Global
HIV Vaccine
Enterprise
IAS

International AIDS Society

2023 HIV Vaccine Science Academy

15 – 18 March 2023

Wits Rural Facility,
Bushbuckridge, South Africa

In partnership with:

science & technology
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

FACULTY OF
HEALTH SCIENCES

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Steering Committee

The steering committee comprises a group of experts in the HIV vaccine field and is responsible for the development of the HIV Vaccine Science Academy programme, the identification of key faculty and the review and selection of the fellows.

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Introduction

IAS Global HIV vaccine enterprise

The Global HIV Vaccine Enterprise of IAS – the International AIDS Society – aims to share knowledge, foster collaboration, enable solutions and expand support critical to the development of, and future access to, an HIV vaccine. It works to engage stakeholders and funders to accelerate HIV vaccine development and prepare the field for the future discovery of a safe, effective and globally accessible HIV vaccine. It does so by:

- Strengthening the HIV vaccine pipeline by encouraging diverse approaches in HIV vaccine research and advancing the HIV vaccine portfolio
- Expanding and diversifying engagement and resources by fostering interest in HIV vaccine R&D and broadening research talent within the HIV vaccine field
- Mobilizing knowledge to accelerate product development by driving opportunities to address unanswered scientific questions
- Leveraging synergies with other infectious disease research

2023 HIV vaccine science academy

The HIV Vaccine Enterprise Academy programme will be presented by a faculty of internationally renowned scientists, including vaccine researchers, social scientists and ethicists. The comprehensive programme will use a participative approach to deliver interactive classroom sessions on key topics related to HIV vaccine research. It will be complemented by supporting activities in between in-person teaching and training sessions.

Goals

- Significantly improve participant's knowledge of molecular biology, virology, immunology and/or clinical research that can be applied to address gaps in their research programme
- Participate to the creation of a sustainable network of African researchers
- Share and disseminate newly acquired knowledge to other researchers at their home organization.
- To facilitate global networking between early to mid-career African researchers and internationally renowned scientists.

Objectives

- Deliver training on state-of-the-art HIV vaccine research and development, notably vaccine design, trial design, laboratory and data analysis and training in the use of relevant scientific tools and skills (e.g., scientific writing).
- Provide opportunities for the participants to engage and discuss with leaders in the HIV vaccine field, in a retreat-type setting, with a view to build and facilitate collaborations in the search for an HIV vaccine.
- Give opportunities for the participants to establish a sustainable network across different research institutions and create momentum for African-led research.
- Facilitate identification of mentees for a mentorship scheme to ensure long-term beneficial impact and continued educational opportunities and to provide critical guidance and further networking.

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FACULTY OF HEALTH SCIENCES

Schedule

Wednesday, 15 March 2023

19:00	**Dinner** **Welcome and introductions** **Linda-Gail Bekker**, Desmond Tutu HIV Centre, South Africa **Vincent Muturi-Kioi**, IAVI, Kenya **Nicola Borthwick**, University of Oxford, UK **Roger Tatoud**, Independent Consultant, France **Nono Mkhize**, NICD, South Africa **Maria Papathanasopoulos**, University of the Witwatersrand, South Africa

Thursday, 16 March 2023

07:30 - 08:30	**Breakfast**
08:30 - 09:15	**Presentation and Q&A: HIV Prevention R&D: Where Are We Now and where do we go from here** Focus: PrEP, AMP trials, Vaccines Presenter: Linda-Gail Bekker
09:15 - 10:00	**Presentation and Q&A: Immunology session: Why T-cells matter?** Focus: mechanism, conserved regions, preventative and therapeutic T-cell vaccines Presenter: Nicola Borthwick
10:00 - 10:30	**Break**
10:30 - 11:15	**Presentation and Q&A: Immunology session: Latest results on bnAbs** Focus: a) Induction of bnAbs; b) passive immunization Presenter: Nono Mkhize
11:15 - 12:00	**Presentation and Q&A: Clinical trial management** Focus: a) Overview (toolkits EDCTP/MRC); b) Challenges of clinical trials in changing HIV PrEP landscape; c) Experimental medicine trials: what is it and what are the challenges? Presenter: Vincent Muturi-Kioi
12:00 - 13:15	**Break**
13:15 - 15:00	**Workshop: The Research Question – How to make a compelling case (Part 1)** Focus: Introduction & exercises Presenter: Roger Tatoud
15:00 -19:00	**Game Drive**
19:00 -21:30	**Dinner**

