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Annual Report and Statement of Accounts



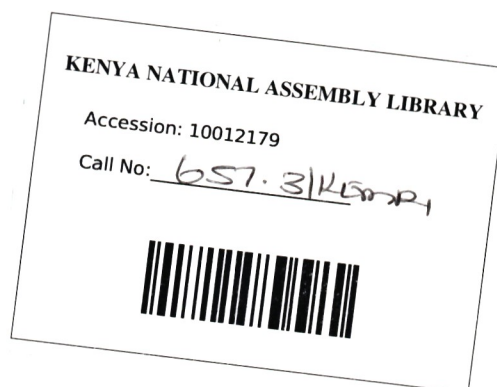
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KEMRI



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Published by:

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CHAIRMAN'S FOREWARD

The Hon. Minister for Health
Ministry of Health
P.O. Box 30016
NAIROBI



Dr. Mohamed S. Abdullah

Dear Madam,

I have the honour to present to you, on behalf of the Board of the Management of the Kenya Medical Research Institute, the Annual Report and Statement of Accounts for the financial year ended 30th June 2001, in accordance with the provisions of Section 20 of the Science and Technology (Amendment) Act of 1979 (Cap 250 of the Laws of Kenya).

As evident from this report the Institute, in the year under review, continued to consolidate its resources in order to achieve its mandates of providing leadership and direction in health research in Africa. I am happy to report that the Institute has lived up to this challenge and continues to contribute to the Government's stated objectives on socio-economic development through improved health care provisions.

The Institute has managed to achieve this status through the invaluable support it continues to receive from the Government of Kenya and also from various foreign governments and organizations. The Board of Management is most grateful for this support.

Finally, the Board is equally grateful to Dr. Davy K. Koech, the Director KEMRI, and the entire staff of the Institute for their continued dedication towards maintaining KEMRI's position as the leading research institute in Africa. I wish all members of staff even greater achievements in future.

I remain,

Yours faithfully,

A handwritten signature in black ink, appearing to be 'M. S. Abdullah'. The signature is stylized and somewhat abstract, with a large loop at the top and several smaller loops below.

**MOHAMED S. ABDULLAH, M Med, MBS
CHAIRMAN, BOARD OF MANAGEMENT**

DIRECTOR'S STATEMENT



Dr. Davy K. Koech

During the year ended 30th June 2001, the Institute continued to consolidate its activities to better meet its mandates of conducting health research and generating findings that can be used for the improvement of health status in Kenya.

The Institute's major thrust on research is on communicable and non-communicable diseases which have been categorized into four broad programmes: -

- The infectious diseases programme focuses on infectious agents and in particular HIV/AIDS. It also places emphasis on opportunistic infections, sexually transmitted infections, Viral Hepatitis and acute respiratory infections.
- The parasitic diseases programme is geared towards reduction of disease burden due to parasitic infections and in particular Malaria, Schistosomiasis, Leishmaniasis and intestinal parasites.
- The epidemiology and public health research programme targets health systems research, applied human nutrition, maternal and child health, reproductive health and population studies as well as behavioral, environmental and occupational health.
- The biotechnology and non-communicable diseases research focuses on development and promotion of modern and appropriate techniques in production of pharmaceuticals and biologicals. This programme also focuses on oncology, cardiovascular and renal diseases.

The Institute's focus on these four programmes is in response to new and emerging challenges in health research both nationally and globally. Following this consolidation, significant achievements were witnessed in Malaria control and HIV management during the year under review. The Institute continued to research on clinical trials of drugs and the diagnostic kits for HIV and Hepatitis. A HIV/AIDS education in the work place programme was also started with over fourteen companies sourcing the service. During this same period, the Institute with the support of Japanese International Co-operation Agency (JICA) conducted a successful Third Country Training Programme (TCTP) on blood safety against HIV and Hepatitis where seven countries from the African region participated.

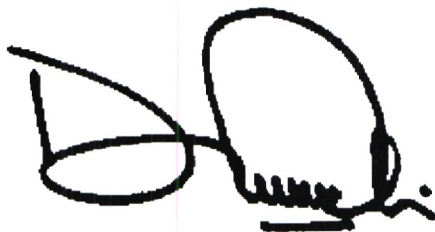
In Malaria research, the randomized controlled trials for the efficacy of insecticide treated bednets was completed with positive results as a malaria preventive strategy. At the same time malaria vaccine trials made a promising headway in western Kenya. Equally, great inroads were made in research on non-communicable diseases particularly cancer where the Institute has established a National Cancer Registry.

The Institute was recently nominated by the G8 countries as one of the three international centres to guide control of parasitic diseases in the Southern Hemisphere. Under this initiative (popularly referred to as the Hashimoto Initiative), KEMRI hosts the Eastern & Southern Africa Centre for International Parasite Control (ESACIPAC). The Institute also serves as a global center for training in infectious diseases under the Okinawa Initiative. Further, in recognition of the low priority assigned to drugs for neglected diseases that continue to afflict many developing countries, KEMRI together with similar institutions in Brazil, India, Malaysia and France have established Drugs for Neglected Diseases Initiative (DNDi) with the aim of developing drugs to combat sleeping sickness, kala-azar and chagas disease. KEMRI is spearheading this initiative in Africa.

Remarkable strides were made in strengthening research partnerships locally, regionally and internationally. We have, to this end, continued to enjoy close working relationship with the National Council for Science and Technology as well as our collaborative partners namely Japan International Cooperation Agency (JICA), Centres for Disease Control and Prevention (CDC), the Walter Reed Army Institute of Research (WRAIR) and the Wellcome Trust amongst others. The fruits from these collaborative arrangements cannot be gainsaid.

The Government reviewed the budgetary grant allocations to the Institute in the year, which saw an additional inflow of Kshs. **100 million**. This was indeed excellent news and greatly expanded our scope for research. For this, we are most grateful to the Government and look forward to further growth in funding so that the Institution's full potential can be realised. We are equally grateful to our research collaborators who together pooled Kshs. **250 Million** into our research operations in the year.

Finally, I wish to sincerely acknowledge the selfless contributions by all our staff and the immense support during this year towards realizing our mandates. To the Chairman of the Board of Management, Dr. Mohamed Abdullah and his entire Board, I wish to register my thanks for their able guidance.



DAVY K. KOECH, PhD, DSc, SS, OGW, MBS
DIRECTOR, KEMRI

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DAVY K. KOECH, PhD, DSc, SS, OGW, MBS
DIRECTOR, KEMRI

(RIGHT) JICA Vice-President Mr. Hisao Azuma (left) during his visit to KEMRI. With him are Chief Advisor KEMRI/JICA Project Prof. Teruaki Amano (centre) and Infectious Diseases Project Co-ordinator, Dr. Solomon Mpoke, (right).



(LEFT) Ambassador H.E. Mary Odinga is received by the Director, KEMRI when she made a familiarisation tour of the Institute.

(RIGHT) Dr. Davy Koech, Director KEMRI (right) in discussions with visiting Deputy Director, CDC, Atlanta, Dr. David Flemmings (left) and Dr. Kevin de Cock, Director, CDC-Kenya (centre).



(LEFT) Members of the East Africa Legislative Assembly led by Speaker, Hon. Abdulrahman Kenani, being briefed by Dr. Gerald Mkoji, (second left) Head, KEMRI, Center for Biotechnology Research and Development.

