

Multi-Disciplinary Research in
KEMRI, Kenya

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In Search of Better Health

KEMRI

Background

- ▶ The Kenya Medical Research Institute (KEMRI) is a state corporation established through the Science and Technology (Amendment) Act of 1979, which has since been amended to Science, Technology and Innovation Act, 2013.
- ▶ The 1979 Act established KEMRI as a National body responsible for carrying out health research in Kenya. It spells out the mandate and responsibilities of KEMRI

Mandate

1. To carry out research in human health.
2. To cooperate with other research organizations and institutions of higher learning on matters of relevant research and training.
3. To liaise with other relevant bodies within and outside Kenya carrying research and related activities.
4. To disseminate and translate research findings for evidence based policy formulation and implementation.
5. To cooperate with the Ministry responsible for Health, the National Commission for Science, Technology, and Innovation, and the Medical Sciences Advisory Research Committee in matters pertaining to research policies and priorities.
6. To do all such things as appear to be necessary, desirable or expedient to carry out its functions.

VISION

To be a leading Centre of Excellence in Research for Human Health.

MISSION

To Improve Human Health and Quality of life through Research, Capacity Building, Innovation and Service Delivery.

MOTTO

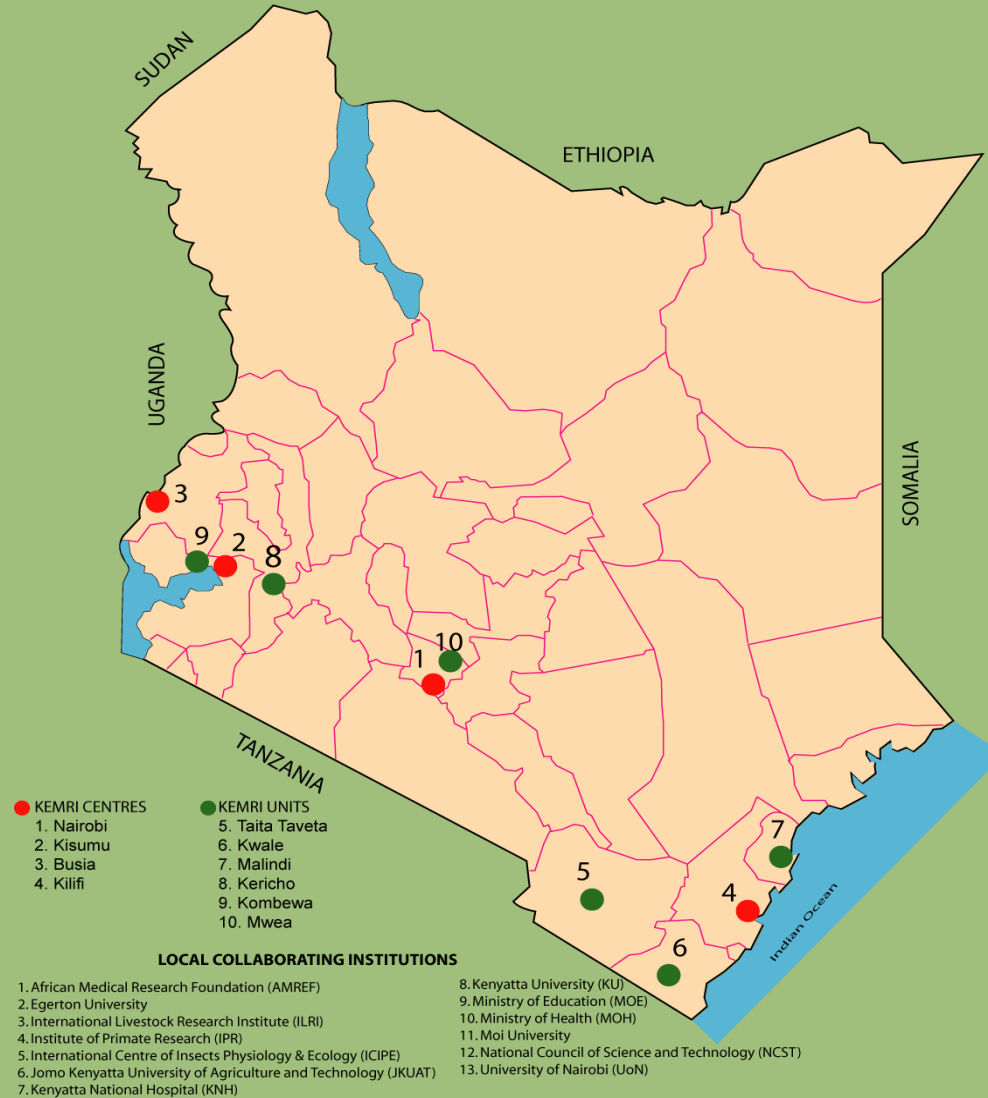
In search of Better Health

Human Resource

HUMAN RESOURCES JULY 2017

Type	Establishment	In-Post	Deficit
GoK	1250	955	295
Project Staff	-	2764	-
Total Complement	1250	3719	295