Schedule

Friday, 17 March 2023

07:30 - 08:30	**Breakfast**
08:30 - 10:00	**Workshop: The Research Question – How to make a compelling case (Part 2.1)** Focus: Presentation of concept notes on research question (homework) 3 slides/3 min on research question + 5 min feedback
10:00 - 10:15	**Break**
10:15 - 11:45	**Workshop: The Research Question – How to make a compelling case (Part 2.2)** Focus: Presentation of concept notes on research question (homework) 3 slides/3min on research question + 5 min feedback
11:45 - 12:00	**Workshop: The Research Question – How to make a compelling case (Part 3)** Focus: summary on feedback, review and rewrite concept note 1 faculty member supporting 3 fellows
12:00 - 13:00	**Lunch Break**
13:00 - 14:00	**Workshop: The Research Question – How to make a compelling case (Part 4)** Review and rewrite concept note 1 faculty member supporting 3 fellows
14:00 - 14:15	**Sanity Check** Group Feedback
14:15 - 15:15	**Workshop: The Research Question – How to make a compelling case (Part 5)** Review and rewrite concept note
15:15 - 15:30	**Break**
15:30 - 16:30	**Workshop: The Research Question – How to make a compelling case (Part 6)** Review and rewrite concept note
16:30 - 17:00	**Presentation and Q&A** Focus: Presenting for success Presenter: Roger Tatoud
17:00 - 18:00	**Workshop: The Research Question – How to make a compelling case (Part 7)** Fellows develop their presentation
18:00 - 19:00	**Leisure time**
19:00 - 21:30	**Dinner**

Schedule

Saturday, 18 March 2023

07:30 - 08:30	**Breakfast**	
08:30 - 10:00	**Presentation of revised concept notes & feedback**	
	08:30 - 09:00	Group 1
	09:00 - 09:30	Group 2
	09:30 - 10:00	Group 3
10:00 - 10:15	**Break**	
10:15 - 11:15	**Presentation of revised concept notes & feedback**	
	10:15 - 10:45	Group 4
	10:45 - 11:15	Group 5
11:15 - 11:30	**Closing remarks**	
11:30 - 12:30	**Farewell lunch**	

Faculty

The workshop faculty comprises internationally renowned scientists who will deliver presentations on key topics in the programme and support the fellows in the development of group projects.

Linda-Gail Bekker
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"Despite these advances that have reduced the ravages of HIV, an HIV vaccine remains elusive."

Magdalene Ameka
Kenya AIDS Vaccine Initiative (KAVI)
Country of work: Kenya

What is your motivation to work in the HIV vaccine field?

In my younger years, testing positive for HIV was a death sentence and there was no family spared by the AIDS pandemic of the '80s-2000s. However, with the expanded availability of antiretroviral therapy (ART) and lifestyle changes, HIV has become a less devastating chronic condition. With it, AIDS has morphed from a disease that was associated with derision, grief and death to a disease that can be well managed with adequate medical resources. This showed me that the burden of HIV is surmountable in our lifetime. Despite these advances that have reduced the ravages of HIV, an HIV vaccine remains elusive. If well managed and distributed, HIV vaccines could protect vulnerable individuals from debilitating health and lifelong ART that has its own grave side-effects. Therefore, my motivation to work in the HIV field is to eliminate the suffering caused by chronic disease and the chronic therapies meant to manage these diseases.

In my previous endeavours, I studied these aspects as they pertain to metabolic diseases in the West. I hope to apply cross-disciplinary approaches to stem the transmission of HIV via vaccine discovery and improve the management of HIV via social engagement.

What is your current role and area of work?

As a postdoctoral fellow at KAVI, I am applying my previous training in immunometabolism in cardiometabolic diseases to assess changes in immune cell metabolism with HIV infection. Here, we leverage the observation that leukocytes change their metabolic profiles when challenged with infection and these changes can be either beneficial or detrimental to host immune response and survival.

In a recent manuscript, we have characterized the glucose and lipid substrate utilization in circulating leukocytes with chronic HIV infection and now would like to profile the extant metabolic pathways in this context. Furthermore, we are interested in understanding the immunometabolic ramifications in HIV-infected tissues, particularly mucosal tissues that are the first point of contact during sexual transmission of HIV. We postulate that a clear profile of these changes can be utilized for improved viral surveillance and tracking efficacy of vaccine action, and perhaps this metabolite information can be utilized for immune cell training in specifically targeted vaccines.

"The number of people receiving lifelong HIV therapy has increased to almost 19 million worldwide."