BACKGROUND

The Kenya Medical Research Institute (KEMRI) is a state corporation, established in 1979 under the Science and Technology (Amendment) Act Chapter 250 of the laws of Kenya. Since its inception, KEMRI has developed a critical mass of scientists and other technical personnel, to enable it to mount competitive biomedical research and to rank as one of the leading centres of excellence in health research development, both in Africa and globally.

INSTITUTE S MISSION

The Mission of the Institute is to conduct health research and generate research findings to be applied towards the improvement and delivery of quality health, a prerequisite for positive development.

INSTITUTE S VISION

The vision of the Institute is to continue to be a leading centre of excellence in health research nationally, regionally and globally, towards the improvement of the health of humanity.

INSTITUTE S MOTTO

The motto of the Institute is *In Search of Better Health* towards the realization of the above stated mission.

MANDATES

- ◆ To carry out research in human health.
- ◆ To cooperate with other research organizations and institutions of higher learning on matters of relevant research and training.
- ◆ To work with other research bodies within and outside Kenya carrying out similar research.
- ◆ To cooperate with the Ministry of Health, the National Council for Science and Technology (NCST) and the Medical Sciences Advisory Research Committee in matters pertaining to research policies and priorities.

- ◆ To do all things as appear to be necessary, desirable or expedient to carry out its functions.

ORGANIZATION AND MANAGEMENT

KEMRI has a Board of Management appointed by the Minister responsible for health research. The Board is responsible for all policy matters, and has a Chairman, six appointed members, and eleven *ex-officio* members representing various Government Ministries and other relevant Government Institutions. The Director is the Chief Executive of the Institute.

The KEMRI Secretariat

The KEMRI Secretariat provides administrative, technical and professional support to research activities and also co-ordinates the various functions of the Institute. The Secretariat has two departments, one responsible for Administration and Finance and the other responsible for Research and Development. Each of the two departments is under a Deputy Director. The two departments are structured as follows:-

Administration and Finance

This department is responsible for financial, personnel and general administrative affairs of the Institute. The Deputy Director (Administration and Finance) is assisted by an Assistant Director (Finance) and other senior administrative staff in the running of the department.

Research and Development

As the name implies, this department is responsible for research and development affairs of the Institute. The Deputy Director (Research and Development) is assisted by three Assistant Directors - the Assistant Director (Production and Marketing) the Assistant Director, (Communication) and the Assistant

Director, (Research Collaboration and Consultancies) in the running of the department.

Within the Secretariat are the following technical services units:-

- i) Corporate Affairs and Partnerships
- ii) Engineering and Maintenance Services
- iii) Marketing
- iv) Medical Library
- v) Medical Illustration
- vi) Animal Care and Use

RESEARCH CENTRES AND SPECIAL COORDINATING CENTRES

RESEARCH CENTRES

1. Centre for Biotechnology Research and Development (CBRD), Nairobi.
2. Centre for Clinical Research (CCR), Nairobi.
3. Centre for Public Health Research (CPHR), Nairobi.
4. Centre for Infectious and Parasitic Diseases Control Research (CIPDCR), Busia.
5. Centre for Microbiology Research (CMR), Nairobi.
6. Centre for Respiratory Diseases Research (CRDR), Nairobi.
7. Centre for Traditional Medicine and Drug Research (CTMDR), Nairobi.
8. Centre for Vector Biology and Control Research (CVBCR), Kisumu.
9. Centre for Virus Research (CVR), Nairobi.
10. Centre for Geographic Medicine Research, Coast (CGMRC), Kilifi.

SPECIAL COORDINATING CENTRES

1. Eastern and Southern Africa Centre for International Parasite Control (ESACIPAC).

2. Institute of Tropical Medicine and Infectious Diseases (ITROMID).

RESEARCH PROGRAMMES

The major thrust of the Institute's research activities is on communicable and non-communicable diseases. It has over 200 active research projects covering major areas of concern in Kenya. KEMRI has consolidated its research activities into the following four main categories:-

(a) Infectious Diseases

The programme is mandated to ensure the reduction of the disease burden due to infectious agents and in particular due to HIV/AIDS and related infections. It also emphasizes on research on opportunistic infections, tuberculosis, sexually transmitted infections, viral hepatitis, acute respiratory infections, and drugs development and management.

The programme mainly focuses on epidemiology, immunology, molecular biology, virology, microbiology, prevention and control.

(b) Parasitic Diseases

The programme ensures the reduction of disease burden due to parasitic infections and in particular, malaria, schistosomiasis, leishmaniasis and intestinal parasites. The programme concentrates on epidemiology, vector biology, parasites, immunology, molecular biology, pathophysiology and prevention and control of vectors. In addition it focuses on drugs management and development of vaccines.

(c) Epidemiology Public Health and Health Systems Research

The programme is mandated to define and investigate the incidences and prevalence of diseases and health issues of major public health importance and develop strategies for



Scientists working in P3 biosafety laboratory at KEMRI.

promotion of better health. Health systems research, applied human nutrition, maternal and child health, reproductive health and population studies, behavioural studies, environmental and occupational health fall under this programme.

(d) Biotechnology and Non-Communicable Diseases

The priority in this programme is development and promotion of modern biotechnology techniques in molecular biology for production of pharmaceuticals, biologicals and for other applications, for use in the promotion of health.

Apart from biotechnology techniques development, the programme also focuses on oncology, cardiovascular diseases and renal diseases.

MAJOR ACHIEVEMENTS

Capital Development

The Institute has a whole range of modern facilities for health research and training. The key facilities include the KEMRI Headquarters and central laboratories complex in Nairobi and research facilities in Kisumu, Busia, Kilifi and Kwale.

Also located at KEMRI headquarters are lecture rooms, an electron microscopy unit, a conference hall with a sitting capacity of 300 people, a 40 bed model hospital, an animal house, herbal gardens and visiting scientists flats. There have also been

major infrastructural developments over the years, the major ones of which are highlighted below:-

KEMRI's long-standing relationship with Japan International Cooperation Agency (JICA) has brought in additional facilities and equipment including the refurbishment of the P3 biosafety laboratory.

The Institute in collaboration with USAMRU-Kenya has developed principal out-of-Nairobi research stations in Kericho, Kisumu, Kisian and Kombewa, in western Kenya. Major infrastructure upgrades have also taken place at the New Nyanza Provincial Hospital.

At the Kisian Campus, KEMRI-USAMRU-K has well developed malaria laboratories where highly specialized research investigations are conducted. The campus unit also gives support to clinical trials at the recently inaugurated clinic at Kombewa and basic science studies (immune complexes in severe malarial anaemia), at the Provincial General Hospital, Kisumu.

KEMRI has also had a strong collaborative arrangement with the US Centers for Disease Control and Prevention (CDC) which has yielded major infrastructural developments.

This collaboration has, for example, seen the development of modern research laboratories dedicated to research and training on HIV/AIDS and other infectious diseases including the emerging and re-emerging diseases in Africa. Modern office accommodation has also been set up through the same arrangement.

The equally long-standing relationship with the Wellcome Trust Research Laboratories has immensely increased the scientific output of KEMRI especially in the

coastal region. With the support of the Trust, a major development of additional laboratories will commence shortly at the Centre for Geographic Medicine Research-Coast (Kilifi).

Human Resource Development

From only seven persons in 1979, KEMRI has developed a critical mass of scientists and the necessary technical personnel, to rank as one of the global centres of excellence in health research development.