KEMRI RESEARCH CENTRES, UNITS AND LOCAL COLLABORATING INSTITUTIONS



INTERNATIONAL COLLABORATORS



INTERNATIONAL

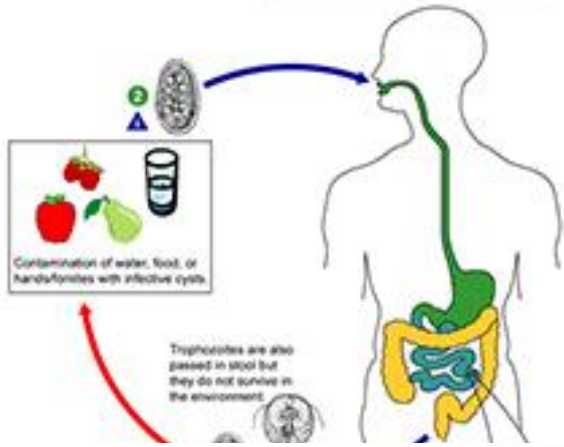
-  **Japan**
 - Japan International Cooperation Agency (JICA)
 - Kanazawa University
 - Nagasaki University
-  **United States of America**
 - Centres for Diseases Control and Prevention (CDC)
 - Walter Reed Army Institute of Research
-  **United Kingdom**
 - Liverpool School of Tropical Medicine
 - London School of Hygiene and Tropical Medicine
 - Wellcome Trust
-  **United Nations Agencies**
 - World Health Organisation (WHO)
-  **Thailand**
 - Mahidol University
-  **Switzerland**
 - Medicines San Frontiers International
 - Drugs For Neglected Diseases Initiative (DNDi)
-  **Brazil**
 - Oswaldo Cruz Foundation
-  **Netherlands**
 - Royal Tropical Institute of Amsterdam
-  **India**
 - Indian Council of Medical Research

-  **Canada**
 - Lawson Health Research Institute
-  **Germany**
 - Institute of Virological Research
-  **Australia**
 - Bois Initiative
-  **Austria**
 - International Atomic Energy Agency (IAEA)

REGIONAL

-  **Tanzania**
 - Commonwealth Regional Health Secretariat For East, Central and Southern Africa
 - National Institute of Medical Research, Tanzania
-  **Uganda**
 - Makerere University Medical School
 - Virus Research Institute
-  **Ethiopian**
 - Health and Nutrition Research
 - Addis ababa University
 - Gondar University
-  **South Africa**
 - Medical Research Council,
-  **Ghana**
 - Noguchi Memorial Research Institute
-  **Zambia**
 - University of Zambia, Medical School
-  **Zimbabwe**
 - Blair Institute
-  **Egypt**
 - Suez Canal University
-  **Sudan**
 - Institute of Endemic Diseases, University of Khartoum

Infectious and Parasitic Diseases Programme



Natural products Research & Drug Development



Non-Communicable Diseases Research Programme



Cardiovascular Disease



Cancer



Diabetes



Chronic Respiratory Diseases

Public Health and Health Systems Research Programme



Biotechnology Research Programme



Sexual, Reproductive, Adolescent & Child Health



Products & Services

- Through our Production Unit we have developed a number of products such as;-
- **HEPCELL rapid, KEMCOM Rapid, TB-cide, Kem-TAQ, KEM-rub SafiKem etc.**

Services

- DNA
- Ethical Review for protocols
- Conference Facilities
- Incineration services
- Cancer Registry
- Rapid Emergency response & disease surveillance
- Clinical Laboratory diagnostic services



Other Services

- **Human identification** – to the public and the military
- **Deworming** – over 6M school-age children from 28 counties in Western, Nyanza, Rift Valley and Coast regions are dewormed annually since 2012 by KEMRI, MoE and MoH. KEMRI is monitoring impact of treatment in 200 schools from 16 counties in these regions
- **Diagnostics**
 - Outbreaks to the nation and the region
 - Specialized affordable services (being revamped)
- **Products**
 - Diagnostics – hepatitis, HIV, Rift valley fever
 - Hand wash- supplying to KEMSA
 - Antiseptics – Supplying to KEMSA