Mildred Obare
Kenya Medical Research Institute (KEMRI)
Country of work: Kenya

What is your motivation to work in the HIV vaccine field?

HIV has become a manageable chronic health condition with the development of medicines, which are now administered as a single pill once daily. With test-and-treat methods and oral pre-exposure prophylaxis (PrEP), the number of people receiving lifelong HIV therapy has increased to almost 19 million worldwide. Nevertheless, despite these impressive developments, sustained combination antiretroviral therapy (cART)-mediated lowering of plasma viral loads to undetectable levels does not completely eliminate the virus, which frequently recurs quickly after treatment stoppage. Additionally, although cART has reduced mortality and morbidity among people living with HIV, long-term cART use is linked to an increase in several significant non-AIDS events (SNAEs). These SNAEs include chronic peripheral and central nervous system problems, cancer, liver disease and cardiovascular illnesses.

The necessity for a preventive HIV vaccine is highlighted by the numerous logistical restrictions and financial difficulties that come with providing lifelong care to people living with HIV. These circumstances compelled me to participate in every conceivable manner to effect change in the treatment and management of HIV and AIDS.

What is your current role and area of work?

I am a Research Medical Officer at KEMRI, with both quantitative and mixed methods research experience. I am committed to continuous clinical quality improvements and improved healthcare administration leveraging evidence-based medicine and data analysis on various medical conditions. I am the lead doctor in the KENSHE (Kenya Single-dose HPV-vaccine Efficacy) study protocol implementation at the KEMRI Kisumu site, which aims to identify effective cervical cancer prevention strategies. I work to promote integration of pre-exposure prophylaxis interventional research among adolescents.

I take interest in advocating for equal health rights of the marginalized in the community. I am committed to providing sustainable, achievable and quality care for all. My main research interests include understanding barriers to vaccination, such as provider and parental hesitancy, as well as intervention research aimed at improving vaccine delivery systems and how to incorporate artificial intelligence, data analytics and statistical methods in HIV treatment and prevention.

"Interventions performed on this population before 12 weeks of age have the highest impact..."

Chikondi Chapuma
Malawi Liverpool Wellcome Trust Clinical Research Program
Country of work: Kenya

What is your motivation to work in the HIV vaccine field?

I am currently working on a project that promotes retention in care for infants who test positive and negative for HIV and adherence to ART (for infants living with HIV). It is a known fact that vaccines prevent major infectious diseases of childhood (tuberculosis, rotavirus, measles, influenza, smallpox and polio). Now, while studies on HIV vaccines have been performed on the most vulnerable groups and not on this population for obvious ethical reasons, this is the demographic group that would benefit the most. Interventions performed on this population before 12 weeks of age have the highest impact on morbidity and mortality. While it may be challenging to think this far with the current progress of HIV vaccines, several trials and new approaches demonstrate feasibility (these include the RV144, the Ad26 mosaic trials, the PrEPVacc trial, new viral vectors, the antibody-mediated protection trials, the native-like envelope trimers, the bNab germline targeting, messenger RNA vaccines, native-like envelope trimers and the use of adjuvants like aluminium salts, liposomes, oil-in-water emulsions and aluminium salt containing absorbed MPLA). I am motivated to acquire research literacy in the HIV vaccine field to improve and reinforce my research concepts for my current and future studies. I am also motivated by networking opportunities.

What is your current role and area of work?

I am a medical doctor and epidemiologist by training with more than five years of experience in infectious diseases of poverty (HIV, malaria and tuberculosis) and maternal and child health. I am currently a doctoral student in global health metrics and implementation science at the University of Liverpool. I am an expert in establishing clinical trial infrastructure and electronic monitoring systems and contributing to the COVID-19 response. I am a member of a Maternal and Neonatal Surveillance team in Malawi, which has developed an online national maternal surveillance system (MATSurvey platform) for capturing data on the direct and indirect effects of COVID-19 on maternal and neonatal outcomes (including the rolling out of COVID-19 vaccinations).

I am working on improving the service outcomes (safety, timely, effectiveness, efficient, equitable and patient-centred) of infants exposed to HIV by undertaking a quality improvement (QI) project that aims to improve the receipt of six-week DNA-PCR results at a secondary-level hospital. This QI project promotes retention to care (for infants who test positive and negative for HIV) and adherence to ART (for infants living with HIV). Retention of care and adherence to ART is associated with a low viral load in infants living with HIV.

"It is important to seek a more reliable approach to ending the HIV epidemic, which is..."

