KENYA MEDICAL RESEARCH INSTITUTE

Mbagathi Road.
P.O. Box 54840.
Nairobi, Kenya.

Date 17th November, 1989

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to Director
Telegrams: "KEMRI" NAIROBI
Telephone: 722541/2/3/4 Nairobi

Our Ref:

Your Ref:

MINUTES OF THE MEETING BETWEEN THE VISITING JAPANESE MISSION FOR THE EVALUATION OF THE KEMRI/JICA PROJECT AND THE DIRECTOR, KEMRI, HELD ON THURSDAY 16TH NOVEMBER, 1989 AT 8.00A.M. IN THE KEMRI HEADQUARTERS BOARDROOM

PRESENT:

Dr. Davy K. Koech	- Director, KEMRI - Chairman
Dr. Atsushi Ozawa	- Leader of Evaluation Team
Dr. Rinji Kawana	- Member of the Evaluation Team
Dr. Shunzo Chiba	- " " "
Dr. Kiichiro Akai	- " " "
Mr. Toshio Ishigami	- " " "
Mr. Nobuyuki Horie	- Embassy of Japan, Nairobi
Mr. Kenji Kumagishi	- JICA, Nairobi
Dr. K. Sato	- Ag. Team Leader
Mr. T. Nakano	- KEMRI/JICA Project Coordinator
Prof. A.O. Obel	- Technical Services Coordinator, KEMRI
Mr. D.M. Ngumo	- Chief Administrative Officer, KEMRI
Mr. J.N. Kariuki	- Senior Administrative Officer, (Research & Development), KEMRI - Recorder

MIN 1 ADDRESS FROM THE CHAIR

The Director, KEMRI called the meeting to order and welcomed the Japanese Mission for the Evaluation of the KEMRI/JICA Project to the Kenya Medical Research Institute.

NOTED That the Mission had previously visited the Institute when they paid a courtesy call on him on Monday 13th November, 1989.

MIN 2 JOINT EVALUATION REPORT

The Japanese Team circulated the paper prepared by themselves entitled "Joint Evaluation Report on the Japanese Technical Cooperation for the Project of Kenya Medical Research Institute in the Republic of Kenya".

The KEMRI Secretariat also circulated a document on the KEMRI/JICA Project prepared by the Centre for Microbiology Research and the Virus Research Centre.

AGREED That the joint committee should adopt the document circulated by the Visiting Japanese Team as the format for discussions.

The Committee discussed the whole document and made the necessary ammendments.

The document was thereafter accepted by both parties and it is hereunder attached.

That the Director, KEMRI and the Leader of the Evaluation Team will sign it on Friday 17th November, 1989.

APPROVED FOR ISSUE ---------- 17/4/89

CHAIRMAN DATE

CINFIRMED AT MEETING ---------- ----------

CHAIRMAN DATE

MINUTES OF THE SECOND MEETING BETWEEN THE VISITING JAPANESE MISSION FOR THE EVALUATION OF THE KEMRI/JICA PROJECT AND THE DIRECTOR, KEMRI HELD ON FRIDAY, 17TH NOVEMBER, 1989 AT 9.00 A.M IN THE KEMRI HEADQUARTERS BOARD ROOM.

PRESENT:

Dr. Davy K. Koech	-	Director, KEMRI (Chairman)
Dr. Atsushi Ozawa	-	Leader of the Japanese Evaluation Mission
Dr. Rinji Kawana	-	Member of the Japanese Evaluation Mission
Dr. Shunzo Chiba	-	" " "
Dr. Keichiro Akai	-	" " "
Mr. Toshio Ishigami	-	" " "
Mr. Kenji Kumagishi	-	JICA Resident Representative, Nairobi.
Mr. Tsutomu Nakano	-	KEMRI/JICA Project Coordinator.
Dr. P.G. Waiyaki		Director, Centre for Microbiology Research, KEMRI
Dr. P.M. Tukei	-	Director, Virus Research Centre, KEMRI.
Mr. J.N. Kariuki	-	Senior Administrative Officer, KEMRI.
Mr. D.M. Ngumo	-	Chief Administrative Officer KEMRI (Secretary)

1. COMMUNICATION FROM THE CHAIR.

The Chairman called the meeting to order at 9.15 a.m and welcomed all members to the meeting.

He indicated that while waiting for the draft Joint Evaluation Report as amended at the meeting held the previous day to be tabled for discussion and approval, the meeting should discuss the general issues related to the KEMRI/JICA Project as intimated at the meeting held the previous day.

2. GENERAL ISSUES RELATED TO THE KEMRI/JICA PROJECT

The general issues related to the KEMRI/JICA Project were discussed as indicated below:-

2.1 Publications

The Visiting Japanese Evaluation Mission indicated that concern had been expressed even in the past joint meetings about apparent delay in the clearance of papers for publication and observed that this issue will need to be closely looked at particularly in view of the expected high number of papers at the end of the Project in April 1990.

It was observed that there are no delays at the centre level and also that since the Publications Committee which is responsible for clearance of papers for publication meets once every month, there should not be any delays in the entire clearance process.

It was noted that KEMRI is, however, seriously looking into the matter to speed up the clearance of papers for publication.

It was also noted that in case of any problems in the clearance of papers for publication those concerned should immediately get in touch with the Office of the Director, KEMRI to expedite action on such matters.

2.2 Counterpart Training

The Visiting Japanese Evaluation Mission expressed the following:-

(i) That it is hoped that JICA participants should continue working in KEMRI long after their training and that they do not move to work in other organizations.

(ii) That it would be useful to inform in advance the Japanese experts in case of any anticipated transfer of counterparts.

In discussing this subject it was noted that of the counterparts trained in Japan only two had resigned, one of whom had resigned for family reasons while the other one was still closely collaborating with the Institute in his new job.

As for internal transfers of counterparts it was noted that as applicable for the rest of the staff of the Institute they would normally not be transferred without close consultations with those with whom they work.

It was expressed that lack of certificates of the counterparts trained in Japan is a handicap in their promotion and since such counterparts may readily take up any available opportunities for further academic training to obtain certificates that may help them in their future career advancement this may create instabilities in counterpart collaboration.

It was observed that there are two types of training available in Japan, namely, academic and technical training. The thrust of JICA training is technical training, although it is now possible to explore opportunities for academic training in given universities where considered appropriate.

It was expressed that discussions could be initiated with the London School of Hygiene and Tropical Medicine for some of the KEMRI/JICA counterpart training to be undertaken there.

It was agreed that KEMRI will send a request to JICA to this effect for JICA to take it up as necessary.

2.3 Japanese Experts

It was observed that by the time the Japanese experts come to KEMRI, they are already committed to work on given projects of their interest and that in case no compatible counterparts are identified this may pose difficulties in getting smooth collaboration in the implementation of the project.

Arising from the above, it was expressed that in future JICA should inform KEMRI well in advance about the experts proposed to be despatched, showing the specific research projects such experts would undertake and also indicating the full CVS of such experts for KEMRI to identify compatible and suitable counterparts.

That if possible KEMRI would like to get this information at least 2-3 months before the experts arrive.

It was indicated that this is also necessary in order to comply with the laid down Government requirements for clearance of despatch of experts.

It was noted at JICA will take the above information into account and will endeavour to send advance information on the name of expert, his specialized field of interest, the duration of his stay and the title of his study project while preparing to send the full C.V of the expert.

3. EXTERNAL EVALUATION OF THE INSTITUTE

The Chairman reported on the external evaluation of the Institute which was conducted in October 1989 and highlighted the pertinent issues, relating to the KEMRI/JICA collaboration.