Achievements

- ▶ KEMRI is the Medical Research arm of the Government and provides advice to the Ministry on various aspects of healthcare and delivery.
- ▶ National diseases surveillance and rapid response capacity for major disease outbreaks (cholera, chikungunya virus, H1N1 flu, yellow fever, rift valley fever, Ebola, aflatoxicosis etc)
- ▶ New treatment for leishmaniasis
- ▶ Involved in research that led to the current anti Tuberculosis treatment
- ▶ Involved in the malaria vaccine that the country is about to roll out (pilot)
- ▶ National cancer registry
- ▶ Many of our scientists have received national and international accolade

International Recognition and Initiatives

- ▶ WHO designated Centre's of Excellence in the following:-
- ▶ NTD
- ▶ Malaria & Ebola Vaccine Trials
- ▶ Nutrition and Virology
- ▶ HIV/Aids
- ▶ Polio, Measles, Anti microbial Resistance
- ▶ ANDi,
- ▶ DNDi, Africa Regional Office
- ▶ TB and lung diseases regional centre
- ▶ Clinical Trials (GCP)
- ▶ Regional centre for Emerging & Re-emerging diseases and climate change.



International Recognition and Initiatives

- ▶ Regional laboratory capacity building in operation research under the East African Public Health Laboratory networking project (EAPHLN).
- ▶ WHO designated International Training Center to implement capacity strengthening training courses to support Neglected Tropical Diseases (NTDs) control Programmes.
- ▶ WHO designated Centre of excellence in Malaria, Nutrition and Virology
- ▶ World Health Organization (WHO) Collaborating Centre for HIV/AIDS, Tropical Diseases Research, Polio Immunization, Viral Haemorrhagic Fevers and Anti-Microbial Resistance (WHO-NET).
- ▶ USA National Research Council recognized training institute for postdoctoral and senior research awards
- ▶ The Africa Regional headquarters for Drugs for Neglected Diseases Initiative (DNDi).

RESEARCH INFRASTRUCTURE



KEMRI Headquarters



Training Centre



KEMRI Kilifi Training Centre



Production Unit



KEMRI /WT Admin Block



Mbuyuni Training Centre,
Kilifi



KEMRI/CDC Office,
Kisumu

Integrating geographical and genetic mapping of salmonella disease in an endemic site in Kenya

- Evaluate the overall incidence of invasive NTS, NTS diarrhea, and TF ; spatial and spatio-temporal clustering of these infections and their constituent genotypes.
- Evaluate the transmission of NTS and TF assessment of personal, household, and environmental risk factors
- Evaluate the incidence and prevalence of antibiotic resistance among NTS and TF isolates

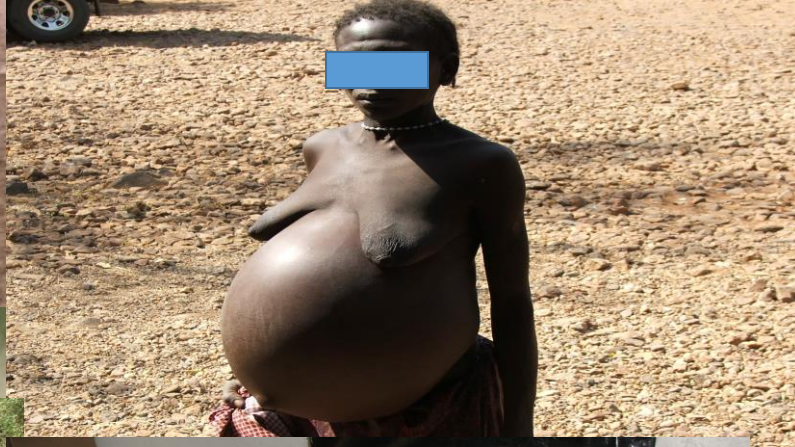


MUKURU SLUMS- NAIROBI CITY



Livestock, wildlife and human surveys

Focus on the distribution and prevalence of various *Echinococcus* taxa in livestock and genotyping of *Echinococcus* species



25/08/2014

Possible areas of collaboration with KEMRI scientists

- Infectious diseases- in relation to one health, AMR, STIs, HIV
(Bacterial, viral, fungal, parasitic infections)
- Drug discovery- Use of natural products
- NCD's- Cancer remains a big threat in the country, no basic research ongoing
- All areas of research

THANK YOU



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