Kennedy Anyachebelu
National AIDS, Sexually Transmitted Infections Control and Hepatitis Programme
Country of work: Nigeria

What is your motivation to work in the HIV vaccine field?

My motivation is working with key populations (female sex workers, men who have sex with men and people who inject drugs) who account for about 80% of new acquisitions. I am currently working with a community-based organization that has over 25,000 people enrolled in care. Given the high likelihood of transmission and poor accessibility of HIV preventive medicine and prevention care services, it is important to seek a more reliable approach to ending the HIV epidemic, which is the discovery of an HIV vaccine.

I have been extensively trained by the International AIDS Society on research for cure and was made to know the importance that the HIV vaccine would play in bridging the gap between prevention and cure. The HIV vaccine is currently undergoing clinical trials and the initial group of volunteers has shown good immune response, as published in the journal, Science, on World AIDS Day. This has further bolstered my desire as I see the end of HIV in sight. Regarding my position as I interact with local governments and state and federal level in HIV programming, I am poised to apply the practical knowledge and skills garnered from this academy and implement them effectively.

What is your current role and area of work?

I currently work as a Lagos State Clinical Mentor for the HIV programme in Lagos State, Nigeria, under the aegis of the NASCP. I work with seven community-based organizations with key populations, among them female sex workers, men who have sex with men and people who inject drugs.

My job involves the organization of capacity-building sessions for staff of the CBOs, identifying bottlenecks and offering solutions, and active participation in operational research, including research for cure (having been trained by the IAS) and prevention, especially development of vaccines. Additionally, my job description involves development of standard operating procedures for the provision of HIV clinical care at the health facilities in collaboration with the Ministry of Health. Affiliation with the CDC has been crucial in exploring a myriad of research options with a major interest in prevention as it pertains to medication and vaccines as modalities for ending the HIV epidemic.

"I am driven to work in the HIV vaccine field to advance self-knowledge and competence..."

Elizabeth Danstan
National Institute for Medical Research-Mbeya Medical Research Center (NIMR-MMRC)
Country of work:
United Republic of Tanzania

What is your motivation to work in the HIV vaccine field?

Despite the global and regional efforts put into HIV prevention interventions, the control of the HIV epidemic has remained challenging, especially in low- and middle-income countries. Most of the implemented HIV vaccine clinical trials have failed to demonstrate sufficient efficacy results. However, learning about the promising results of RV144 (the Thai trial) at the beginning of my career as a junior research scientist encouraged me to join the efforts to respond to this epidemic.

I am motivated to understand and explore the disease on the basis of effective preventive methods and good management outcomes for people living with HIV. The medical training in our country does not offer much knowledge in the area of HIV vaccine; this has made Tanzania lack expertise in this field. I am driven to work in the HIV vaccine field to advance self-knowledge and competence, as well as add to the little expertise available in our country. As efforts are focused on developing an effective vaccine that would be able to eliminate HIV, being part of this response in the context of vaccine development is my biggest motivation. Being a junior researcher from a low- and middle-income country is of huge benefit to my career growth and my country.

What is your current role and area of work?

am a medical doctor currently working as a research scientist at the NIMR-MMRC in Tanzania. I am engaged in HIV research, specifically clinical trials, as a clinician/sub-investigator for the studies that are conducted at the site. I am currently working as a clinician in the PrEPVacc clinical trial that is conducted in three countries in eastern and southern Africa. Tanzania is one of these countries. This is a Phase 2b study combining the evaluation of experimental vaccines and pre-exposure prophylaxis (PrEP) at the same time. My roles include: briefing participants with information about the study and attaining their informed consent; assessing the medical eligibility for participation in the study; provision of the investigator product (IP); assessing reactogenicity events related to the IP; attending to medical emergencies; identifying and reporting adverse events as per the guidance; and participating in the dissemination of research findings through publications and presentations in various local and international scientific platforms.

"A vaccine would be an essential tool in the response to HIV..."

Elizabeth Ntapara
National Institute for Medical Research-Mbeya Medical Research Center (NIMR-MMRC)
Country of work:
United Republic of Tanzania

What is your motivation to work in the HIV vaccine field?

