been involved in LGBT health research: pilot intervention among healthcare workers to reduce stigma and discrimination faced by MSM and transgender women in healthcare settings; syndemics and HIV risk among transgender women; stigmas and mental health among MSM; smartphone-based pilot HIV-prevention intervention among transgender women. She is a co-investigator in an ICMR-IAVI-supported ongoing HIV-related project administered by NIAS (National Institute of Advanced Studies), Bengaluru, India, in collaboration with C-SHaRP: "Influence of minority and COVID-19 stressors on HIV risk and access to services among MSM and transgender women". She has published several peer-reviewed articles in international journals and chapters in books. Health promotion for all, including sexual and gender minorities, in clinical and community settings, constitutes her research interest.

### **Pruthvi S Gowda**



Dr. Prithvi S. completed a MD in community medicine at KIMS Bangalore and has worked as an Assistant professor at Sathagiri Institute of Medical Science & Research Centre for 2 years. Currently working as Medical officer at ART centre, KIMSH&RC Bangalore. Pruthvi has experience working as an external monitor of WHO-NPSP in IPPIP, in Mission Indra Dhanush, in tOPV to bOPV switch, and as an external Monitor of UNICEF in the MR campaign, and has exposure in conducting school health examinations, health camps among factory workers. Practical hands-on experience in Allergy clinic, Allergen Immunotherapy, Anti Rabies clinic, and Adult immunization clinic. Worked as a supervisor for the Intensive pulse polio immunization programme, as a vaccinator for the Measles-Rubella campaign. Prithvi has experience in conducting Immunization sessions, ANC checkups, management, and organizing health programmes, and events, and exposure to diagnosis, counseling, treatment, and follow-up of PLHIV. Prithvi is well-versed in state 14, epi info statistical packages and is involved in research studies.

### **Sohini Mukherjee**



Sohini is an experienced scientist with a demonstrated history of working in the field of catalysis (with experience in electrochemistry, spectroscopy, surface chemistry, and synthesis) for clean energy and environment and biophysics and biotechnology (with experience in working with E. coli bacterial cells, protein expression, purification by liquid chromatographic technique & biophysical/biochemical characterization) for biomedical applications. Sohini is a highly motivated and detail-oriented scientist with 6 years of Ph.D. experience in Chemistry from the Indian Association for the Cultivation of Science, India, and 3 years of post-Ph.D. experience in biophysical chemistry, molecular biology, and cell biology from the University of Pennsylvania, USA. To date, Sohini has

published 7 research articles in international peer-reviewed journals and a book chapter in an international book as a first author. So far has attended 6 international conferences in bioinorganic chemistry, biophysics & biochemistry, vaccine, and immunology, etc. Sohini has experience working in corporate publishing and IT sectors as well. Sohini is leading two different projects with a team of 4 people in the current position at IAVI THSTI.

#### **Natarajan Sudhakar**



Dr. Sudhakar Natarajan, Ph.D., is a Scientist working in the Department of Virology and Biotechnology at National Institute for Research in Tuberculosis (NIRT), Chennai, India. He has finished his M.Sc in Molecular Biology, M.Phil in Biochemistry, and Ph.D in Molecular Oncology. His Ph.D thesis on “Molecular analysis of T-cell receptor (TCR) and Immunoglobulin heavy chain (IgH) gene rearrangements in Acute Lymphoblastic Leukemia”. He has a post-doctoral stint at National Cancer Institute (NCI), Frederick, USA. He is a Co-Investigator in the establishment of the Viral Research and Diagnostic Laboratories (VRDL) facility at NIRT, which has been funded by the Department of Health Research, Govt. of India. His research interests include Molecular biology & Molecular Virology, Genomics & Transcriptomics of Tuberculosis (TB), HIV, COVID-19, and emerging infectious diseases. He is also working on the development and validation of a diagnostic kit for the early detection of Human papillomavirus (HPV) infection in Cervical cancer. He has more than 20 publications in peer-reviewed journals to his credit. Dr. Sudhakar would like to take a position of leadership in research of public health importance in the areas of molecular diagnostics, and vaccine development in HIV, TB, and emerging infectious diseases.