He indicated that the Evaluation Team was highly impressed with the KEMRI/JICA collaboration and indeed with the tremendous contribution JICA and the people and Government of Japan have made to the Institute.

The Chairman further indicated that the Evaluation Team had observed that serious attention needs to be given to the future maintenance needs of the equipment donated by JICA and other donor groups.

It was noted that JICA is planning to send a follow-up mission for the repair and maintenance of all JICA donated equipment.

4. THE JOINT EVALUATION REPORT

The meeting received the Joint Evaluation Report as discussed and amended the previous day and after correcting and revising it as necessary it was agreed to sign it.

Before signing the Report Prof. A. Ozawa, the Leader of the Visiting Japanese Evaluation Mission, expressed his satisfaction for the fruitful results generated in the Project and also expressed his gratitude for the kind cooperation JICA had received from the Institute in the implementation of the Project.

Prof. Ozawa expressed his hope that the KEMRI/JICA collaboration will be strengthened, intensified and solidified in the days ahead.

On his part, Dr Davy K. Koech, the Director KEMRI indicated that this was a memorable day for KEMRI as the Institute was greatly indebted to JICA for all the support it had received since its inception and more so during the last five years of the Project.

On behalf of the Institute and the Kenya Government, the Director, KEMRI expressed his most profound gratitude for all the support and assistance the Institute had received from JICA, and from the people and Government of Japan which had immensely enabled the Institute to get to where it is at the moment.

He confessed his joy in appending his signature to the Joint Evaluation Report and expressed his firm conviction that the KEMRI/JICA collaboration will grow from strength to strength in the days ahead.

Thereon, Dr. Atsushi Ozawa, the Leader of the Visiting Japanese Evaluation Mission and Dr. Davy K. Koech, the Director, KEMRI proceeded to append their signatures, on behalf of their respective teams, to the Joint Evaluation Report of the KEMRI/JICA Project for the period from 1st May 1985 to 30th April 1990.

There being no other business the meeting ended at 11.55 p.m.

APPROVED FOR ISSUE

(CHAIRMAN)

17 Nov. 1989

(DATE)

CONFIRMED AT MEETING

(CHAIRMAN)

17 Nov. 1989

(DATE)

KENYAN COUNTER PARTS (ADMINISTRATION)

NAME	TITLE	ROLE
1. Dr. D. Koech	Director, KEMRI	Head of the Project
2. Prof. A. Obel	Chief Research Officer	Supervisor of the technical affairs
3. Mr. D. M. Ngumo	Chief Administrative Officer	Supervisor of the Administrative affairs
4. Mr. J.N. Kariuki	Senior Administrative Officer	Assistant to the Chief Administrative Officer
5. Mr. L.K. Gikaru	Administrative Officer	Information Officer

KENYAN COUNTER PARTS (BACTERIOLOGY)

NAME	TITLE	ROLE
1. W. Sang	Scientist, CMR	Lab. & Field work
2. S.M. Saidi	Scientist	Supervisor
3. J. Khamala	Technician	Supervisor
4. Dr. P.Waiyaki	Director, CMR	Supervisor

KENYAN COUNTER PARTS (VIRAL HEPATITIS PROJECT)

	NAME	TITLE	ROLE
1.	Dr. F.A. Okoth	Research Officer VRC	Management of the Project
2.	Mr. O.C. Kaptich	Lab. Technologist VRC	Lab. & Field work
3.	Mr. P. Kaiguri	Senior Lab. Technologist	"
4.	Mr. V.O. Osidiana	Lab. Technician VRC	"
5.	Mr. N. Owino	Lab. Technician VRC	"
6.	Mr. G. Kamau	Lab. Technician	"
7.	Mr. J. Kulundu	Lab. Assistant	"
8.	Miss A. Watahi	Lab. Assistant	"
9.	Mr. Muiruri	Public Health Technician, Muranga Hospital	"
10.	Dr. P.M. Tukei	Director, VRC	Supervisor

KENYAN COUNTER PARTS (VIRAL DIARRHOEA PROJECT)

NAME	TITLE	ROLE
1. Dr. Z.W. Gatheru	Research Officer	Management of the project
2. Mr. G. Nakitare	Assistant Research Officer	Lab. & Field work
3. Mr. J.M. Muli	Chief Lab. Technologist, VRC	"
4. Mr. P.O. Ogaja	Senior Lab. Technologist, VRC	"
5. Mr. E.O. Lichenga	Lab. Technologist VRC	"
6. Mr. J.O. Nyangao	Lab. Technologist VRC	"
7. Mr. S.R. Kiplagat	Lab. Technologist VRC	"
8. Mr. R. Awich	Lab. Attendant	"
9. Dr. Kiptui	Medical Superintendant, Nakuru Provincial General Hospital	
10. Dr. P.M. Tukei	Director, VRC	Supervisor

KENYAN COUNTER PARTS (PARASITOLOGY)

NAME	TITLE	ROLE
1. Mr. D.N. Muhoho	Scientist	Management of Project
2. Dr. Wangeci Nderitu	(Veterinary) doctor	Field & Lab. work
3. Mr. F.B. Kiliku	Technologist	"
4. Mr. S.M. Gatika	Technologist	"
5. Mr. David K. Migwi	Technologist	"
6. Mr. W.R. Mutua	Technician	"
7. Dr. P.G. Waiyaki	Director, CMR	Supervisor

KENYAN COUNTER PARTS (VIRAL DIARRHOEA PROJECT)

NAME	TITLE	ROLE
1. Dr. Z.W. Gatheru	Research Officer	Management of the project
2. Mr. G. Nakitare	Assistant Research Officer	Lab. & Field work
3. Mr. J.M. Muli	Chief Lab. Technologist, VRC	"
4. Mr. P.O. Ogaja	Senior Lab. Technologist, VRC	"
5. Mr. E.O. Lichenga	Lab. Technologist VRC	"
6. Mr. J.O. Nyangao	Lab. Technologist VRC	"
7. Mr. S.R. Kiplagat	Lab. Technologist VRC	"
8. Mr. R. Awich	Lab. Attendant	"
9. Dr. Kiptui	Medical Superintendant, Nakuru Provincial General Hospital	
10. Dr. P.M. Tukei	Director, VRC	Supervisor

KENYAN COUNTER PARTS (PARASITOLOGY)

NAME	TITLE	ROLE
1. Mr. O.N. Muhoho	Scientist	Management of Project
2. Dr. Wangeci Nderitu	(Veterinary) doctor	Field & Lab. work
3. Mr. F.B. Kiliku	Technologist	"
4. Mr. S.M. Gatika	Technologist	"
5. Mr. David K. Migwi	Technologist	"
6. Mr. W.R. Mutua	Technician	"
7. Dr. P.G. Waiyaki	Director, CMR	Supervisor

KEMRI

Annual Report 1986-87

and Statements of Accounts for the years 1981 to 1987

Published in 1989 by the
Kenya Medical Research Institute
Off Mbagathi Road
P.O. Box 54840
Tel: 722541
Nairobi, Kenya

Produced by the Information Section, KEMRI
Designed and printed by Motif Creative Arts,
P.O. Box 22415 Tel: 23567 Nairobi Kenya.