As a study doctor working with the HIV vaccine trial unit, I was curious about how the gathered data advanced the search for an HIV vaccine. As author Mike Schmoker said, "Things get done only if the data we gather can inform and inspire those in a position to make a difference." This affirmed my desire to pursue an MSc in immunology of infectious diseases ... I needed to know more about the outcome of the collected sample. Having witnessed the challenge for the HIV communities, I dedicated myself to being part of the influences of change. The development of an HIV vaccine is a critical global health issue as the HIV pandemic poses a significant threat to public health. An estimated 38 million people were living with HIV at the end of 2020. Although antiretroviral therapy has dramatically improved the prognosis for people with HIV, there is still no cure. A vaccine would be an essential tool in the response to HIV and could help reduce the transmission of HIV and ultimately save lives. Working on HIV vaccine research makes me an advocate for innovative and inclusive scientific research that can inform health policy makers to regroup and strategize.

What is your current role and area of work?

I am an early-career researcher interested in promoting health and medical science technology in Tanzania. My career journey began in 2018 as a medical doctor at the NIMR-MMRC. I worked with human cohorts and clinical trials as part of the HIV Vaccine Trials Network (HVTN). My ambition to pursue a biomedical science career was driven by my participation in the HIV vaccine trials (HVTN 111, HVTN 703 and HVTN 120), where I developed an interest in immunology.

I was drawn to immunology because of its multidisciplinary role in science, ranging from modern antibody and cellular therapies to drug and vaccine development. In 2020-2021, I pursued my Master of Science from the London School of Hygiene & Tropical Medicine. I currently work with the Immunology Laboratory at the NIMR-MMRC, studying how different pathogens modulate our immune system based on the epidemics of global importance, such as HIV and TB. I aspire to advocate for changes in the healthcare system of Tanzania, focusing on infectious diseases to develop innovative ideas that inform health policies, reforms and strategies for better health.

"A total of 1.5 million people worldwide acquired HIV in 2021, implying that a vaccine is the most effective way of eliminating the HIV epidemic..."

Frank Msafiri
Muhimbili University of Health and Allied Sciences (MUHAS)
Country of work:
United Republic of Tanzania

What is your motivation to work in the HIV vaccine field?

Over 32 million people have lost their lives to AIDS-related illnesses since 1981, with central, eastern, western and southern Africa being the most affected region. Remarkable success has been achieved over the years in reducing AIDS-associated mortality and new HIV acquisitions by using non-vaccine interventions (like the use of ART, condoms and PREP). However, these gains will not be sustainable without using interventions whose effectiveness does not depend on human behaviour, as demonstrated by the slow decline in the rate of new HIV acquisitions. A total of 1.5 million people worldwide acquired HIV in 2021, implying that a vaccine is the most effective way of eliminating the HIV epidemic and ending the AIDS epidemic.

What is your current role and area of work?

I'm a clinical microbiologist at MUHAS, with a major interest in the use of vaccines to prevent the spread of infectious diseases and emergence of antibiotic resistance. I have recently defended my PhD in HIV vaccine immunology at Karolinska Institutet, Sweden. Currently, I work as a co-investigator and assistant laboratory coordinator in the Phase 2b HIV vaccine trial (PrEPVacc), MUHAS site (Dar es Salaam). In the trial, I'm responsible for quality assurance in the laboratory and supervision of all research-related laboratory investigations, such as PBMC separation, testing of HIV, hepatitis infections, syphilis and chlamydia, measurement of CD4+ T cells and viral loads. Additionally, I'm involved in educating study participants on study procedures in the PrEPVacc trial

"Crucially, this HIV Vaccine Science Academy will be a valuable opportunity to gain knowledge..."

Wilbert Mbuya
National Institute for Medical Research-Mbeya Medical Research Center (NIMR-MMRC)
Country of work:
United Republic of Tanzania

What is your motivation to work in the HIV vaccine field?

Four months ago, I successfully defended my PhD thesis. Currently, I am an immunologist at the NIMR-MMRC, Tanzania. During PhD training, I investigated immune cells phenotype and functionality in relation to pathogenic infections and vaccine induced responses. Furthermore, I contributed to designing and pre-clinical efficacy testing of a therapeutic HPV vaccine. While my doctoral training focused on investigating the mechanisms of HIV on cervical cancer, my postdoctoral research focuses on exploring the effects of HIV on immune cells lipid metabolism and HIV vaccinology. My motivation is driven by the fact that even though there are many vaccine trials conducted in Tanzania, few local scientists contribute to the design and pre-clinical evaluation of tested HIV vaccine candidates, therefore reducing potential benefits of vaccine candidates if licenced. I am motivated to close this gap by contributing to HIV vaccine innovation and pre-clinical investigations by tapping into the NIMR-MMRC's global network of HIV vaccine collaborators. Crucially, this HIV Vaccine Science Academy will be a valuable opportunity to gain knowledge on HIV vaccine science and network with senior HIV investigators. My goal is to utilize the skills, knowledge and network from this fellowship to improve the contribution of Tanzanian scientists in HIV vaccine design and evaluation.