Research and research training together with professional development are inseparable activities of the Institute. The Institute emphasizes professionalism by all staff in their respective specialties. To this end, KEMRI offers training to its scientific and supportive staff to prepare and equip them with the skills necessary to enable them carry out their work competently and efficiently. Training funds come either directly from the Government or from international development agencies. The Institute is also recognized as a training centre by many organizations, locally and internationally. These include, Nairobi University, Jomo Kenyatta

University of Agriculture and Technology (JKUAT), Moi University, the National Research Council of U.S.A, and the School of Medicine of the University of Zambia among others.

Through these concerted training efforts, the Institute now prides itself with more than 250 professionals with doctoral and post-graduate degrees in various disciplines. It also has over 400 highly trained and skilled technical staff. This makes KEMRI the largest health research institute in Africa and one of the top ten such institutions in the world. In addition Professionals in KEMRI are holding top consultancy and teaching positions in several institutions and organizations worldwide.

Scientific Developments (1)

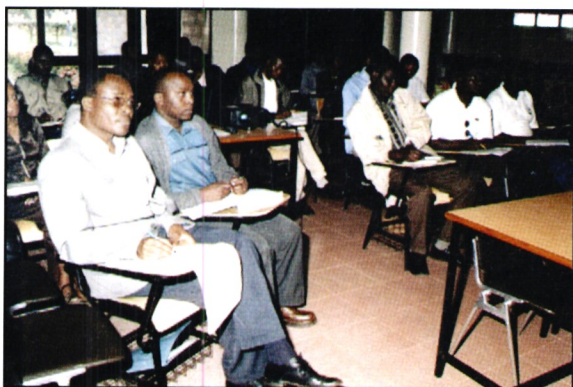
Besides the creation of new knowledge through research, KEMRI scientists have been able to catapult the name of the Institute on the international health research map. The Institute continues to actively map out incidences of diseases and disease burden in the country. The Institute maintains a Rapid Response Unit for national preparedness in the event of major disease outbreaks.

The Institute advises the Ministry of Health on the rational use of drugs in the clinical management of diseases. For example, it is KEMRI's research findings that led to the withdrawal of anti-malarial drug, Daraprim, in 1982 from the market, and later the withdrawal of Chloroquine as first line drug in the treatment of malaria.

KEMRI scientists played a pivotal role in the development of anti-malarial drug - LAPDAP (Chlorproguanil hydrochloride/dapsone). The drug has been developed specifically to address the problems of increasing resistance to existing anti-malarial drugs.



The KEMRI HEPCELL kit.



Postgraduate students attending lectures at the newly established ITROMID.

KEMRI also played a leading role in studies on the development of Insecticide Treated Bednets (ITBs) for use in the control of malaria. This is an immense contribution to the reduction of malaria morbidity and mortality rates.

The success in the inception, development and expansion of KEMRI's clinical trials has been achieved through close collaboration and partnerships especially in HIV/AIDS, tuberculosis, malaria and other important parasitic diseases, such as leishmaniasis, schistosomiasis and filariasis.

Scientific Developments (2)

KEMRI pioneered the development of a treatment formulation that enabled the reduction of the treatment period for leprosy from 18 months to 3 months. Additionally, the Institute has developed a treatment formulation that has led to the reduction of the treatment period for tuberculosis from 18 months to 6 months. It has also developed a new treatment approach for leishmaniasis that reduced treatment period from 30 days to 10 days.

It has played a leading role in the development of appropriate formulation of micronutrients and in the development of vitamin supplementation policy.

Scientific Developments (3)

KEMRI has contributed to the development of various formulations for the treatment of HIV/AIDS and opportunistic infections.

Similarly, it has made a profound contribution to the understanding and regulation of the traditional medical practice for application in modern health care delivery services.

KEMRI has made a unique contribution to health research technology development. This includes the development of the KEMRI HEPCELL Kit for the diagnosis of infectious hepatitis, the Particle Agglutination (PA) Kit for the diagnosis of HIV, and the HLA tissue typing techniques for kidney transplants. Amongst the Institute's most outstanding technological achievements, is the development of *In-Vitro* Fertilization (IVF) Embryo Transfer.

Scientific Developments (4)

KEMRI hosts the Eastern and Southern Africa Centre of International Parasite Control (ESACIPAC) under the Global Parasitic Diseases Control (the Hashimoto Initiative).

It is also recognized as a global centre for training in the control of infectious diseases (Okinawa Initiative). In collaboration with the Jomo Kenyatta University of Agriculture and Technology, KEMRI has established the Institute of Tropical Medicine and Infectious Diseases (ITROMID) for masters and doctoral training in health disciplines.

CORPORATE SOCIAL RESPONSIBILITY

The Institute is addressing the corporate social responsibility through a broad range of community-oriented services. These include clinical services, laboratory

and diagnostic services, research field services, training and capacity building of local communities in areas of operations research, outreach and voluntary initiatives. More recently KEMRI has developed a comprehensively packaged training module for HIV/AIDS education in the workplace, in an effort to spearhead public health and policy issues in the control of HIV/AIDS, as well as to fill the existing information gap.

FINANCIAL RESOURCES

The Institute receives funding from the Government of Kenya to support both its recurrent and development expenditure. The Institute also receives substantial financial support by way of research grants and turnkey development projects from a number of external sources. Currently, the government's support amounts to approximately 45 percent of KEMRI's total expenditure.

HUMAN RESOURCES

KEMRI has one of the highest concentrations of staff in the whole of Africa involved with health research on full time basis. The Institute's human resource capacity is as follows:-

Research Scientists

These include, social scientists, pharmacists, epidemiologists, immunologists, virologists, bacteriologists and other specialized cadres.

Technical Staff

These include laboratory technologists, public health officers, laboratory technicians, clinical officers, radiographers, nurses and pharmaceutical technologists.

Administrative and Other Supportive Cadres

KEMRI has a complement of over 600 members of various administrative and supportive cadres. These include

administrative officers, accountants, doctors, engineers, maintenance staff, supplies and procurement personnel, medical illustrators and others. The Institute also has 1000 contract and short time employees.

COLLABORATION

In line with its mandate, KEMRI has developed very useful linkages with local, regional and international institutions and organizations that are involved in health research.

In Kenya, the Institute works closely with government ministries, the national universities and locally based research institutions. In the African region, KEMRI collaborates with the South African Medical Research Council, National Institute of Medical Research (NIMR) Tanzania and the Noguchi Memorial Institute of Medical Research in Ghana.

KEMRI also collaborates with the World Health Organization, the Japan International Cooperation Agency (JICA), the International Development Research Centre (IDRC) - Canada, the Wellcome Trust-UK, the United States Army Medical Research Unit (USAMRU)-USA, the Centres for Disease Control and Prevention (CDC)-USA, the Royal Tropical Institute of Amsterdam, Netherlands and International Atomic Energy Agency (IAEA) amongst others.

REGIONAL SCIENTIFIC CAPACITY

Annually, KEMRI in liaison with the African Forum for Health Sciences (AFHES), organizes the African Health Sciences Congress (AHSC) which attracts participants from Africa as well from other parts of world, especially Japan, USA, Canada and United Kingdom. The Congress is hosted on rotational basis by various health research institutions within Africa.

Through the initiative and effort of KEMRI, the African Journal of Health Sciences was established and is now published by the African Forum for Health Sciences for worldwide subscription.

