

A research team investigates river-borne parasites in rural areas with high infection rates.



A Top-Flight Center for Tropical Medicine

KEMRI, established with grant aid support from Japan, is a focal point for tropical medicine in Africa, where researchers from around the world collaborate on cutting-edge research.

Kenya occupies a key geographical position as the gateway for marine and air transport in East Africa, a region with a population of roughly 140 million. With the highest per-capita income in East Africa, it is the powerhouse of the regional economy.

The country still faces challenges, though: one of the most serious has been its battle with arbovirus infections, such as yellow fever and Rift Valley fever. At the core of that battle is KEMRI, the Kenya



Medical Research Institute, which was established with JICA's technical assistance.

INFECTIOUS DISEASE RESEARCH: A VITAL NEED

In the 1960s, Kenya became one of the first countries in Africa to focus on improving its healthcare services. With the cooperation of Nagasaki University, home to the only institute for tropical medicine in Japan, JICA reached out to the Rift Valley Provincial General Hospital in 1966 as a means of backing these improvements.

Initial efforts consisted of examining malaria and tuberculosis patients. But participants soon noted that just treating patients was not enough—that research had to be bolstered as well to ascertain the causes of the diseases and develop effective diagnostic techniques and cures. There were no research institutions in Kenya at the time, although the need for one had been recognized.

When the Kenyan government decided to establish KEMRI to oversee research on infectious diseases, JICA stepped up to provide assistance. Technical cooperation began in 1979. The headquarters building was completed in 1985 with grant aid from Japan, and KEMRI launched its operations as a hub for tropical medicine in Africa.



Kenyan and Japanese researchers who drove viral and bacterial research forward at the beginning of the 1980s.



Laying pipe for a spring-water based water-collection point (above) and installing public water facilities (below) with support from JICA. JICA collaborates with Kenyan researchers to build ideas and lead research to improve local lives.



Researchers perform urinalysis to test for schistosomiasis in local residents.

ZEROING IN ON COMMUNITY HYGIENE EDUCATION

Nagasaki University, which was already working with JICA in Kenya, was among the Japanese research and development institutions that led the provision of assistance to KEMRI. And the assistance was most welcome. Blackouts were common in Kenya at the time, and securing needed equipment and medical supplies was not easy. Nonetheless, Japanese and Kenyan researchers devoted themselves to their research. Professor Yoshiaki Aoki, who heads the Nagasaki University Graduate School of International Health Development, was one of the researchers involved in assistance to KEMRI beginning in the early 1980s. "Our mission at Nagasaki University is to eradicate disease worldwide," he says. "Cooperating with KEMRI was very meaningful in terms of our promotion of tropical medicine research."

During surveys of Kenyan villages, Professor Aoki and other members of the research team noticed the poor sanitation in rural areas, a major contributing factor to infectious diseases. "The villagers had no notion of hygiene control. For them, disease was simply a part of life. We realized that no amount of research would produce a fundamental solution unless we changed their way of thinking." This led the team to a new focus on hygiene education as part of a broad-based battle against disease. Field-oriented research extending beyond the laboratory had given them valuable insight into ways to get a leg up in the fight.

TOWARD A FLEXIBLE, FOCUS-SHIFTING APPROACH

Cooperation with KEMRI lasted for 27 years until 2005. Over that time, JICA shifted the focus of research a number of times in response to local needs, developing diagnostic kits for HIV/AIDS and hepatitis, for example. It also offered assistance in other



KEMRI is collaborating with Nagasaki University to develop a rapid testing kit for arboviruses.

ways, such as by training Kenyan researchers in Japan.

Meanwhile, Nagasaki University established its African headquarters within KEMRI in 2005. Since fiscal 2011, it has been taking advantage of SATREPS, the Science and Technology Research Partnership for Sustainable Development, to conduct its own joint research.

The research aims to build an early warning system for alerting the Kenyan government of disease outbreaks, putting diagnostic kits to practical use in the field to obtain the needed data at an early stage. Today health workers in remote rural areas can use mobile phones and other means to relay the information to the authorities in time to head off widespread outbreaks before they start. Nagasaki University and KEMRI eventually hope to share the technology and system with neighboring countries to create an international network for early containment.

Dr. Miriam K. Were, who won the first Hideyo Noguchi Africa Prize in 2008 for her devotion to the development of community healthcare services in Africa, has this to say: "JICA was the only organization that supported the Kenyan government's grand vision of creating a medical research institute from scratch. Today, KEMRI has grown to become Africa's leading research institute."

This is Japanese cooperation at its best.