What is your current role and area of work?

I am an immunologist at the NIMR-MMRC, engaged in the various HIV vaccine projects. The project, "A pilot study for systematic comparison of HIV vaccine-induced immune responses between Caucasian and African populations", compares immune responses to HIV vaccine candidates in Caucasian versus African populations in order to inform new HIV vaccine innovation. I performed laboratory investigations, and we are currently preparing a manuscript showing that vaccine-induced HIV-specific antibody responses differ between ethnicities for some envelope-variant-specific antibody responses. The project, "Clinical trial of a novel long-acting bispecific antibody to inform development of HIV pre- and post-exposure prophylaxis", investigates effectiveness of a novel antibody in preventing HIV acquisition by blocking CD4 receptors. I will perform laboratory investigations and data analysis. The project, "Building a platform for characterizing premature aging in HIV+ children on antiretroviral treatment", investigates the effects of HIV on immune cell metabolism and links metabolic shifts to suboptimal and less durable immune response to childhood vaccines, observed in children living with HIV. I coordinate laboratory investigation and analyse data, which has thus far led to one publication.

"My passion grew over the five years when I had opportunities to work with reputable organizations..."

Mafabi Twaha
The AIDS Support Organisation (TASO)
Country of work: Uganda

What is your motivation to work in the HIV vaccine field?

I am a trusted, patient-focused and experienced clinician with a passion for patient care. I am easy to get along with, results-oriented, hardworking and flexible. My passion grew over the five years when I had opportunities to work with reputable organizations for career growth, have an increase in my level of responsibility, and contribute to alleviation of pain attributed to HIV and AIDS.

What is your current role and area of work?

I currently work as the Site Study Coordinator for the fHI360-funded project called CATALYST-MOSAIC Study, a PrEP-linked project studying the use of the LA-CAB, oral PrEP and the vaginal ring. At TASO, my roles include:

- Participating in study-related training.
- Participating in development and review of study materials or research materials in requirement with the requirements of the approved protocols
- Ensuring timely recruitment and accrual of study participants at the site
- Being responsible for identifying social harms and protocol deviations or violations and reporting them through appropriate channels
- Ensuring that study participants sign the consent forms and that the forms are appropriately stored in a safe and private place
- Coordinating study progress meetings with country team staff as needed
- Monitoring confidentiality of study participants and ensuring that other ethical principles are adhered to by research and other service delivery teams
- Ensuring that necessary study materials are always available

"Most of the burden of infectious diseases like tuberculosis and HIV is in Africa."

Allan Baguma
Baylor College of Medicine Children's Foundation
Country of work: Uganda

What is your motivation to work in the HIV vaccine field?

The field of vaccine sciences is a novel, virgin field for many research sites in Africa. A lot of development is required, both structural and in human resource capacity. Vaccines have over the years eliminated infectious diseases, the first being smallpox. This is important for public health in central, eastern, western and southern African countries. Most of the burden of infectious diseases like tuberculosis and HIV is in Africa.

After the breakthrough for COVID-19 vaccines, especially mRNA technology, it is very important that we apply the same technology to try to come up with new preventive tools like vaccines and treatments for some of these diseases that have dodged science for decades. I would like to be part of these efforts. It is against this background that I pursued a Master of Advanced Studies in Vaccinology from the University of Lausanne. The training has bolstered my technical expertise in vaccine sciences and developments. This has come in handy at my host research site, which is now conducting vaccine trials.

What is your current role and area of work?

I am currently positioned as a study medical officer and Investigator for Phase 3 vaccine trials (COVPN 3008, COVPN 3005) and DAIDS network studies, especially HPTN 084 (HIV prevention study). I also double as a primary care physician for these studies, and I have held these positions for the past five years. Roles have included: conducted protocol specific trainings to study staff; generated standard operating procedures and study source forms for studies; interpreted protocols for implementation by study staff; obtained research approvals from research ethics committee; held site implementation meetings with protocol team and sponsors for the different studies; coordinated day-to-day operations of the studies; spearheaded safety follow up and medical care for study participants; submitted protocol event reports to protocol team and local regulatory bodies; and spearheaded enrolment of 210, 280 and 38 participants for the HPTN 084, COVPN 3008 and COVPN 3005 studies, respectively. I have provided primary medical care to participants in these studies and also thereby prescribed investigational products. I maintained retention at 93% for these studies and data quality reporting at 90% for timely entry of source data into the electronic case report forms.