GLOBAL EXCELLENCE AND RECOGNITION

KEMRI enjoys a unique position as a recognized global reference centre for the following:-

- CMR is a WHO appointed Regional Centre for Anti-Microbial Resistance and Surveillance in the East and Southern Africa (WHO-NET).
- CCR is recognized Good Clinical Practice Centre for Clinical trials.
- CCR has played a major role in establishment of National Cancer Registry in Kenya, and hosts the International Union Against Cancers.
- CRDR is a regional Liaison Office for International Union Against Tuberculosis and Lung Diseases.
- CVR is appointed by WHO for Active Surveillance for Viral Haemorrhagic Fever.
- CGMRC is one of the leading malaria research centres globally.
- In recognition of expanding capacity and expertise, KEMRI/CDC Programme was recently chosen by CDC headquarters in Atlanta, as a new International Emerging Infections Programme Site. This makes it one of only two such sites in the world.
- The Institute is a recognized training institution by the USA National Research Council for postdoctoral and senior research awards.

- KEMRI is also Africa's regional Centre for Global Health Initiative on Climate Change and Health.
- KEMRI is a founding partner and host Institution for Africa Drugs for Neglected Diseases Initiative (DNDi).

THE FUTURE

KEMRI has a firm scientific foundation, the physical infrastructure, the manpower capability, the experience and the capacity to continue to serve as a centre of excellence in health research for Africa and for the rest of the world.

RESEARCH PROGRAMMES

1. INFECTIOUS DISEASES PROGRAMME

HIV/AIDS

Kenya continues to face a worrying AIDS epidemic with over 2.5 million people infected with HIV/AIDS. KEMRI's research on HIV/AIDS, a disease that kills at least 700 people daily in Kenya, dates back to when the first case of AIDS was diagnosed in the early 1980s. The Institute made immense contribution to the first National survey on HIV infection in Kenya which provided the first policy platform.

The HIV/AIDS programme focuses on Epidemiology, Immunology, Molecular Biology, Prevention and Control, Opportunistic Infections and Management including, the development of clinical drug trials.

The establishment of a P3 Biosafety laboratory in KEMRI with the help of Japan International Co-operation Agency (JICA), saw the Institute begin active research on the characterization of HIV virus that has potential for providing a basis for vaccine development using local virus strains. Amongst the highly sophisticated equipment in the P3 facility, are automated machines for genotyping.

The ultra-modern KEMRI/CDC complex comprising of offices and laboratories provides for collaborative

research and prevention work on HIV/AIDS and other infectious diseases, including emerging and re-emerging diseases in Africa.

In another major development, the Institute collaborated with JICA to develop an easy to use diagnostic kit known as Particle Agglutination (PA), for diagnosis of HIV/AIDS. The PA kit has advantages over other kits in that its reagents are locally produced, and does not require power for analysis. The kit can test many samples at the same time and the results can be read visually with the naked eye. These kits are now in use in government hospitals in the country and plans are underway to supply them regionally.

KEMRI, in collaboration with JICA has been facilitating regional blood safety workshops known as Third Country Training Programme (TCTP). This course aims at training health workers in the continent in the screening of blood for HIV/AIDS, Viral Hepatitis B, among other blood-borne viral infections, as part of mandatory blood screening before transfusion.

In another joint KEMRI-JICA research collaboration the Institute has acquired technologies for monitoring progress of infection and treatment of HIV infected patients, using flow cytometry for measuring CD4 and CD8 cells. Results, from the research findings using the above techniques are routinely shared with the medical practitioners, researchers, partners and other stakeholders.

KEMRI in collaboration with various partners is conducting studies on HIV prevention of transmission from



The KEMRI Infectious Disease Programme team.

mother to child (PTMTC) in parts of Western Kenya. In Kisumu, scientists are studying the role of malaria in enhancing transmission of HIV from infected mothers to the foetus. In addition, KEMRI is working closely with local communities in various parts of the country, to assist them in identifying and developing programmes in prevention, care, support and management of HIV/AIDS. The Institute continues to advise the government on policies regarding the use of ARV s and other drug supplements.

The KEMRI HIV/AIDS education in the workplace programme has covered eight companies in Nairobi and other towns in the country with an estimated audience of over 4000 people. The pro-active programme also assists private and public companies, institutions, NGO s, CBO s and other stakeholders to develop policies and programmes on HIV/AIDS that are geared towards achieving the desired behaviour change. The programme also produces a quarterly newsletter that provides easy to understand-up-to-date health information on HIV/AIDS.

Leprosy

Leprosy is a chronic communicable disease caused by the bacillus *Mycobacterium leprae*, which is related to the *M. tuberculosis bacilli* that causes tuberculosis. The disease affects mostly the skin and peripheral nerves. There are two main forms of leprosy infection: Lepromatous leprosy and Tuberculoid leprosy.

The Institute has been involved in studies that introduced multi-drug therapy for leprosy. The new combination of dapson, rifampicin and clofazimine has managed to reduce the period of medication, and has reduced the incidence of the disease. Previously, treatment of leprosy was lengthy with low

compliance rate and an added problem of drug resistance.

Through the exerted effort by the Centre for Infectious and Parasitic Diseases Control Research (CIPDCR), Busia, in promoting health education amongst the community, stigmatization of leprosy is now reduced and patients can be rehabilitated in their homes.

Tuberculosis

Tuberculosis causes the most deaths among infectious diseases, and with the emergence of HIV/AIDS, the disease is receiving unprecedented attention from health care providers worldwide. It is estimated that about 3 million people, succumb to the disease worldwide and Kenya is one of the high burden countries which together contribute to 80 per cent of global tuberculosis.

The Institute s research activities on TB have been directed towards limiting transmission and promoting treatment. KEMRI in collaboration with Wellcome Trust, has carried out studies to ascertain how HIV affects the epidemiology, presentation and diagnosis of TB in Kenya.

Preliminary studies have been conducted on the levels of resistance of the bacterium to commonly used drugs such as isoniazid, streptomycin and rifampicin . Strains of drug resistant TB have rendered treatment difficult, costly and often ineffective. However the Institute is working closely with the Ministry of Health and other partners in developing, preventive, management and clinical policies for tuberculosis.

Acute Respiratory Infections (ARI s)

Acute respiratory infections are defined as infections in any area of the respiratory tract, including the nose, middle ear, throat, windpipe and lungs. Pneumonia is the most serious among the ARIs, and in

Kenya it is estimated that 70 children die daily from pneumonia.

KEMRI programme on ARI is mainly concentrated on the infections in children. Most children have four to six infections each year, with urban areas showing higher frequencies than rural areas.



A patient using ARI diagnostic kit.

The Institute is conducting research that could result in introducing new vaccines in the prevention of causative organism for ARI s.

On going studies in western Kenya are focusing on the interaction between ARI and malaria, since in children, the symptoms of the two often mimic each other, and this may lead to wrong diagnosis and treatment. KEMRI programmes are addressing areas of improving diagnosis and treatment approaches for ARI s, especially in children.

Viral Hepatitis

Hepatitis is a term reserved for infections of the liver by one or more of the distinct hepatitis viruses. The terms hepatitis A,B,C,D and E are used to categorise the viruses. The World Health Organization estimates that 500 million people in the World are chronic carriers of the virus that cause hepatitis.