Kenya Medical Research Institute

Annual Report

1986-87

and Statements of Accounts for the years 1981 to 1987

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BOARD OF MANAGEMENT

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Prof. A.E. O. Wasunna
Dr. Z. Onyango
Prof. C. P. M. Khamala
Dr. D.G. Ombati
Mr. E.C. Kotut

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Permanent Secretary, Ministry of Education

Permanent Secretary, Ministry of Environment and Natural Resources

Permanent Secretary, Ministry of Health

Permanent Secretary, Ministry of Culture and Social Services

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Permanent Secretary, Ministry of Commerce and Industry

Permanent Secretary, Ministry of Agriculture and Livestock Development

The Director of Medical Services

The Secretary, National Council for Science and Technology

In attendance
The Solicitor-General, Attorney General's Office
Inspector of Statutory Boards

Secretary
Director, KEMRI

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Secretary, National Council for Science and Technology
Director, KEMRI.
Secretary

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(Sub-Committee of the Finance Committee)

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Prof. A.E.O. Wasunna
Dr. P.M. Tukei
Dr. Davy K. Koech
Permanent Secretary, Ministry of Works, Housing and Physical Planning
Director, KEMRI
Secretary

PRINCIPAL OFFICERS

Prof. M. Mugambi,
M.B., Ch.B., Dip. Cardiology, Ph.D.
Director

Mr. D.M. Ngumo,
B.A., Cert. Univ. Administration.
Administrative Secretary

Mr. P.G. Kenya,
Cert in Finance & Marketing
Cert in Senior Management
Cert in Organisation & Methods
Accounts Controller

In addition to the above Committees of the Board, the Institute has an **ETHICAL REVIEW COMMITTEE**, whose membership is as follows:-

Dr. J.A.Aluoch
Chairman
Dr. G. Muriuki
Dr. A.R. Njogu
Dr. J.Otete
Mr.A. Rachier
Mr. A. Mbugua
Mrs E. Ongeri
Dr. D. Nyamwaya
Dr. F. Njenga
Director, KEMRI
Secretary

CHAIRMAN'S STATEMENT

Dr M. S. Abdullah

The Hon. Minister,
Ministry of Research, Science
and Technology
P.O.Box 30623,
Nairobi.

Dear Sir,

I hereby submit, on behalf of the Board of Management of the Kenya Medical Research Institute, the 1986/87 Annual Report and Statement of Accounts for the years 1981 to 1987, in accordance with the provisions of Section 20 of the Science and Technology Act Cap. 250 of the Laws of Kenya, 1980.

The momentum which characterized the period between 1983 and 1985 continued in the years 1986 and 1987 and is evident in the various activities of the Institute as highlighted in this Report.

In the 1985/86 financial year, the recurrent expenditure rose to Kenya Pounds 1, 991,400 from Kenya Pounds 1,561,620 in the 1984/85 financial year.

The development expenditure for the same financial year was Kenya Pounds 1,366,000. In the 1986/87 financial year, the recurrent expenditure rose to Kenya Pounds 2,454,847 while the development expenditure rose Kenya Pounds 1,387,000.

The increase in financial allocations during the period covered by this Report enabled the Institute to expand and diversify most of its activities during the time. During the two years under review the Institute recruited an additional staff of 123 comprising research officers, technical staff of various categories and supportive staff. Emphasis has been on recruitment of qualified staff to advance the Institute's objectives.

During the period, major strides were made in all research programmes being undertaken by KEMRI. Particular attention was paid to the refinement of strategies for management of research so as to make the Institute's research activities more responsive to the health needs of this country and also to ensure their relevance to the laid down objectives. This was partly through the establishment and strengthening of various committees to manage and streamline research work as well as regular monitoring of the Institute's research progress.

Significant research findings made during the period are reflected in this report. Some of these findings are an invaluable source of important information needed for the better planning of health services in this country. Most of these findings have been presented in various scientific fora and published in local and international journals.

As is now the traditional every year, the Institute jointly with the Kenya Trypanosomiasis Research Institute organized the Annual Medical Scientific Conferences in 1986 and 1987.

During the two occasions we were honoured to host the then Minister for Health, distinguished visitors and leading scientists from Africa and other parts of the world. Through these conferences we are able to disseminate useful information on our research work. This information is available in the printed proceedings of these conferences.

To cater for its steady expansion, various physical development projects to provide staff houses, laboratories, offices and other facilities were initiated during the period under review in our centres in Kisumu, Alupe (Busia) and at the Headquarters.

As we are still a growing Institute this momentum in physical development and especially in the construction of vital research facilities, and staff houses will need to be sustained.

In the area of research collaboration, the Institute received support from various bodies and it continued to strengthen its cooperation with various national and international organisations. It was during the period under review that the transfers and integration of the Medical Research Centre (MRC) from its hitherto status as a department of the Royal Tropical Institute of Amsterdam in the Netherlands into KEMRI was completed.

The Institute is grateful to the Netherlands Covernment for its generous support and the successful manner in which the entire process of transfer and integration of MRC into KEMRI was done. Similarly, major strides were made in the collaboration between the Japanese International Co-operation Agency (JICA) and the Institute for which very useful research results have been generated.

For all the development and progress made during the period, I express my gratitude to the Government of Kenya and in particular to the Ministries of Research,Science and Technology, and Health, the Treasury, and the National Council for Science and Technology for their continued interest and support of our work.

The Institute is also grateful to various foreign governments and organizations that have in various ways assisted us in achieving our objectives.

I would like to conclude by recording the Board's appreciation for the support and the effort of the Director, KEMRI, and all the staff of the Institute for achievements made during the period under review.

While applauding our humble contributions during the period, I am confident that we shall sustain the gained momentum in the years ahead to make KEMRI a centre of excellence in medical research.

Accept, Sir, My honour to be,
Yours faithfully,

Dr Mohamed S. Abdullah
Chairman
Board of Management, KEMRI

INTRODUCTION

Historical Back-ground

For about a decade or so, up to June, 1977, medical research in East Africa was conducted on a regional basis by the then East African Medical Research Council under the auspices of the East African Community.

At the time of collapse of the East African Community, the Kenya Parliament passed the Science and Technology Act of July 1977 so as to provide a machinery for making available to the Government, advice upon all matters relating to the scientific and technological development of the Nation.

Under the Science and Technology Act, medical research was recognized as one of the priorities for scientific and technological development in Kenya. The next step was to establish the machinery for facilitating and advancing medical research as an integral part of the national science and technology policy.

KEMRI was established through the Science and Technology (Amendment) Act of November, 1979. Under this Act, biomedical research in Kenya, except on trypanosomiasis which is the domain of a sister Institute,the Kenya Trypanosomiasis Research Institute (KETRI), was made the responsibility of KEMRI.

Mandate of the Institute

The functions of the Kenya Medical Research Institute as stated in the Science and Technology (Amendment) Act, 1979, are as follows:-

- To carry out research in the field of biomedical sciences.
- To co-operate with other organizations and institutions of higher learning in training programmes and on matters of relevant research.
- To liaise with other research bodies within and outside Kenya carrying out similar research.
- To disseminate research findings.
- To cooperate with the Ministry of Health, the National Council for Science and Technology (NCST) and the Medical Science Advisory Research Committee in matters pertaining to research policies and priorities.
- To do all such 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 for Research Science and Technology that is responsible for all policy matters of the Institute. The Board is made up of a Chairman, six appointed members and representatives from various government ministries, departments and agencies.