"As a physician from one of the countries that are hardest hit by HIV and AIDS, I want to be part of the solution to ending it."

Annet Nanvubya
Uganda Virus Research Institute-International AIDS Vaccine Initiative (UVRI-IAVI) HIV Vaccine Programme
Country of work: Uganda

What is your motivation to work in the HIV vaccine field?

As a physician from one of the countries that are hardest hit by HIV and AIDS, I want to be part of the solution to ending it. Access to healthcare in Uganda is still limited, so I need to help improve access to care and emphasize how important it is for people living with HIV to be able to continue taking their ARVs. I am motivated to end HIV stigma, which is still a huge issue in Uganda. As a researcher, I am interested in benefitting from new scientific knowledge and developments in the HIV vaccine field.

What is your current role and area of work?

I am the Clinical Trials Manager and physician at the UVRI-IAVI HIV Vaccine Programme. Its main mission is the development of a safe effective and affordable HIV vaccine. The programme is also engaged in other community initiatives like voluntary counselling and testing geared toward responding to the AIDS epidemic. My main role is the coordination of clinical trial activities for the different studies that are conducted by the programme. As one of the physicians in the programme, I conduct clinical assessments, administration of investigational products, and care for research participants. I ensure that programme research activities are conducted in compliance with Good Clinical Practice and other existing local and international research guidelines.

"A total of 78% of Uganda's population is below the age of 30, the most vulnerable to HIV..."

Dos Santos Ankmomisyani
Uganda Virus Research Institute-International AIDS Vaccine Initiative (UVRI-IAVI) HIV Vaccine Programme
Country of work: Uganda

What is your motivation to work in the HIV vaccine field?

"Ashes to Ashes, dust to dust." These were the words of the religious cleric at the burial of Bakulumpajji, a 20-year-old fisherman from Nkose Island, as we laid his body to rest. At the time of his passing, Bakulumpajji was diagnosed with stage IV AIDS with Kaposi's Sarcoma and extra-pulmonary tuberculosis. This happened during my first day of fieldwork on the island as we looked to mobilize communities through health education and recruitment for eventual participation in PrEP clinical trials. Even with all these complications, Bakulumpajji was diagnosed only a year before his death after so many years of living at home in denial. I felt his plight and so made a personal commitment to devote my career to research to find an HIV vaccine, a proposed solution that will come to rescue many young people like him. A total of 78% of Uganda's population is below the age of 30, the most vulnerable to HIV because of sexual behaviours. As an early-career researcher in the field of HIV and AIDS, I am more than ever motivated to work with the brilliant and experienced researchers already in the field to innovate further until we get a vaccine.

What is your current role and area of work?

I am currently working as a study physician for the Purpose 1 clinical trial at the Makerere-Kalangala site where we are evaluating the safety and efficacy of the twice-yearly lenacapavir injectable drug as PrEP. I perform the following tasks:

- Diagnosing and offering proper and timely treatment and management of all general care problems of attending participants
- Organizing prompt and appropriate referral and follow up of participants for further management in case of serious adverse events
- Conducting clinical trial procedures and ensuring proper adherence to trial protocol
- Ensuring timely receipt and review of participant laboratory results to maintain safety and well-being
- Assessing for and managing adverse events
- Providing ongoing information, education and support to participants regarding the clinical trial and trial procedures

"As the saying goes, prevention is better than cure."

Ethel Kamuti
CIDRZ
Country of work: Zambia

What is your motivation to work in the HIV vaccine field?

As the saying goes, prevention is better than cure. But, in this case, there is still no cure. At present, the prevention of HIV largely focuses on behavioural and biomedical interventions, such as male circumcision, condom use and antiretroviral drugs used prior to and post exposure. To add on HIV is not self-limiting because once an individual is exposed to HIV and no intervention occurs, that individual could acquire HIV and eventually AIDS. The existence of variants has complicated the development of an effective vaccine, but there is still a need to discover an HIV vaccine that prevents transmission. According to the Zambia Population based HIV/AIDS Impact Assessment 2021 (ZAMPHIA 2021), the annual incidence of HIV among adults aged 15+ years in Zambia was 0.31%, which corresponds to approximately 28,000 new cases of HIV per year among adults. In my experience, there are too many avoidable deaths due to HIV. In a low- and middle-income country, which evidently has gaps in the health system, an effective HIV vaccine would certainly aid in cutting down on costs of medical care for complications, such as opportunistic infections and AIDs.