Transmission is primarily through blood and sexual contact, though other methods of transmission have been suggested. The hepatitis B virus is found primarily in the blood of infected individuals. It has also been detected in other body fluids, including urine, saliva, semen and vaginal fluids. The programme focuses mainly on hepatitis B, which is a common medical problem and hepatitis C, which is increasingly becoming a problem in Kenya.

Epidemiological studies show that almost half of the Kenyan population will have been infected with hepatitis B by the age of 30 to 40 years. Out of those infected, about 10% become carriers of the virus while in the majority, the body s immune system eliminates the virus.

KEMRI has developed a test kit known as the KEMRI HEPCELL, for screening blood for the hepatitis B virus. The test kit, is already in use in all provincial hospitals and some private health facilities. Plans are on-going to begin commercial preparations of the kit.

KEMRI in collaboration with JICA organizes training workshops every year on the use of KEMRI Hepcell kit, locally and in the East and Central African region.

2. PARASITIC DISEASES PROGRAMME

Malaria

Malaria in humans is a serious infection of the blood caused by a protozoan of the genus *Plasmodium*, transmitted by the bite of a female *Anopheles* mosquito. Four species cause infection, namely *P. falciparum*, *P. malariae*, *P. ovale*, and *P. vivax*. *P. falciparum* mainly occurs in tropical Africa, and is the malaria parasite most associated with severe or fatal illness in Kenya. In addition, *Anopheles gambiae*, is a highly efficient vector of malaria in Kenya and predominates throughout large areas of Africa.

Each year, there are an estimated 300-500 million cases of malaria worldwide. Nine out of ten of the world's malaria cases occur in Africa. Malaria is estimated to kill more than one million people annually, the majority of whom are young children.

Ministry of Health statistics indicate that, 30 percent of illnesses in Kenya are due to malaria. Of the childhood population in Kenya, it is estimated that approximately 26,000 die each year from the direct consequences of malaria infection (72 children each day).

KEMRI malaria programme continues to focus on the development of innovative means that combine preventive and curative strategies, as a bold move to effectively tackle the increasing challenges posed by malaria in Kenya. The research at the Center for Geographic Medicine Research in Kilifi in collaboration with Wellcome Trust of UK, concentrates on the characterisation of malaria and its transmission in the community, encompassing epidemiology, laboratory based and clinical application.



Anopheles gambiae, the common malaria vector in Kenya.

In Nairobi, complimentary work focuses on the pharmacology of drug treatment. It is envisaged that the outcome of such studies will provide information on both cure rates and effects on malaria transmission, as

well as on rational choice of combination therapy in areas with sulfadoxine-pyrimethamine (SP)-resistance. KEMRI Scientists played a leading role, as part of an international team, in the development of LAPDAP, a new antimalarial treatment.

Operationally, KEMRI has supported activities on management of malaria in pregnancy by use of both preventive and chemotherapeutic strategies. The Institute is also working with manufacturers of various malaria diagnostic kits to evaluate their efficacy.

Other areas of malaria research have focused on prophylaxis, treatment seeking behaviour and community practices. Pioneering work has also been done on the use of remote sensing technology, to predict clinical incidence and prevalence of malaria in the region.

Results of a multidisciplinary trial by KEMRI in collaboration with the

Centres for Disease Control and Prevention (CDC) researchers, have shown that insecticide-treated mosquito nets provide strong scientific support for use of treated nets to reduce the burden of malaria. Studies conducted in KEMRI have refined the understanding of malaria vector bionomics. It is envisaged that continued research in molecular entomology will contribute in the development of long-term strategies. Through expanded partnerships, KEMRI scientific and research outputs are in line with the objective of the global Roll Back Malaria Program (RBM).

Schistosomiasis

Schistosomiasis (also known as bilharzia) results from infection with parasitic trematode worms known as bloodflukes or schistosomes. By current estimates, the disease afflicts some 200 million people, of whom about 20 million suffer clinical morbidity. The disease rarely kills but its chronic effects and associated morbidity makes it a problem of great public health importance. Human beings play a major role in the transmission of the bilharzia parasite. Contact with parasite-infested water is crucial for the perpetuation of the infection. The research programme focuses on developing simple and inexpensive control methods, which include snail control using environment



Collection of specimens from school children for parasitological diagnosis.

modification and biological control.

The Institute's Centre for Biotechnology Research and Development is also part of an international initiative to evaluate candidate vaccine molecules.

A technique for differentiating between *S. haematobium* and *S. bovis* has been developed, and it is being evaluated in the Institute. Studies have shown that environmental modification and supply of clean water reduces the transmission of schistosomiasis. The above control measures, supplemented with treatment using praziquantel has been shown to reduce levels of infection.

The Institute continues to conduct random sample surveys in primary schools in different parts of the country in order to determine the prevalence rates. The results obtained have been used to formulate appropriate control measures.

Studies have been done on inter-relationship between schistosome infection and soil-transmitted helminthes. The two infections are inter-related in that poor environmental and sanitary/hygienic conditions sustain them. Subsequently, a successful programme for control of schistosomiasis should also include control of geohelminthes.

Uro-cytological studies related to morbidity due to schistosome infection, revealed a high incidence of cancer of urinary bladder in people with chronic *Schistosoma haematobium*. Males with schistosome infections may experience difficult micturition a condition that may be reversed after treatment. Recent random sample survey of the prevalence and distribution of geohelminthes indicated that about 72% of the school children harboured one or

more geohelminths, with a high number of the children demonstrating schistosoma infection.

Follow up studies have been going on to evaluate the effects of various control measures and to further observe epidemiological and community behavioural changes. These studies have shown improved awareness of the importance of the diseases and improved health seeking behaviour in the community.

Together with partners and collaborators, KEMRI is conducting studies to evaluate the effects of safe water in the transmission of schistosomiasis and other intestinal parasites.

Filariasis

Among the three human filarial parasites, *Wuchereria bancrofti* is the most widespread and the only known form in Kenya. The parasites are transmitted by mosquitoes of the *anopheles* and *culex* species. An infective mosquito transmits the larval stages of the parasites through the punctured wound during a blood meal.

Infection with filarial parasites leads to elephantiasis, a profoundly disfiguring and disabling disease. Added to this disease burden are serious psychosocial consequences, and cultural taboos. The bulk of the work of this project is conducted in Kwale District, Coast Province, where microfilariae prevalence has been shown to be about 17% or twice as high when using the more sensitive immunodiagnostic tests.

The major activities are centred around a drug efficacy study conducted by CMR and CCR. Studies have shown that diethylcarbamazine (DEC) is an effective antifilarial drug, and its



A KEMRI scientist examining a patient diagnosed with filariasis.

antifilarial activity is enhanced when combined with albendazole. These studies have recommended the use of simple, sensitive, rapid and convenient diagnostic methods in the field.

