Center for Family Health Research in Zambia (CFHRZ)

Pioneering evidence-based, cost-effective, couples-focused strategies for prevention of HIV and unplanned pregnancy

CFHRZ, formerly known as Zambia-Emory HIV Research Project (ZEHRP), together with the Center for Family Health Research in Kigali, Rwanda, and the School of Medicine at Emory University, U.S., forms the Rwanda Zambia HIV Research Group (RZHRG). CFHRZ programs are overseen by a project management group comprised of senior medical doctors and consultants from the University Teaching Hospital (UTH) in Lusaka and Ndola Teaching Hospital in Ndola.

The CFHRZ site in Lusaka was established in 1994 when the project moved from Rwanda to Zambia during the Rwandan genocide. Since 1994, CFHRZ has provided couples’ HIV voluntary counseling and testing (CVCT) and has supported more than 70 government clinics in three provinces to host active CVCT programs reaching 50,000 couples per year. Most HIV transmissions in sub-Saharan Africa occur in heterosexual HIV discordant or concordant HIV-negative couples; CVCT has proven to be a high-impact HIV-prevention strategy in Rwanda and Zambia. Since 2004, CFHRZ has participated in multiple clinical research trials including Phase I, II, and III trials of behavioral and biomedical prevention interventions.

CFHRZ has extensive experience in conducting epidemiological studies on HIV transmission in heterosexual cohabiting couples and in high-risk women as well as studies on other sexually transmitted infections. CFHRZ is also experienced in conducting clinical trials, including Phase I/II HIV vaccine trials in collaboration with IAVI and have conducted several studies in preparation for large-scale HIV prevention clinical trials.

CFHRZ has a long history of providing quality services such as CVCT, HIV treatment and care, and family planning services. Both the research activities and service provision are underpinned by a strong community engagement program that complies with international standards of good participatory practices.

CFHRZ Lusaka is in Zambia’s capital and operates from two adjacent locations in Lusaka. The CFHRZ-IAVI site conducts HIV vaccine clinical trials, other vaccine development studies, and HIV vaccine preparedness studies. The site is comprised of one large building, which houses an advanced Good Clinical Laboratory Practice (GCLP)-accredited laboratory for vaccine trials, along with four medical clinic rooms, a conference room, a reception area, a pharmacy, and a comprehensive data department. Three smaller buildings hold two polymerase chain reaction (PCR, which is considered the “gold standard” in diagnostic testing) laboratories and one liquid nitrogen production plant. The second site combines living space for visiting scientists, with office space for the administration and CVCT departments. The CFHRZ facility in Ndola (also known as CFHRZ-Copperbelt) consists of four buildings with a full scale GCLP-accredited research/clinical laboratory, one CVCT coordination center, eight private clinic rooms, a data management center, archive, pharmacy, and administration department.

IAVI has worked in partnership with CFHRZ since 2003, supporting basic science research, epidemiological studies, formative research, and the conduct of HIV vaccine clinical trials.

**Laboratory capacity**

CFHRZ Lusaka has a full-scale immunology laboratory; a clinical safety laboratory (chemistry, hematology, and flow cytometry); as well as serology, microscopy, phlebotomy, parasitology manual hematology, ELISA (enzyme-linked immunosorbent assay), and specimen repositories. Additionally, the CFHRZ facility in Ndola consists of a full-scale, GCLP-accredited research/clinical laboratory (phlebotomy, serology, ELISAs, microscopy, hematology, flow cytometry, and immunology).

**People**

The CFHRZ Lusaka site is directed by William Kilembe, M.D., M.Sc., who is supported by a team of study physicians, senior research nurses, laboratory scientists, data technicians, administrative assistants, filers, general workers, interns, and project coordinators. CFHRZ-Copperbelt is directed by Mubiana Inambao, M.D., M.P.H., who is supported by a team of senior research nurses, laboratory scientists, data technicians, administrative staff, and project coordinators. Other key personnel include Susan Allen, M.D., M.P.H., professor and founding director.

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**IAVI-supported activities**

- Research preparedness: engaging communities and cohorts
- Rapid identification and engagement of key populations for ongoing and future HIV prevention clinical trials
- Acute HIV infection
- Study to evaluate clinical, laboratory, immunologic and viral markers of disease progression in volunteers with recent HIV infection to prepare for activities relevant to the execution of preventive HIV vaccine efficacy trials. The USAID-supported Protocol C study has provided a much better understanding of HIV in Africa, revealing differences in how the infection progresses and the distribution of the many HIV variants across regions or countries.
- Simulated vaccine efficacy trials (in female sex workers and at-risk young women)
- Long term follow-up studies
- T-cell immunogen design and assessment
- Capacity strengthening
  - International training
  - Investigator-initiated research
  - Laboratory capabilities
- Supported the introduction of an online review platform for Research Ethics Committees: the Research for Health and Innovation Organiser (RHInnO) platform to the University of Zambia Biomedical Research Ethics Committee (UNZABREC) for submission of protocol applications.

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