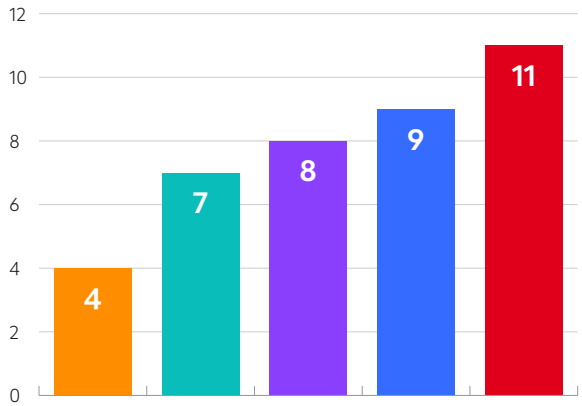
What is your current role and area of work?

I have three years' experience in clinical trials. This includes one vaccine trial to prevent HIV, two vaccine trials to prevent diarrhoea in children under the age of five, three COVID-19 observational trials and one COVID-19 vaccine trial. I worked as a research clinician on the HVTN 705 study, a multi-centre, randomized, double-blinded, placebo-controlled Phase 2b efficacy study of a heterologous prime/boost vaccine regimen of AD26.Mos4.HIV and aluminium phosphate adjuvanted clade C gp 140 in preventing HIV-1 in women in central, eastern, western and southern Africa. My role as a research clinician has been to participate in participant enrolment, perform clinical assessment and carry out study procedures while providing basic medical care. This is in addition to data analysis and scientific writing, including creating standard operating procedures and site-specific protocols. My current role as a principal investigator of the Ubuntu study also includes overseeing the study at site level. This involves selecting and training qualified staff and mentoring junior staff and ensuring compliance with the protocol, regulations and institutional policies while conducting the study. In addition, I communicate directly with the sponsor, monitors, ethics committee and regulatory bodies throughout the study. Lastly, my role includes data analysis and manuscript preparation in close collaboration with other team members.

Survey results

> "The program was truly excellent, and I came away from it with a wealth of new knowledge and insights that I am excited to apply to my work. One thing that really stood out to me was the level of support and interaction that the organizing team provided throughout the program. From the engaging speakers and interactive sessions to the individualized feedback on our research questions and concepts, it was clear that the organizing team was committed to creating a positive learning environment and helping us to get the most out of the program."
>
> **Survey respondent**

What did you gain by attending this academy?

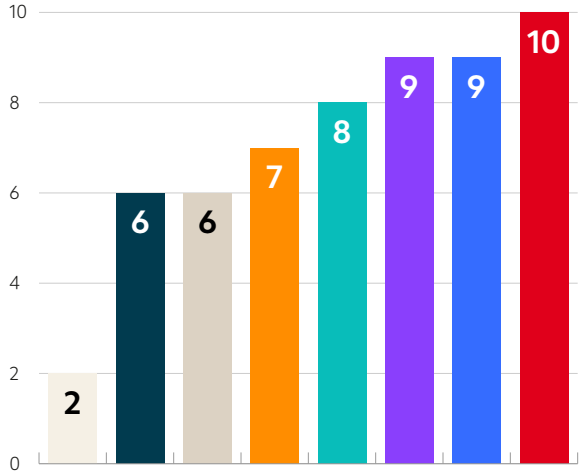


- **11** A better understanding of HIV science and new findings
- **9** It gave me new ideas on how the latest findings in HIV can be applied to local issues
- **8** It gave me new contacts in the field of HIV
- **7** It gave me opportunities for collaboration in order to improve HIV policies and programmes in my region
- **4** Ideas and solutions for challenges I face at work

> "The quality of the speakers and their willingness to engage us was commendable. The team was cohesive and the venue was peaceful and appropriate for the needs of the academy."
>
> **Survey respondent**

> "I am sincerely grateful for having been given the opportunity to take part in this academy which was a great resource."
>
> **Survey respondent**

After attending this academy, I now intend to



- **10** Use new knowledge gained to contribute to HIV science
- **9** Improve my ability to engage in the HIV response
- **9** Refine/improve existing work/research practice or methodology
- **8** Develop new collaborations or strengthen existing ones (e.g., create a partnership/network)
- **7** Initiate a new project, activity and/or research or scale up existing projects/programmes
- **6** Change the way I do my work/adapt my practices to the latest evidence
- **6** Improve my ability to engage communities living with or affected by HIV in my work
- **2** Other