#### **Murali Shunmugam**



Murali Shunmugam, M.S.W., is a Co-director of the Centre for Sexuality and Health Research and Policy (C-SHaRP), a not-for-profit research agency in Chennai, India; and is a social worker by profession and graduated from Madras Christian College in 2002. Since then, he has been working in the field of HIV/AIDS, managing several national and international research and advocacy projects. He has co-authored more than 15 articles in International peer-reviewed journals and presented several papers at International and National AIDS conferences in the areas of stigma and discrimination and access to health services for marginalized communities such as men who have sex with men, transgender women, sex workers and people living with HIV.

#### **Jatin Chaudry**



Jatin has been working with The Humsafar Trust for almost three years. Has a bachelors in Dentistry and completed a Master's in Public health from AIIMS Rishikesh, India. Jatin is a public health researcher and has been working on various research projects being implemented by The Humsafar Trust. Some of them include social media-based HIV prevention intervention for Men who have sex with Men (MSM) community, the representation of Mental health on social media, and its impact on the mental health of the LGBTQ community. Jatin has recently started working with male and female sex workers on issues such as safer sex practices; struggles faced during COVID-19, and HIV Vaccine Target Product Profile (TPP).

## South Africa

### **Nompumelelo Mkhwanazi**



Nompumelelo Mkhwanazi, PhD is the faculty member and research supervisor of the HIV Pathogenesis Programme and Lecturer in Human physiology and medical microbiology at the University of KwaZulu-Natal, School of laboratory medicine and medical science. She has worked at the HIV pathogenesis programme for more than 15 years. She has vast experience in HIV immunology, Pathogenesis, and HIV drug resistance. She graduated with a Bachelor of Science (Biochemistry and microbiology) and BSc (Hons) in Biochemistry from the University of KwaZulu-Natal, South Africa. She graduated with a Master in Medical Science degree and a PhD in Virology from the University of KwaZulu-Natal. Nompumelelo's research interest is understanding the host-pathogen interactions, mainly antiviral immune responses associated with protecting against or controlling HIV infection. She is also interested in the antiviral screening of secondary metabolites from endophytic fungi and bioactive compounds from natural products. Her research focuses on harnessing the antiviral activity of natural compounds for HIV cure development. She investigates the role of the HIV-1 Tat proteins and anti-Tat antibodies in developing an effective prevention vaccine. She has expertise in virology, immunology, drug development and screening, and virus/host interactions. She has co-authored more than 15 peer-reviewed publications. She actively participates in training undergraduate and postgraduate researchers and has supervised and is currently supervising more than seven master's and doctoral students.

### **Itai Ncube**



Itai is dedicated and passionate about HIV/TB research. Itai's main area of interest is immunology basic and applied. Has two master's degrees, a Master of Technology in Biomedical technology from the University of Johannesburg, and a Master of science in medicine in Vaccinology from the University of the Witwatersrand. Itai has always been interested in understanding immunology and how the body responds to infections such as HIV. Itai has always wanted to be part of a leading team that is going to illuminate a path that will lead to a vaccine or a product that can be efficient in the prevention of HIV/TB. And is keen on increasing knowledge through this IAVI LDP. Itai enjoys teaching and is hopeful that one day soon will also be able to share knowledge and thoughts with the next generation of scientists.

### **Nomfanelo Maenetje**



Nomfanelo holds a Master's degree in Biomedical Technology and is currently employed as a scientist at the Aurum Institute, involved in Basic Science research. She has more than 10 years of experience in basic science research. She has been involved in several Clinical Trial studies and is passionate about understanding and identifying precursor B-cells as one of the strategies for developing HIV vaccines through Germline targeting and broadly neutralizing antibody induction. She is a strong-willed and resilient woman with a good work ethic who always strives to excel as she seeks to improve her knowledge and expertise whenever an opportunity arises. She has successfully set up a few assays in anticipation of new HIV Clinical Trials.

### **Paradise Madlala**



Dr. Paradise Madlala is a Senior Lecturer and Faculty member at the HIV Pathogenesis Programme in the School of Laboratory Medicine and Medical Sciences, College of Health Sciences at the University of KwaZulu-Natal. He obtained his Ph.D. in Genetics and subsequently worked as a postdoctoral fellow at Katholieke Universiteit (KU) Leuven, Belgium investigating the molecular mechanisms of HIV-1 elite control. His current research focuses on understanding the molecular mechanisms that govern HIV latency, which is the major barrier to HIV cure development. Particularly, his research seeks to determine the role of the HIV promoter, 5' long terminal repeat (LTR) element and Transactivator of transcription (Tat) in regulating viral latency. Understanding the mechanisms that block replication in vivo could provide valuable clues to guide research on HIV cure development. He has received several grants including the South African Medical Research Council (SAMRC)-Strategic Health Innovation Partnerships (SHIP) HIV cure award and UCSF-CAFAR awards as the Principal Investigator. He received Research-for-Cure Academy Fellowship Prize from ABIVAX and the International AIDS Society (IAS) and is the Pioneer of this HIV Cure Research Award. Subsequently, he received an invitation from Towards an HIV Cure Team (International AIDS Society) to join the faculty for the Research-for-Cure Academy.