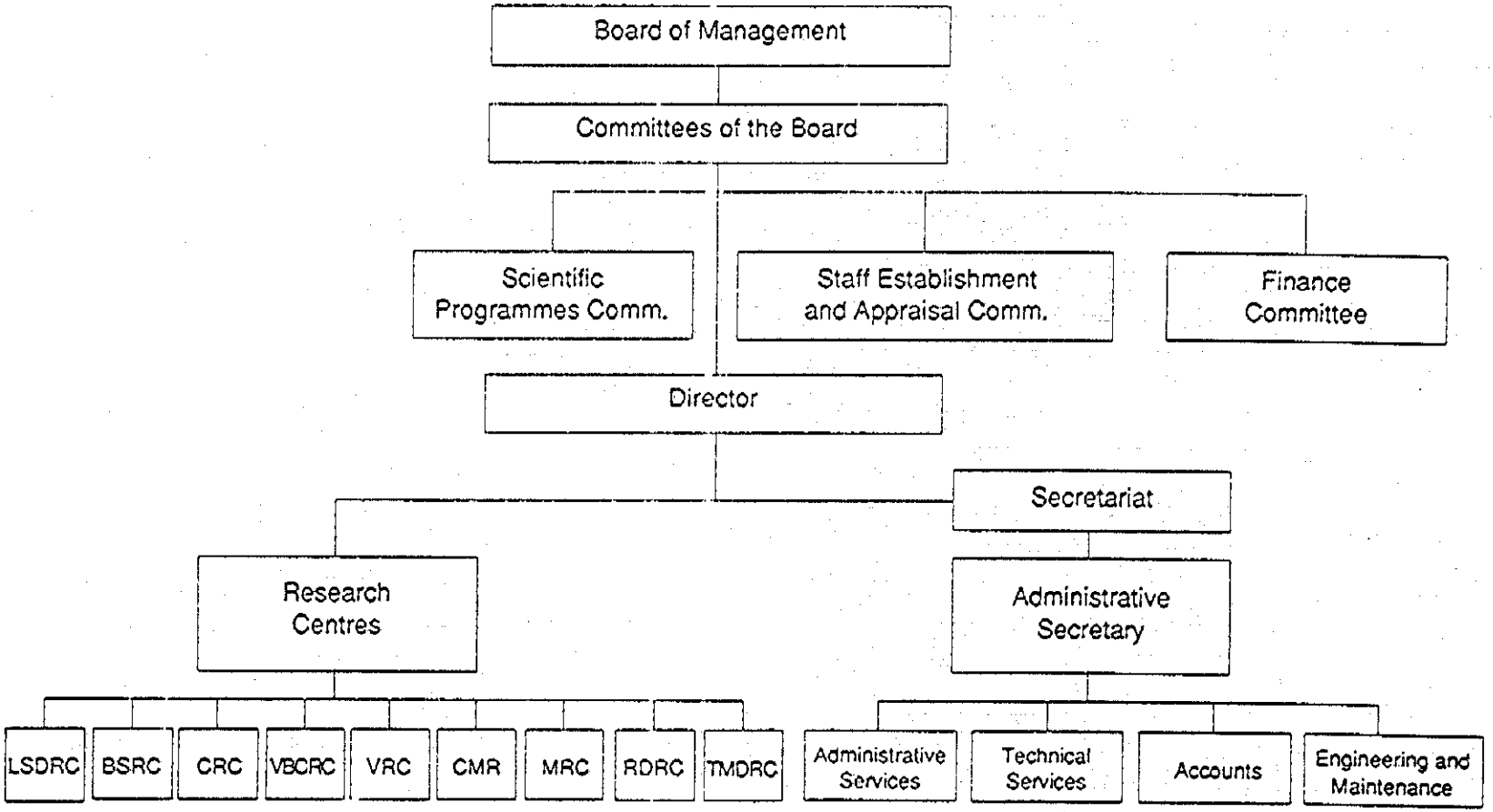
The Board has a number of standing committees which carries out specialized functions on behalf of the Board. They are the Scientific Programmes Committee, the Staff Establishment and Appraisal Committee and the Finance Committee.

To fulfill its mission KEMRI has nine specialized research centres, each one conducting research into a specific area of health.

The Centres are:

1. Alupe Leprosy and Skin Diseases Research Centre, situated at the western Kenya town of Busia.
2. The Biomedical Sciences Research Centre in Nairobi.
3. The Centre for Microbiology Research in Nairobi.
4. The Clinical Research Centre in Nairobi.
5. The Medical Research Centre in Nairobi.
6. The Respiratory Diseases Research Centre in Nairobi.
7. Traditional Medicines and Drugs Research Centre in Nairobi.
8. The Vector Biology and Control Research Centre, situated in the western Kenya town of Kisumu, and
9. The Virus Research Centre in Nairobi.

THE OPERATIONAL STRUCTURE OF KEMRI



KEY

LSDRC	Leprosy and Skin Diseases Research Centre
BSRC	Biomedical Sciences Research Centre
CRC	Clinical Research Centre
VBCRC	Vecter Biology and Control Research Centre
VRC	Virus Research Centre
CMR	Centre for Microbiology Research
MRC	Medical Research Centre
RDRC	Respiratory Diseases Research Centre
TMDRC	Traditional Medicines and Drugs Research Centre

KEMRI Secretariat
KEMRI has a Secretariat under the Director that is responsible for all administrative matters of the Institute. The Director is assisted by the Administrative Secretary.

The Secretariat is made up of the following divisions:-

- Personnel and General Services
- Technical Services
- Accounts
- Engineering and Maintenance.

RESEARCH DEVELOPMENT

In determining its research priorities, the Institute is guided primarily by the national priorities on the promotion of health as identified by the Government of Kenya. As discerned from the Ministry of Health policy guidelines, the primary objectives of health services in Kenya are to reduce health risks, to control diseases and to encourage better health styles in the community. Within this broad context, the Institute carries out research in the areas of family and child health, population growth management, communicable diseases, vector borne diseases, community health, traditional medicines, nutrition, occupational health and psychosocial medical problems. Embraced within these broad fields, the Institute has major programmes in the following areas:-

a) **Malaria:** the overall objective is to develop appropriate malaria control strategies. The major programmes include:

- the biology, epidemiology and control of malaria vectors
- clinical studies and laboratory diagnosis of malaria
- the effectiveness of the current and the newer antimalarial drugs
- community chemoprophylaxis and chemotherapy.

b) **Schistosomiasis:** programmes include vector and disease prevalence, water contact studies, immunology, treatment and control strategies.

c) **Leishmaniasis:** disease and vector prevalence studies form the field studies. Clinical diagnosis pathology, and treatment regimen studies are carried out at the Clinical Research Centre.

d) **Diarrhoea:** programmes on diarrhoea aim at developing immediate, medium and long term strategies for the reduction of mortality due to diarrhoea. Community based programmes are being carried out.

e) **Acute Respiratory Infections (ARI):** KEMRI programmes on acute respiratory infections are carried out mainly in collaboration with the Department of Paediatrics of the University of Nairobi. The programmes are part of a global network of activities on ARI being coordinated by WHO and the National Academy of Sciences of the USA. The overall objective is to develop strategies for early diagnosis and appropriate management of ARI particularly in children.

f) **Viral Hepatitis:** programmes on hepatitis concentrate on developing simpler diagnostic methodologies for elucidating the total epidemiology of viral hepatitis. Strategies for vaccination are also being developed.

g) **Tuberculosis:** national control strategies based on early diagnosis and shorter term chemotherapeutic regimens are being tested and further developed.

h) **Nutritional Disorders:** the programmes aim at studying the epidemiology of these disorders in Kenya in order to develop and apply appropriate preventive and control methods.

i) **Dental Health:** the programmes aim at developing appropriate national preventive procedures for dental problems and promotion of good health.

j) **Sexually Transmitted Diseases:** the epidemiology and the role of various aetiological agents are being studied. Treatment and control methodologies are being developed.

k) **Traditional Medicines and Drugs:** identification and authentication of the efficacy of traditional medicines forms the core of these programmes. The extraction of active ingredients, and testing their toxicity and standardization is also carried out.

l) **Leprosy:** programmes on epidemiology, treatment regimens and control methodologies form the core of the research activities of the Leprosy and Skin Diseases Research Centre.

m) Other programmes offering services central to the success of the above listed programmes are epidemiology, demography, biostatistics, computer services, and behavioural sciences. These are particularly important to the programmes which are field oriented and include community participation. These services play an important role in operational research of the Institute especially in the field testing of strategies for disease control.