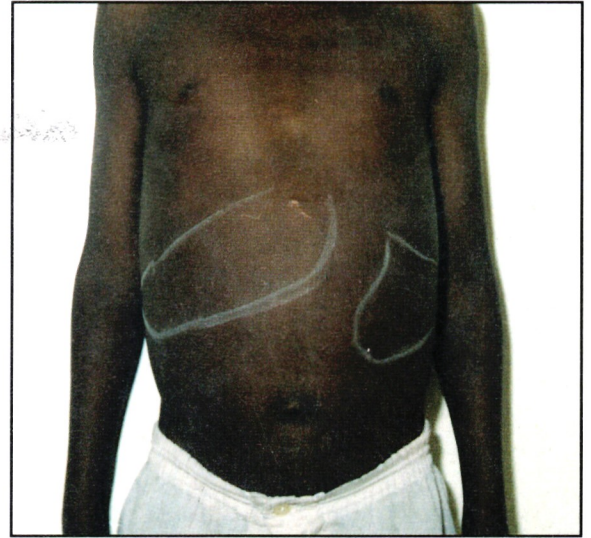
Leishmaniasis

Leishmaniasis forms a whole group of parasitic tropical diseases spread by bites of many different species of infected sandflies, genus *Phlebotomus*. About 20 species of *Leishmania* are known to infect man, leading to symptoms ranging from simple self healing skin ulcers to severe life threatening forms of the disease. Cutaneous leishmaniasis is the most common form. The other form is known as visceral leishmaniasis (*Kala-azar*). *Kala-azar* affects the soft internal organs such as the spleen, liver and lymph nodes and is characterized by fever, weight loss, anaemia, swelling of the affected organs and depressed immune systems.

Studies conducted in KEMRI have shown that Leishmaniasis is one of the opportunistic infections in HIV/AIDS cases. KEMRI researchers have continued to improve the diagnostic

techniques for leishmaniasis. Drug trials have continued to generate positive results now already used in policy formulation by the Ministry of Health in the treatment of leishmaniasis.

KEMRI has made major contribution to the understanding of the immune mechanisms in leishmaniasis, especially in the development of a simple diagnostic test known as Direct Agglutination Test (DAT). Further work is being done to explore the possibilities of developing a vaccine .



A patient with Leishmaniasis showing enlarged organs.

3. EPIDEMIOLOGY, PUBLIC HEALTH & HEALTH SYSTEMS PROGRAMME

Nutrition Programme

KEMRI's Centre for Public Health Research (CPHR) is conducting studies which are addressing public health nutrition as well as providing direction in the fine tuning of policies aimed at controlling micronutrients malnutrition or hidden hunger.

The studies have been conducted on both epidemiology and field trials on efficacy of various nutrition interventions. Deliberate emphasis has been placed on micronutrients malnutrition intervention.

The CPHR together with partners have embarked on a national survey to establish the prevalence of iodine deficiency disorders. In addition, a study on the efficacy of iron and iodine fortified salt has been developed and is on-going.

Results from studies done by KEMRI on selected micronutrients supplements have shown beneficial effects on health and quality of life of people living with HIV/AIDS (PLWHA).

It is envisaged that the ongoing micronutrient studies, will continue to provide further understanding of the roles and effects of these nutrients, as well as appropriate prevention and control methods for nutrition disorders. In order to provide guidance to policy makers and the private sector, KEMRI initiated field trials of fortified maize flour in collaboration with other research partners.

During the year, KEMRI in collaboration with other institutions initiated studies on mineral rich varieties of beans and provitamin A rich-sweet potatoes (orange fleshed sweet potatoes).

As a result of these epidemiological studies, the private sector responded by investing in fortification of common staple foods with minerals and vitamins.

4. BIOTECHNOLOGY & NON-COMMUNICABLE DISEASES PROGRAMME

Biotechnology

Research on this sub-programme focuses primarily on the development, improvement and evaluation of diagnostic tests for HIV, malaria, schistosomiasis and filariasis. Vaccine-related research for leishmaniasis is also a major activity.

KEMRI researchers in collaboration with other partners have developed a PCR-based diagnostic test for detection of filarial infection (causal agent of lymphatic filariasis) in sputum.

In another collaborative study the Institute developed a quantitative nucleic acid sequence-based amplification (QT-NASBA) assay for the detection of *Plasmodium* parasites in blood samples.

Molecular entomology research with other partners is focusing on the development of molecular tools for identifying anopheline mosquito sibling species and analysis of the genetic structure and diversity of anopheline mosquito populations.

It is envisaged that research in molecular entomology will contribute in the development of long-term strategies for control of malaria-transmitting mosquitoes.

A PCR-based technique for differentiating between *S. haematobium* and *S. bovis* has been developed and is being evaluated. Such a technique could be useful for monitoring of transmission sites for human urinary schistosomiasis following intervention measures.

The sub-programme will continue to strengthen capacity in

biotechnology, initiate new innovation of tools and strategies for the improvement of human health and welfare.

Non-Communicable Diseases

This sub-programme supports local, regional, and global strategies and initiatives in cancer research. It also supports research on cardiovascular diseases and other non-communicable diseases.

The sub-programme has a population based cancer registry where data is collected in order to accurately evaluate the situation of the disease. The data is also used in the planning of health delivery services for cancer.

The sub-programme also routinely monitors risk factors associated with cardiovascular diseases such as hypertension. Research findings have elucidated that the most efficient approaches for the prevention and control of NCDs are those based on comprehensive, multisectoral and multidisciplinary interventions implemented through partnerships with all stakeholders.

Traditional Medicines and Drug Research

The great majority of people in the developing countries still depend on traditional medicines for their primary health care and Kenya is no exception.

The emergence of HIV/AIDS and other drug resistant microorganisms has driven a large proportion of people both in the rural and the urban areas into seeking traditional medicine for disease management.

KEMRI has conducted studies on malaria, HIV/AIDS and herpes

simplex virus infections using traditional medicines.

During these studies, technology for in-vitro anti-HIV activity, and methods of evaluating activity against *Herpes simplex* virus were achieved. During the same period twelve medicinal plant extracts were shown to have high potential as anti-*Herpes simplex* virus.

With regard to malaria, one product, which had previously shown promising activity *in-vitro*, was subjected to pilot human clinical trials.

The collaboration between CTMDR and National Museum of Kenya (NMK) has played an important role in plant identification and collection.

KEMRI appreciates the need to consider social and economic issues and true values of research, through demonstration of strict adherence to research ethics and protocols. To have an impact, these research findings are channelled into priority setting and policy making processes in the country.

KEMRI looks forward to continued collaboration and partnership with key researchers locally, regionally and globally in consolidating its past achievements in health research and in maintaining its image as a centre for scientific research excellence.



Assortment of capsules, medicinal fruits and herbs.

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REPORT OF THE CONTROLLER AND AUDITOR GENERAL ON THE ACCOUNTS OF KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE 2001

I have examined the Accounts of Kenya Medical Research Institute for the year ended 30th June 2001 in accordance with Section 29 of the Exchequer and Audit Act (Cap 412). I have obtained all the information and explanations considered necessary for the purpose of the audit. Proper books of account have been kept and the Accounts, which have been prepared under the historical cost convention, are in agreement therewith and comply with the Science and Technology Act (Cap. 250).

1. STAFF HOUSING PROJECT

Reference was made in the previous years reports, of the irregular manner in which the Institute entered into an agreement for the construction of a staff housing project on Plot No. L.R209/10683, Mbagathi Road, Nairobi which at the time of entering into the contract belonged to Cyperr Enterprises Ltd. The construction project was estimated to be completed by February 1991 and to cost Kshs. 165 million. However, the project was abandoned after the contractors had been paid Kshs. 101,727,177 by the Institute. Government in 1993 paid a further Kshs. 280 million into the account of the contractor on behalf of KEMRI, even though the contractor had already abandoned the project thus bringing the total payment then to Kshs 381,727,177. Thereafter for unexplained reasons Government, in 2000 released an amount of Kshs. 142,000,000 to KEMRI towards settlement of an outstanding debt owed by the Contractor to the National Bank of Kenya and for the revival of the Project, but project still remained stagnant. Out of the Kshs. 142,000,000 released for the project, the Institute deposited Kshs. 120,000,000 with its lawyers for onward transmission to the National Bank of Kenya on behalf of Cyperr Enterprises Ltd, the construction company, but as far as can be ascertained, the deposit is still being held by the lawyers, out of which Kshs. 27,327,697 was reportedly and irregularly used to pay City Council rates and land rent in April 2000. In the circumstances, therefore, and apart from the fact that immediate revival of the Project continues to remain doubtful, when releasing the amount of Kshs 142 million to KEMRI, the stated Government intention was to not only get the dispute between the Bank and the developer resolved and the project revived and completed but also to avoid further escalation of the cost of the project arising from further interest charges on the outstanding loans. It is not clear, under what circumstances Government got involved into the developers debt and the matter still remains unresolved with the project still incomplete.