## **Zambia**

### **Kalonde Malama**



Kalonde MPH, Ph.D., is an epidemiologist at the Center for Family Health Research in Zambia. His experience over the past 10 years spans service delivery and research programmes for HIV prevention in sub-Saharan Africa. He has overseen a successful sexual and reproductive health programme and a cluster randomized HIV prevention trial in Zambian government clinics. Kalonde has also supported various Southern African Ministries of Health in implementing demand creation and costed implementation plans for couples' voluntary HIV counselling and testing. He has led research to improve sexual and reproductive health equity for diverse populations, including female sex workers, refugee youth, adolescent girls, and young women. Through his community-engaged research, Kalonde hopes to contribute to improved access to HIV prevention interventions for the populations most in need of them.

### **Chama Chanda**



Dr. Chama Chanda is a medical manager/study physician at the Center for Family Health Research in Zambia (CFHRZ) – Lusaka. He's a frontline public health programs research expert at the clinical research site in Lusaka, Zambia. He has been instrumental in ensuring timely patient flow, obtaining medical history, and performing physical examinations of study participants. He makes appropriate referrals when required and identifies and provides adequate reporting and follow-up of Adverse Events/Severe Adverse Events until resolution.

He has a track record of successfully working with the Zambia National Ministry of health, and has experience implementing public health programs in multicultural, complex environments. Has managed Zambia Integrated Systems Strengthening Program in Northwestern province implementing health systems strengthening interventions (Mentorship and Quality Improvement). He has demonstrated the ability to deliver high-quality results and impact within specified timelines.

### **Loveness Mukuka**



Loveness has worked with several projects dealing directly or indirectly with HIV research, first worked with the Aids Healthcare Foundation (AHF), Zambia AIDS-Related Tuberculosis (ZAMBART) project, Self-Testing HIV Africa (STAR) project, Population ART-HIV Prevention Trials Network (HPTN 071) project and currently working with the Center for Family Health Research in Zambia (CFHRZ) under the International AIDS Vaccine Initiative (IAVI) project, all these Projects have a common goal: to create a world in which HIV no longer presents a threat to public health and individual well-being. At CFHRZ Loveness works as part of a young group of researchers participating in ongoing basic and public health research which includes research in HIV-1 vaccine design and development. As a Laboratory QA Manager, Loveness provides managerial, technical, and operational guidance for the Laboratory and ensures that it functions in line with GCLP guidelines. HIV Research has always formed a big part of her career. Her goal as a Research Scientist and Public health specialist is to bring a link between biomedical research and Behavioral Social Science research in the fight against HIV. The transmission of HIV/AIDS is interwoven with individual behavior and social context, without expansion of the research base in the social and behavioral sciences, the campaign against HIV/AIDS will be incomplete and less effective than it could be (NIH, 1995). She has a BSc degree in Clinical Bio-Analysis from the University Of Medical Sciences Of Matanzas in Cuba, and an MPH degree from the University of Lusaka.

### **Maria Mbewe Kaleji**



Maria is the Quality Assurance Manager at the Center for Family Health Research in Zambia (CFHRZ) - Ndola. She has a Master's degree in Public Health and a Bachelor's Degree in Microbiology and Biochemistry. Her goals and aspirations are to be part of a network of professionals who are able to make decisions that positively impact the world with regard to health care and make the world a better place; to be a change in the world. She had the privilege to author a research paper during the final year of her bachelor's degree program that ultimately got published in the International Journal of Pharmaceutical, Chemical, and Biological Sciences. She has also authored (with other authors) a study carried out at CFHRZ that was presented at the Research for Prevention (R4P) conference. She is the Principal Investigator for an observational study currently being carried out at CFHRZ that is sponsored by the International AIDS Vaccine Initiative (IAVI). She loves to travel and interact with people and learns so much from that.