Most of the Institute's research programmes could be classified as applied research rather than basic research and are conducted mainly in the rural areas, with an express view of identifying ways and means of promoting good health in rural communities.

The main research programmes being undertaken by the Institute are discussed in detail under the section on Research Programmes.

Research Facilities

At the time of its inception in 1979, KEMRI had a skeleton of facilities mainly inherited from the East African Community. Since then the Institute has continued to develop its own facilities designed to suite the needs of its research work. Most of the facilities have been financed by the Kenya Government while others have been developed through the support of collaborating international agencies and overseas governments. Examples of the latter include the Medical Research Centre which was put up by the Netherlands Government before the inception of the Institute, and the Centre for Microbiology Research building, which was constructed by the Japanese Government in 1982.

The most outstanding of the facilities built through external asistance is the KEMRI Headquarters and Central Laboratories complex which was constructed through a grant aid from the Japanese Government to the Kenya Government. This complex, built at a cost of nearly Kshs. 200 million, has specialised research laboratories,a model clinic, library, conference facilities, an animal house, and other modern scientific facilities.

Research Achievements

Although it is too early for the Institute to have made major research breakthroughs it has made the following notable achievements within its short period of operation that have a direct bearing on the improvement of health.

a) The establishment of drug resistance testing in malaria which is of considerable importance to health delivery.

b) New treatment regimens for kala-azar which are now recommended for use by the WHO.

c) The identification of a dengue epidemic for the first time in Kenya in 1982.

d) Establishment of systems to diagnose dangerous viral diseases such as the marburg and haemorrhagic fevers.

e) Development of short treatment regimens for tuberculosis which shorten treatment period from 18 months to 6 months.

f) Developing a rapport with traditional doctors thus opening the way for scientific investigations of traditional medicines.

g) Setting up of systems of tissue typing in support of the kidney transplantation programmes.

h) Establishment of parasite banks and techniques for characterizing leishmanial parasites.

i) Establishment of animal model systems in leishmaniasis.

j) Laboratory colonisation and breeding of the sand-fly (vector of leishmaniasis) for the first time in the world.

On the whole, the Institute has established a viable infrastructure for medical research with modern facilities and expertise and it is steadily developing a capability of tackling health problems through research.

Funding

The growth in both the recurrent and the development expenditure of the Institute from 1979/80 to 1986/87 financial year was as follows:-

Recurrent Expenditure in Kenya Pounds

Year	
1979/80	500,000
1980/81	536,000
1981/82	752,800
1982/83	683,871
1983/84	1,088,900
1984/85	1,561,620
1985/86	1,991,400
1986/87	2,454,847

Development Expenditure in Kenya Pounds

Year	
1979/80	110,000
1980/81	200,000
1981/82	200,000
1982/83	445,000
1983/84	1,002,000
1984/85	2,408,570*
1985/86	1,366,000
1986/87	1,387,000

** This figure includes Appropriations-in-Aid of Kenya pounds 1,035,270 from the Japanese Government for the KEMRI Headquarters and Central Laboratories Complex.*

Although the figures shown above portray a significant rise in the expenditure during the years covered by this Report, in most cases, this growth has not been commensurate with the increased activities and rapid expansion of the Institute.

A large share of the recurrent expenditure has been channeled to personal emoluments and other related personnel needs with a relatively small share being directed to research operations. Research is expensive by its very nature and the Institute is keen to see an increasingly greater share of the recurrent expenditure being directed to research operations.

Until 1982/83 the development expenditure was more or less static. In 1983/84 and 1984/85 there was a great improvement in the level of the development expenditure largely due to the grant aid from the Japanese Government to the Kenya Government for the developemt of the KEMRI Headquarters and Central Laboratories Complex. KEMRI is confronted with the challenge of planning and developing modern scientific facilities for its research work as well as proper housing and other staff welfare facilities and consequently the level of the development budget will in future need to be substantially increased to meet these needs.

Manpower Growth

When the Institute was established it started with a small complement of staff inherited from the East African Community. Over the years the Institute has placed emphasis on the recruitment and development of qualified staff to promote its scientific activities. In 1985 the Institute'a total workforce was 635 consisting of 84 research personnel, 135 technical personnel and 369 supportive staff. By 1987 the total workforce had risen to a total of 758 consisting of 92 research personnel of various categories, 207 technical personnel and 459 supportive personnel. As the Institute forges ahead, emphasis will be on recruitment and development of qualified personnel to advance more profoundly its research objectives.

Training

The Institute attaches great importance to training as it recognizes that research and training are inter-dependent and that each enhances the other.

During the period under review, emphasis was laid on training of all cadres of staff. A total of 29 members of staff were involved in training programmes for higher degrees while another 33 undertook diploma and certificate courses in various areas. Training will continue to receive high priority.

Local and External Collaboration

In line with its mandate the Institute collaborates with other organizations both within and outside Kenya that are involved in Medical research.

In Kenya, the Institute works closely with the Ministry of Research, Science and Technology, the Ministry of Health and the National Council for Science and Technology particularly on policy matters and in identification of medical research priorities.

Other local organizations that the Institute collaborates with include the University of Nairobi, the Kenya Trypanosomiasis Research Institute, the International Centre of Insect Physiology and Ecology, the Institute of Primate Research, the International Laboratories for Research on Animal Diseases and the African Medical and Research Foundation.

At the international level, KEMRI collaborates and receives support from a number of international organizations. These include the World Health Organization, the Japanese International Cooperation Agency, the International Development Research Centre of Canada, the United State Agency for International Development, the Wellcome Trust (UK), the Walter Reed Army Institute of Research (USA), the Centres of Disease Control (USA), the British Medical Research Council and the Royal Tropical Institute of Amsterdam, Netherlands among others.

RESEARCH PROGRAMMES

MALARIA RESEARCH PROGRAMME

The Malaria Research Programme with five of the Institute's centres participating is the largest programme at KEMRI.

Malaria, which is caused by 4 species of protozoan parasites of the genus Plasmodium and transmitted by the anopheles mosquito, remains one of the most devastating diseases in Kenya and the tropics. At KEMRI there are ongoing studies looking at the various aspects of the disease all aimed at finding better and more effective ways of treating and controlling malaria.

Here are summaries of the various studies undertaken during the period under review:

Drug sensitivity: it is now recognized that there are strains of malaria parasites that are resistant to chloroquine. Research in drug sensitivity is looking at various drugs and drugs combinations for their effectiveness against malaria. There are various on-going in vivo (in the body) and in vitro (outside the body) studies to assess the efficacy and safety of various drugs for the treatment of malaria.

A workshop on drug sensitivity in malaria organized under this programme in early 1987 recommended that chloroquine still be the first drug of choice for the treatment of malaria except in severe complicated malaria where other drugs which have been found to be effective can be used.

Epidemiology and Vaccine Studies: Under this aspect a sporozoite vaccine developed by Walter Reed Army Institute of Research was tried at the Clinical Research Centre on people who already had been exposed to malaria.

Other more general epidemiological studies are examining which people get malaria and when, how some people become immune to malaria and why some children become very ill when they get malaria. The studies are also showing which mosquitoes transmit malaria and when they do so.

Vectors: On-going studies on the behaviour of the mosquito in relation to its transmission of malaria parasite are underway at KEMRI's Vector Biology and Control Research Centre in Kisumu. The studies aim at providing better understanding of the mosquito and ultimately its control.

Using the newest techniques in molecular biology, scientists in the Biomedical Sciences Research Centre are using DNA probes to detect malaria parasites and to identify the species of mosquito vectors. They hope, with these methods, to gain a better understanding of malaria transmission in Kenya.