2. PENSION SCHEME CONTRIBUTIONS.

As previously reported, between 1 July 1993 and 30 April 1996, the Institute paid Staff Pension Scheme contributions amounting to Kshs. 97,930,600.00 to Kenya National Assurance Company Limited (in liquidation), thereby bringing the total Scheme s funds invested to Kshs. 1,762,761,360 as at 30 June 1996. The Institute has, to date, neither received repayment of these contributions from the Receivers of Kenya National Assurance Company nor has it provided details of the pensioners and their respective balances in relation to the above contributions.

3. ABANDONED PROJECT.

The Fixed Assets balance of Kshs. 1,223,500,537 as at 30 June 2001 includes Kshs. 5,375,472 being the Institute s contributions towards a joint Project with Kenya Trypanosomiasis Research Institute (KETRI) which, in 1987 was expected to cost Kshs 28,785,039 but which was later abandoned when the project was 37% complete. A review of the position in the year 2000/2001 showed that the project was still stalled even though KEMRI had reportedly taken over their portion of the houses. In the meantime, the stalled Project continues to deteriorate and may cost more than originally planned if and when eventually revived and completed.

Except for the matters set out in the above paragraphs the Accounts, when read together with the Notes thereon, present a true and fair view of the financial state of affairs of the Institute as at 30 June 2001 and of its excess of expenditure over income and cash flows for the year then ended.


D. G. NJOROGE
CONTROLLER AND AUDITOR GENERAL


NAIROBI

24 July 2003


KENYA MEDICAL RESEARCH INSTITUTE

BALANCE SHEET AS AT 30TH JUNE 2001

				<u>2000/2001</u>	<u>1999/2000</u>
	<u>Page</u>	<u>Sch.</u>	<u>Notes</u>	<u>(Kshs)</u>	<u>(Kshs)</u>
<u>Assets Employed</u>					
Fixed Assets	8	I	1&2	1,223,500,537	1,061,579,088
Current Assets:					
Debtors	9	II	4	120,900,391	121,526,583
Centres Imprest	10	III	6b	227,866	289,790
Temporary Imprest	12	IV	6a	519,969	394,736
Unexpended Balance on					
Special Accounts & Grants	17	VI	7	43,241,350	60,646,656
Cash & Bank Balance			8	31,760,414	25,751,814
Total Current Assets				<u>196,649,990</u>	<u>208,609,579</u>
<u>Less:</u>					
Current Liabilities					
Creditors	13	V	5	1,747,263	2,237,935
Deposits, Special					
Accounts & Grants	17	VI	7	43,241,350	60,646,656
Total current Liabilities				<u>44,988,613</u>	<u>62,884,591</u>
Net current Assets				<u>151,661,377</u>	<u>145,724,988</u>
				<u>1,375,161,914</u>	<u>1,207,304,076</u>
<u>Financed by:</u>					
Accumulated Fund	7	°	9	<u>1,375,161,914</u>	<u>1,207,304,076</u>



DAVY K. KOECH, Ph.D, DSc, SS, OGW, MBS
SECRETARY, BOARD OF MANAGEMENT



Dr. M.S. ABDULLAH
CHAIRMAN, BOARD OF MANAGEMENT

September 25, 2001

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 30TH JUNE

	2000/2001 (Kshs.)	1999/2000
MOH Grants	382,933,801	282,737,024
Special Accounts and Grants	238,131,655	228,555,070
JICA Operational Grants	12,026,470	18,470,847
	<u>633,091,926</u>	<u>529,762,941</u>
Personal emoluments	150,222,369	134,282,054
Pension and Gratuity	8,727,232	6,452,329
House Allowances	48,977,100	23,097,665
Other Allowances	33,846,519	14,648,383
Medical Allowances	12,459,031	12,575,202
Passage & Leave Expenses	759,291	787,264
Medical Expenses	4,196,285	2,912,850
Refund of Medical Exp. -Ex-Gratia	410,064	1,332
Transport Operating Expenses	7,996,806	9,841,277
Travelling and Accommodation	2,251,373	1,339,992
External Travel & Accommodation	613,527	567,485
Postal and Telegrams Expenses	463,643	361,527
Telephone Expenses	8,068,705	5,994,276
Official Entertainment	2,920,277	1,808,027
Exp. Of Board, Committees & Conferences	4,830,615	2,547,027
Electricity Expenses	18,191,052	11,792,993
Water & Conservancy	7,414,384	7,946,206
Laboratory Reagents and Supplies	261,198	59,516
Purchase of Drugs and Dressings	2,306,167	2,214,188
KEMRI /JICA Project	7,333,541	3,748,085
Food and Rations	475,763	65,751
Feeds for Animals	425,835	369,739
Purchase of Consumables	1,842,113	NIL
Publishing & Printing Exp.	610,400	301,367
Uniforms and Clothing	492,980	339,960
Library Expenses	309,798	191,067
Purchase of Stationery	7,211,319	6,608,652
Advertising & Publicity	222,019	147,438
Rents and Rates	20,652,171	20,408,330
Computer Expenses	852,853	905,358
Miscellaneous & Other Charges	578,604	530,530
Special Accounts & Grants	238,131,655	228,555,070
Insurance Expenses	11,637,246	6,504,551
Fees, Commission & Honoraria	177,125	NIL
Training Expenses	20,730	254,970
Maintenance of Plant Machinery & Equipment	3,439,894	2,757,564
Maintenance of Buildings & Stations	3,413,939	4,470,685
JICA Operational Cost	12,026,470	18,470,847
Loss on disposal (NBV)	7,616,504	583,000
Total expenses before depreciation	<u>632,386,597</u>	<u>534,442,557</u>
Surplus (deficit) of income over expenditure	<u>705,329</u>	<u>(4,679,616)</u>
DEPRECIATION EXPENSES		
Motor Vehicles	2,953,991	2,732,309
Office & Medical Equipment	8,768,275	8,838,591
Office Furniture	227,183	222,036
Office Buildings	4,223,384	3,347,643
Residential Buildings	1,875,767	1,860,446
	<u>18,048,600</u>	<u>17,001,025</u>
Excess of Expenditure over Income	<u>(17,343,271)</u>	<u>(21,680,641)</u>

