

Surveillance of Transmitted HIV-1 Drug Resistance in Drug-Naive and Newly Diagnosed Patients in Cameroon

Context

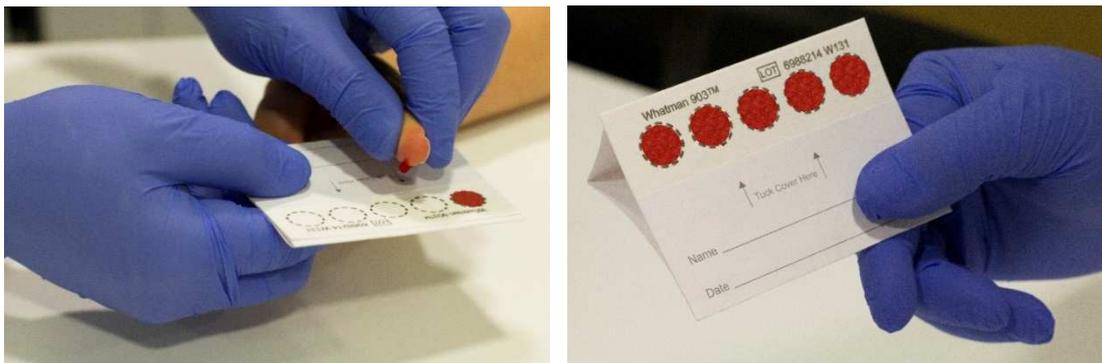
According to UNAIDS 2015, the adult HIV prevalence in Cameroon was 4.5% with 620,000 people living with HIV. Several clinics provide antiretroviral therapy (ART) free of charge since 2007. Developing countries, including Cameroon, are moving towards universal access to HIV prevention, care and treatment. Thus, in May 2016, ART eligibility was expanded to treat every patient.

Routine drug resistance testing and surveys recommended by the World Health Organization are very uncommon throughout the country because of limited material, financial and human resources. With the rapid introduction of ART and with limited health care infrastructure for care and monitoring, the country may face similar emergence rates of ART resistance to those described for other developing countries.

We would like to fill this gap and to build capacity in HIV genotypic resistance testing in Cameroon to successfully treat HIV positive individuals in the long run. For this approach we are working together with 4 hospitals in Cameroon, Bamenda Regional Hospital, Ndop District Hospital, Kumba District Hospital, and Ngaoundere Regional Hospital.

Project description

Herbert Afegenwi Mbunkah is a PhD student from Cameroon at the University of Zurich. He received a Swiss Government Excellence Scholarship for Foreign Scholars and developed an HIV-1 genotypic drug resistance test (GRT) for dried blood spot (DBS) samples.



Dried blood spot samples

Herbert Afegenwi Mbunkah applied this genotypic drug resistance test to >350 DBS samples from our 4 partner hospitals in Cameroon. We would now like to visit all our 4 partner hospitals to discuss the progress of the project and to scale up the GRT to be more affordable for possible application in Cameroon for routine transmitted and also acquired HIV-1 drug resistance testing.

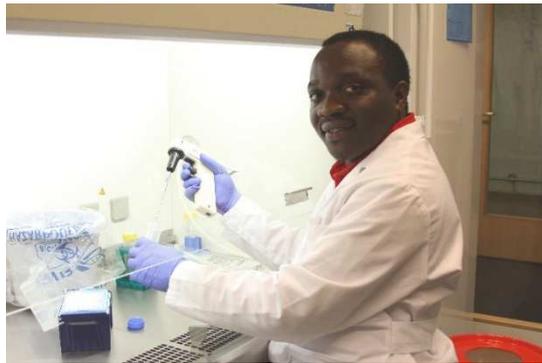
This project will be of relevance to Cameroon especially as it includes state-of-the-art GRT which will be transferred to Cameroon. Baseline information on the frequency and types of ART resistance mutations in Cameroon will help to inform optimal treatment and enable the government to better monitor the success of the national AIDS treatment program.

Partnership

The University Hospital of Zurich is one of the major hospitals in Zurich with a long standing reputation in healthcare delivery. It has many areas of specialty including the Division of Infectious Diseases and Hospital Epidemiology where there is an HIV clinic for the treatment of patients and laboratories for research work on HIV.

The four hospitals in Cameroon involved in this project are very similar in nature and mission. These are Government hospitals in several health districts of the country. These areas are semi-urban to fully urban in nature. These hospitals have HIV clinics running and outpatients diagnosed of HIV are enrolled into the clinics for treatment and follow up.

Herbert Afegenwi Mbunkah from Cameroon is a PhD student at the University of Zurich. He developed and applied the HIV-1 genotypic drug resistance test for dried blood spot samples and will scale this assay up for routine applications in Cameroon. Herbert Afegenwi Mbunkah will transfer to his home country Cameroon.



Herbert Afegenwi Mbunkah in the laboratory of the University of Zurich

Timeframe

This project started in September 2014 and will be continued at least until 2018.

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