SCHISTOSOMIASIS PROGRAMME

The Schistosomiasis Programme is one of the oldest programmes in KEMRI and undertakes both laboratory and field-based studies.

Schistosomiasis which is also known as bilharzia is a water-borne disease transmitted by certain species of snails and estimated to affect about 2 million Kenyans.

Below is some major achievements in laboratory studies:

1. Mice have been shown to be possible laboratory hosts of *Schistosoma haematobium*.
2. The plant *Solanun incanum* has been shown to have the potential of killing snails.
3. Monoclonal antibodies which can detect carbohydrate epitopes of *S. mansoni* antigens in snail hemolymph and also in cercaria have been developed.

Field based studies include control of schistosomiasis through health education and community involvement, epidemiology and control of illness and the nature and mechanisms of immunity to *S. mansoni* and biological control of the snails.

The field based studies are ongoing in various areas in Kenya where the disease is a problem. They include:-

1. The Mwea Tebere Irrigation Schistosomiasis Control Project which has shown that infection with the disease can be reduced in a community through health education, primary health care and community involvement.
2. In the Kwale Chemotherapy Project provision of clean water have led to the reduction of the prevalence and intensity of *S. haematobium* and has lowered transmission as a result of change in water contact behaviour among residents in the study area namely Mwachinga Village.
3. The control of illness due to *S. haematobium* at Msambweni, Kwale District, has shown that there has been a drastic reduction in prevalence and intensity which have also concomitantly been associated with reduction in proteinuria, haematuria, bladder abnormalities as well as severe hydronephrosis.
4. Evidence for age related slow development of acquired immunity which may be associated with early development of subsequent slow decline of appropriate immune responses that block the effects of potentially protective responses has been obtained.
5. One candidate for vaccine development has been identified.
6. The sensitivity for a serodiagnostic antigen for *S. mansoni* infection has been established. However its specificity has still to be investigated.

LEISHMANIASIS PROGRAMME

Studies to find better tools for the control of leishmaniasis continued. Leishmaniasis which is common in parts of Machakos, Bungoma, Laikipia, Baringo, West Pokot, Turkana and Kitui districts is a disease caused by protozoa parasites of the genus Leishmania.

There are two types of leishmaniasis; cutaneous leishmaniasis which is characterized by skin lesions, nodules and ulcers depending on the species of the parasite, and visceral leishmaniasis (also known as Kala-azar) which affects internal organs such as the liver and the spleen.

If untreated, visceral leishmaniasis can be a fatal disease. It is transmitted by phlebotomine sandflies

(Diptera:*Psychodidae*), which are tiny nocturnal insects found breeding and resting in termite hills and animal burrows.

Studies being undertaken at KEMRI aim at establishing the disease pattern in relation to the population at risk, finding better ways of diagnosing and treating it, and also understanding the biology of the sandfly vector and how it transmits the disease.

In the epidemiological studies of the disease, case-finding surveys, vector and animal reservoir studies were carried out in Baringo and Machakos districts. So far more than 1100 leishmanial isolates have been isolated from man, animals and sandflies and cryopreserved (preservation at very low temperatures in liquid Nitrogen) making KEMRI's Nairobi Leishmania Bank the largest cryobank in Africa. Arising from this work it is anticipated that KEMRI wil soon become a Leishmania reference centre for the African region.

In the area of treatment, clinical trials to find the most effective drug regimen for treating Kala-azar have yielded very good results. After analysing four different schedules of treatment using the drug sodium stibogluconate (Pentostarm), researchers found that a dosage of 20 mg per kg body weight for 30 days provides a complete cure of the disease. This dosage has now been adopted by the Ministry of Health and has been recommended for worldwide use by the World Health Organization (WHO). However this drug has to be injected intravenously and has some side effects. Research to find cheaper and even more effective drugs continues.

In diagnosis of the disease a simple test done using a drop of blood that can be used for screening people en masse for this disease in the community was developed. Also developed was a method of quantifying parasites in splenic aspirates from patients suffering from Kala-azar.

In the search for suitable non-human primate that can be used as a model for drug and vaccine trials, studies undertaken in collaboration with the Institute of Primate Research have identified the vervet and sykes monkey as suitable animal models for leishmaniasis studies. As a result the vervet monkey will be used for trials of a cutaneous leishmaniasis vaccine supplied by the WHO.

During the period under review scientists established that *leishmania tropica* also causes cutaneous leishmaniasis in Kenya. So far this parasite has been isolated only in patients and the search for the vector and reservoir host is in progress in a newly discovered focus in Laikipia District.

ACUTE RESPIRATORY INFECTIONS PROGRAMME

Acute respiratory infections (ARI) constitute a major public health problem especially in children under five years old.

ARI is caused by both bacteria and viruses. The ARI Rural Project in Maragua undertaken by the Virus Research Centre showed that more than half of episodes of ARI requiring hospital consultation in children under 5 years were due to several viruses.

Further studies in Kenya have shown that ARI is responsible for:-

- 19% of all outpatient hospital cases.
- 20% of hospital admissions (50% of these are children under 5 years).
- 25% of deaths in those admitted (87% being children under 5 years old).

Of the various viruses which cause ARI, only one - the measles virus - can be prevented through vaccination. The control of the other viruses therefore poses major problems and requires multifaceted approach which include education, nutrition, housing and sanitation among other measures.

Studies undertaken by KEMRI and the Department of Paediatrics of the University of Nairobi have identified simple symptoms that indicate the seriousness of the condition which are now taught to mothers and other primary health care providers. The aim is to reduce the deaths associated with moderate to severe ARI by applying appropriate level of management.

ORAL HEALTH PROGRAMME

Laboratory and community based research, all aimed at understanding oral diseases and their patterns in order to provide guidelines for delivery of dental services continued under this programme.

The areas of interest include periodontal diseases, dental fluorosis, oral lesions, epidemiology of dental caries and studies on the prevention and control of dental diseases through primary health care.

Part of the findings of a base-line survey to find out the rate of progression of periodontal diseases and dental caries in an adult rural population in Machakos District demonstrated that dental caries are the major cause of tooth loss in adult populations but not gum disease as was earlier thought.

A study on Acquired Immuno-Deficiency Syndrome (AIDS) related oral lesions in women was started in 1987 and is continuing.

A retrospective study of facial bone fractures in Kenyatta National Hospital during the last decade was completed and results which will throw more light on facial fractures are undergoing analysis.

Studies on bone char in defluoridation of water and the assessment of glass ionomer cement for restoring decayed teeth were initiated during the period under review.

Under this programme a public health course was held jointly with the WHO and attended by representatives from more than ten African countries. A symposium on oral health in Africa was also held and attended by more than 200 participants.

Early 1987 saw the establishment of the Primary Oral Health Care Project in Meru District in which alternative methods of providing health care are being evaluated.

HYDATID PROGRAMME

Parts of Turkana District in North-West Kenya have the highest prevalence of hydatid disease in the World. Hydatid is caused by a tapeworm called *Echinococcus granulosus* and is characterized by a disentended abdo-

men brought about by fluid-filled bladders called hydatids.

The standard form of treatment is through surgical removal of the cysts. Besides the usual risks that surgery entails, patients have to travel to Nairobi or to other hospitals for treatment. An effective oral treatment would substitute the need for surgery and would provide treatment to people at their homes. Now results of a clinical study undertaken by the Clinical Research Centre in cooperation with the African Medical and Research Foundation indicates that the drug, Albendazole, may be a safe alternative to surgery in the treatment of hydatidosis.