CASH FLOW STATEMENT FOR THE YEAR ENDED 30TH JUNE 2001

	<u>2000/2001</u> <u>(Kshs)</u>	<u>1999/2000</u> <u>(Kshs)</u>
<u>Cash Flows from Operating Activities</u>		
Deficit for the year	(17,343,271)	(16,472,552)
Adjustments for:		
Depreciation	18,048,600	11,792,936
Loss on disposal of equipment	7,616,504	583,000
Surplus (Deficit) before working capital changes	8,321,833	(4,096,616)
Decrease (increase) in debtors	626,192	(118,945,432)
Decrease (increase) in standing imprest	61,924	(95,000)
(Increase) decrease in temporary imprest	(125,233)	384,808
Decrease in creditors	(490,672)	(3,749,007)
Net Cash (absorbed by) generated from Operating Activities	8,394,044	(126,501,247)
<u>Cash Flows From Financing Activities</u>		
Motor vehicle purchase grant	NIL	560,000
Capital grant and grant in aid from donors	12,627,021	150,060,951
Net Cash from Financing Activities	12,627,021	150,620,951
<u>Cash Flows from Investing Activities</u>		
Purchase of fixed assets	15,670,036	13,078,057
Fixed assets disposal proceeds	(657,571)	(100,000)
Net Cash from Investing Activities	(15,012,465)	(12,978,057)
Net increase in cash and cash equivalent	6,008,600	11,141,647
Cash and cash equivalent at the beginning of the year	25,751,814	14,610,167
Cash and Cash equivalent at the end of the year	31,760,414	25,751,814

SCHEDULE OF FIXED ASSETS

ITEM	LAND (KSHS)	OFFICE BUILDINGS (KSHS)	RESIDENTIAL BUILDINGS (KSHS)	MOTOR VEHICLES (KSHS)	OFFICE & MEDICAL EQUIPMENT (KSHS)	OFFICE FURNITURE (KSHS)	TOTAL (KSHS)
Cost B/fwd	131,175,500	334,764,308	301,504,241	54,646,178	353,543,679	8,881,434	1,184,515,340
Additions	85,000,000	87,574,088	1,532,112	4,723,643	9,203,385	210,896	188,244,124
Disposals	-	-	-	(290,000)	(12,016,055)	(5,025)	(12,311,080)
	216,175,500	422,338,396	303,036,353	59,079,821	350,731,009	9,087,305	1,360,448,384
<u>DEPRECIATION</u>							
Balance B/fwd	-	21,273,323	6,181,438	22,825,089	68,470,385	4,186,017	122,936,252
Charge for the year	-	4,223,384	1,875,767	2,953,991	8,768,275	227,183	18,048,600
Disposals	-	-	-	(130,500)	(3,905,374)	(1,131)	(4,037,005)
	-	25,496,707	8,057,205	25,648,580	73,333,286	4,412,069	136,947,847
<u>Net Book Value</u>							
30-6-2001	216,175,500	396,841,689	294,979,148	33,431,241	277,397,723	4,675,236	1,223,500,537
30-6-2000	131,175,500	313,490,985	295,322,803	31,821,089	285,073,294	4,695,417	1,061,579,088

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 30 JUNE, 2001

1. ACCOUNTING POLICIES

a. Basis of Accounting

- i. The Accounts are prepared under the historical cost convention.
- ii. The Accounts have been prepared on Cash Basis as opposed to Accruals Basis.

a. Depreciation

Depreciation of Fixed Assets is calculated to write off their cost over their estimated useful lives on a straight-line basis at the following rates.

Buildings	-	Office and Residential	1.0%
Equipment	-	Office and Medical	2.5%
Office Furniture	-		2.5%
Motor Vehicles	-		5%

2. ACQUISITIONS

a) Donor Funded

During the year ended 30th June 2001 the Institute received medical and other equipment worth Kshs. 12,627,021 of which Japan International Cooperation Agency's contribution was Kshs. 6,110,034. The contributions were added to the fixed assets schedule as follows:

<u>Item</u>	<u>Amount</u> <u>(Kshs)</u>
Office Furniture	86,175
Medical equipment	7,817,203
Motor Vehicles	4,723,643
TOTAL	12,627,021

b) Exchequer funded

Capital expenditure incurred by the institute from exchequer funds was as follows:

<u>Item</u>	<u>Amount</u> <u>(Kshs)</u>
Office Furniture	124,721
Medical Equipment	1,386,183
Residential Buildings	1,532,112
Total	3,043,016

3. APPROPRIATIONS IN AID

As at 30th June, 2001, Kshs.1, 754,644 had been received being economic rent from Institutional leased houses occupied by staff and from miscellaneous sources.

4. DEBTORS

Included in the balance is Kshs. 120,000,000 deposited with our advocates as commitment to settlement of outstanding accounts on the Staff Housing Project. The balance also includes Personal and Medical advances, and outstanding balances on Staff accounts for auctioned Items.

5. CREDITORS

Creditors include SACCO s, SAYE, NSSF, PAYE, NHIF and KESWA.

6. IMPREST

- a). Temporary imprest outstanding as at 30th June 2001 amounted to Kshs. 519,969.
- b). Imprests issued to Centers stood at Kshs. 227,866.

7. SPECIAL ACCOUNTS AND GRANTS

The unexpended balances on Special Accounts and Grants totaling Kshs. 43,241,350 represent donor funds held on their behalf at the balance sheet date.

8. CASH AND BANK BALANCE

The closing Cash and Bank balance of Kshs 31,760,414 is composed of Cash at hand of Kshs. 17,505 and Cash at Bank of Kshs. 31,742,909.

9. ACCUMULATED FUND

The fund is built and analysed as follows:

	<u>Kshs</u>
Balance brought forward as at 1-7-2000	1,207,304,076
Revaluation Reserves	172,574,088
Excess of Expenditure over Income	<u>(17,343,271)</u>
	1,362,534,893
Support from Donors	<u>12,627,021</u>
TOTAL	<u>1,375,161,914</u>

10. EXCHEQUER ISSUES

During the year the institute received Kshs. 382,933,801 as a grant from the Ministry of Health.

UNEXPENDED BALANCES ON SPECIAL ACCOUNTS AND GRANTS

	Balance as at 1-7-2000 (Kshs)	Received during the year (Kshs)	Expenditure during the year (Kshs)	Balance as at 30-6-2001 (Kshs)
US Embassy- USAMRU Project	13,160,159	78,255,440	80,047,807	11,367,792
US, Embassy- CDC Project	13,045,663	34,247,643	46,952,617	340,689
US Government- Treasury Others	8,279,746	12,332,977	20,609,975	2,748
Case Western Reserve University	(350,000)	5,712,088	3,490,494	1,871,594
Commonwealth Secretariat	904,754	-	404,334	500,420
World Health Organization	11,010,299	27,585,469	23,392,721	15,203,047
UNICEF	972,637	1,113,690	549,020	1,537,307
Royal Tropical Institute	1,329,105	3,322,728	4,631,124	20,709
University of New Mexico	(445,500)	7,275,158	6,352,020	477,638
African Medical Services Trust	(1,174,298)	2,673,634	2,224,537	(725,201)
SmithKline Pharm Institute	1,656,627	2,130,376	5,788,234	(2,001,231)
University of Otago	-	2,877,891	2,536,856	341,035
Oxford University	-	2,272,747	2,139,090	133,657
Liverpool School of Tropical Medicine	-	1,584,510	847,422	737,088
Inserm Institute National	-	2,849,375	381,141	2,468,234
Miscellaneous	12,257,465	36,492,623	37,784,264	10,965,824
TOTAL	60,646,657	220,726,348	238,131,656	43,241,350

3. APPROPRIATIONS IN AID

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TOTAL	60,646,657	220,726,348	238,131,656	43,241,350

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