Findings of a clinical trial to find out the most effective schedule of treatment showed that a dose of 10 mg/kg body weight for 30 days was able to reduce the cysts in more than half of the patients who participated in the trial. Albendazole is normally used to treat worms.

TRADITIONAL MEDICINES AND DRUGS RESEARCH PROGRAMME

In African societies traditional medicines still plays an important role in health care. And by integrating the practice of traditional medicines into public health systems we can exploit its potential and meet more effectively the health requirements of our people. Activities under this programme cover traditional medicines and drugs and quality control of conventional drugs.

Investigations of traditional medicines concentrated on the evaluation of the medicine with a view to establishing their identities, safety and effectiveness.

During the period under review visits were made to all provinces in Kenya where researchers met and held discussions with selected traditional doctors. Other traditional doctors visited the Traditional Medicines and Drugs Research Centre in Nairobi.

Through these interactions researchers were able to obtain extremely useful information on the preparation of these medicines. In the process, the Centre has collected more than 1,300 medicines that are undergoing indepth analysis and studies. There are more than 100 traditional doctors collaborating in the study of those medicines.

Besides gaining more information on the preparation of these medicines, the sessions with traditional doctors, which were held weekly, provided an opportunity for advising them on how to improve their practice and make their medicines safe for use by their patients.

This is in recognition of the fact that today many Kenyans visit traditional doctors to seek treatment for various ailments.

Traditional medicines under investigations include those for asthma and allergies, diabetes, hypertension, epilepsy, malaria, skin diseases, migraine, mental diseases and medicines that can act as contraceptives.

Preliminary findings of a clinical study carried out on volunteers receiving a traditional medicine for asthma show that it has high potential as a medicine for this disease and is now receiving further investigation. Preliminary clinical studies of other medicines are planned.

During the period under review a medicinal plant forest was initiated and has now about 20 medicinal plants some of which were collected from traditional doctors during field visits.

In the area of drug research and quality control the centre evaluated about 100 drug products for the Ministry of Health.

DIARRHOEA RESEARCH PROGRAMME

The prevalence of diarrhoea varies from region to region but worldwide, apart from acute respiratory infections, it claims the lives of more children than any other disease. It is estimated that in the developing countries one in every ten children dies from diarroea before reaching the age of five years.

Diarrhoea research projects carried out aimed at providing vital information on diarrhoea as a disease its prevention and management.

Studies carried out in Kiambu and Kakamega were able to identify organisms that caused diarrhoea among children in these rural communities.

Different approaches for the provision of oral rehydration solutions (ORS) were also tested.

Results of a clinical study carried out in Kakamega to establish the efficacy of Cereal-based ORS as an alternative to the standard World Health Organization recommended ORS showed that Cereal-based ORS is just as effective.

What this means is that with training mothers can now treat diarrhoea using common cereals such as maize, sorghum and millet available in their homes.

Other studies explored forces relating to social marketing of ORS, and the effect of diarrhoea on the growth of children, and the relationships of food handling behavior and practices, to food contamination and occurrence of diarrhoea in the rural households in Kiambu District.

Collaborating organizations in this programme include the College of Health Sciences of the University of Nairobi, Kenyatta National Hospital, the Royal Tropical Institute, and the International Centre for Diarrhoeal Diseases Research, Bangladesh.

Supporters of this programme include the Ministry of Health, the United States Agency for International Development, the National Council for Science and Technology, the Aga Khan Foundation and the International Development Research Centre of Canada. (IDRC). More studies on risk factors for persistent diarrhoea in the community, dietary practices during diarrhoea illness and control strategies for acute diarrhoea are planned.

SEXUALLY TRANSMITTED DISEASES PROGRAMME

During the period under review emphasis on this programme has shifted from clinical based research to community based epidemiological research. Most of the studies concerns issues related to the control and prevention of sexually transmitted diseases (STDs) or the complications.

Studies to establish the disease patterns of STDs and their control have been carried out in several communities. All aim at establishing the prevalence of STDs

in the country and consequently provide important guidelines in controlling these diseases.

The studies being undertaken aim at finding out the pattern of male-female transmission of STDs, the outcome of pregnancy in women with STDs and the relationship between STDs and certain cancers such as that of the cervix among other things.

In the area of acquired immune-deficiency syndrome (AIDS) several studies have been undertaken. These include a pilot study to find the knowledge, attitudes and practices in relation to AIDS in a rural community and a survey to find the current status of AIDS epidemic in Kenya and its relationship with other STDs.

ACQUIRED IMMUNE DEFICIENCY SYNDROME PROGRAMME

When AIDS was first reported in Kenya in 1984 it was a new disease here and unknown within the service sector of the Ministry of Health.

Right from the start KEMRI has been involved in tackling this new and urgent problem through the provision of appropriate facilities and basic expertise on virology that is available at the Virus Research Centre (VRC) of KEMRI.

The VRC has played a key role in training and developing a capability to handle the AIDS epidemic within the National Health Care System.

The activities that the VRC is involved in mainly fall into:

- training
- service and
- research.

Training

VRC senior staff continued to contribute heavily in the teaching of AIDs and virology in general at the College of Health Sciences of the University of Nairobi. VRC also participated in the National AIDS Control Programme by facilitating in seminars, workshops and other training programmes.

Service

During the initial stages of AIDS Control, VRC provided HIV diagnostic services throughout Kenya. Now with the gradual installation of these services to provincial and other hospitals this service is only provided to Kenyatta National Hospital and to other health institutions which have not yet installed the diagnostic capability.

Until recently the laboratory confirmation of HIV, the Western blot was centralized at VRC. In order to decentralize this confirmatory test VRC is now training laboratory technologists from the provinces.

In line with the Ministry's of Health Policy of ensuring safe blood supply, VRC in conjuction with the National Public Health Laboratory Service have undertaken the mammoth task of training laboratory technologists to screen blood for HIV throughout the country. This capability has been installed in 56 points throughout the country. Quality control and retraining of staff in this service is also being undertaken.

Research

The VRC laboratory at KEMRI has been involved in proficiency testing of simple, cheaper and more appropriate laboratory tests for HIV infection. Already two to three tests have shown promise and might be established in rural health centres where the volume of blood transfused is low.

The VRC laboratory is also supporting clinical and epidemiological research and is currently involved in a therapeutic trial and a National sample survey.

VIRAL HEPATITIS PROGRAMME

Studies on viral hepatitis are carried out at the Virus Research Centre. These studies have shown that close to 75% of the adult population in Kenya has at one time been infected by the Hepatitis B Virus.

A proportion of this population (10 to 20%) remain active carriers of the virus. These carriers:-

- maintain the virus in the population.
- transmit it through blood donation or during sexual intercourse.
- transmit the virus to their offspring in the case of mothers.
- may develop chronic active infection.

Carriers with chronic active infection proceed to develop cirrhosis (scarring of the liver) and finally liver cancer, one of the commonest cancers in males in Kenya.

Since there is no cure for liver cancer, KEMRI has evolved several projects on Viral Hepatitis B with the overall objective of controlling this disease. The projects are:

1. Reagent Project

This project aims at developing locally available reagents for screening of Hepatitis B virus in donated blood. Once fully developed, the routine manufacture of the reagents will be handed over to the National Public Health Services.

2. Epidemiology of Hepatitis B

Hepatitis B Virus can only be transmitted from human to human. It does not have an animal reservoir.

The classical means of transmission which are understood are through blood transfusion; through contaminated piercing instruments and through sexual contact.

Now studies at KEMRI are beginning to throw light on other means of intrafamilial transmission particularly between carrier mothers and their newborns and between siblings. It appears that continuous prolonged close contact between carriers and susceptibles appears to account for a very sizeable proportion of infection.

3. Vaccine Strategy Studies

An effective and safe vaccine is now commercially available. The initial generation of this vaccine was derived from plasma of Hepatitis B carriers and the

supply was limited making it very expensive for general use.

Over the past five years a new generation of vaccines produced entirely through genetic engineering has become widely available. These vaccines have the advantage of being potentially limitless in supply. The drop in price has been phenomenal and hence these vaccines are now available for mass programmes.

KEMRI research with these vaccines has shown that:

1) The vaccines are safe;
2) The vaccines are potent;
3) The vaccines are stable;
4) The vaccines are effective;
5) Newborn infants and children can be vaccinated irrespective of Hepatitis B status of their mothers.

KEMRI is thus spear heading a practical application of these vaccines in the field for a mass vaccination programme. There are studies designated to evolve an appropriate machinerry for integrating Heapatitis B mass vaccination to the ongoing KEPI Programme.

FILARIASIS PROGRAMME

This programme was initiated in 1985 as a collaborative effort between KEMRI's Centre for Microbiology Research and the Institute of Primate Research. Most of the research investigations started in 1986. Wild caught and colony non-human primates have been screened for filarial infections. Attempts have been made to establish *Wuchereria bancrofti* in a suitable non human primate model. Several parasites including new ones have been recovered and described in scientific journals. These findings are of crucial importance because they have paved the way for evaluation of filarial models for filarial infections which are of medical and veterinary significance. Other findings show that non-human primates may serve as useful models in transmission studies since they have been shown to be potentially susceptible. Susceptible hosts would facilitate chemotherapeutic, immunological and pathological assessments.

Other studies carried out within this programme include screening of inpatients at Kinango Hospital, Kwale District, for filarial parasites. Results obtained so far have epidemiological implications which may facilitate control of filariasis. Positive cases also facilitate selection of infected persons who can donate microfilariae for laboratory studies. It has been particularly interesting to note that some patients are infected with *Mansonella perstans* and not *W. bancrofti*.

NUTRITION RESEARCH PROGRAMME

Studies undertaken under this programme aim at throwing more light on the factors associated with poor nutrition in special population groups. Among the groups are mothers, infants and children and the elderly.

During the reporting period a longitudinal study to find the iron status during normal pregnancy in the mother and its influence on the health of the baby was completed. Results are under analysis and will be reported at a later date.

Analysis of soil and stone samples consumed by pregnant mothers showed that these samples contained iron which is needed by the developing foetus. Other studies undertaken during the period looked at the influence of health education on the quality of oral rehydration solutions prepared by mothers in Kiambu District.

HEALTH SYSTEMS RESEARCH PROGRAMME

The Ministry of Health and KEMRI have identified the strengthening of Health Services Management as one of the priority areas in primary health care. As a programme, Health Systems Research (HSR) was formally initiated in KEMRI in 1985. HSR is concerned with populations organizational structures and their interactions and evaluates health policies with a view to improving them.

Studies in this area aim at providing information that will help improve health by increasing the effectiveness and efficiency of health care services in hospitals, dispensaries and other health delivery points.

During the reporting period a multi-district pilot project for evaluating the implementation of primary health care in Embu, Baringo and South Nyanza Districts was designed.

The programme also created firm linkages with the Ministry of Health and other organizations and it continued to receive support from the World Health Organization.

PARASITOLOGY PROGRAMME

Several surveys to establish the infection pattern of selected disease parasites were carried out under this programme. They included a survey conducted in a defined community in Kiambu District to establish the level of infection with two parasites: *Entamoeba histolytica* and *Giardia lamblia*.

The study found that a large percentage of the community had the parasites in their stools. Other parasitology surveys were carried out in Baringo District on Kala-azar *(Leishmaniasis)*.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH RESEARCH PROGRAMME

This is a new programme that was initiated in 1984. Its objective is to carry out research on all those aspects of the environment and work that is related to health.

During the period under review several research programmes for identifying and investigating hazards in the general environmental and in the workplace were developed. They include a rural health surveillance programme in Meru District developed jointly with the University of Iowa, USA; a project to investigate lead poisoning in children developed together with the National Environment Secretariat and a research plan on occupational cancer in Kenya. Analysis on the economic impact of selected occupational illness and injuries in Kenya carried out in 1987 shows that injuries and pesticide poisoning have the greatest human and economic impact in Kenya.

This programme has been selected as the co-ordinator for the East African Regional Pesticides Project which will assess pesticides exposure and their effect on health among agricultural field workers in Kenya, Tanzania and Uganda. The Pesticides Project is being sponsored by the International Development Research Centre of Canada.

LEPROSY PROGRAMME

Research on the leprosy disease is undertaken from the Busia-based Leprosy and Skin Diseases Research Centre (LSDRC) of KEMRI.

The overall goal is to develop strategies through research to control the disease and find out ways of helping those already suffering from leprosy.

In the area of drug treatment, a pilot study to evaluate the applicability of the World Health Organization (WHO) recommended multidrug therapy (MDT) in Kenyan patients was carried out. Other drug studies developed and tried out a shorter and cheaper drug alternative regimen to the WHO recommended MDT. The drug studies are in search of alternative drug treatment as resistance to dapsone - a drug that has been used to treat leprosy since 1940 has been reported in Kenya and other countries.

Preliminary results from the drug studies show that these treatments are effective.

A survey to assess the problem of disabilities arising due to deformities in leprosy patients was also carried out. A principal conclusion of the study was that disability can be prevented if health workers are trained to recognize certain bodily changes that are the underlying cause of disability.

A major course of disability in leprosy is a change in immune status of leprosy patients which is accompanied by bodily changes referred to as leprosy reactions.

Preliminary results of a project looking at the cause of leprosy reactions indicate that the presence of auto-antibodies may contribute to the development of these reactions.

This centre is also studying the torelability and effectiveness of an alternate day steroid treatment schedule for management of leprosy reactions.

In the prevention of leprosy, results of a project to test a new technique for screening people living in a leprosy area indicate that general population screening, performed using a drop of blood is feasible. Early detection of leprosy will help limit the spread of infection since those found with early symptoms can be treated.

Studies to find the best ways of involving the local community in prevention of disabilities due to leprosy are ongoing.

There are also proposed studies related to vaccine trials in the control of leprosy.

Other studies have looked at the pattern of skin diseases in Western Kenya. These studies aim at providing information that would help the Government in planning National treatment strategies for skin diseases. Reports show that the most common skin diseases are due to infestations and infections.

During the period the leprosy programme received generous support from the WHO, the National Council for Science and Technology and Ciba-Geigy among others.

Those collaborating in the programme include the Netherlands Leprosy Relief Association, the National Leprosy and Tuberculosis Control Programme and the Royal Postgraduate Medical School and St. John Hospital for Skin Diseases in the United Kingdom.

HUMAN REPRODUCTION RESEARCH PROGRAMME

Research on human reproduction was launched in 1984 initially as a Natural Family Planning (NFP) Project that would provide an additional service to the already existing family planning services.

During the period under review the programme which initially covered Nairobi expanded to cover nine - - rural centres notably in Murang'a District.

So far more than 1,000 couples have been recruited into natural family planning. The NFP teachers under the programme held over 20 seminars and over 320 promotional talks in various points on natural family planning. More than 400 NFP users have been able to practice natural family planning without supervision. Recruitment of more users will continue.

When fully developed, the programme is expected to cover other relevant areas including other methods of fertility control, adolescent fertility and the effect of sexually transmitted diseases on reproductive capacity.

TUBERCULOSIS PROGRAMME

Tuberculosis continues to be a major public health problem in Kenya. Under this programme there are both laboratory and field based studies to find out better ways of controlling this disease.

Research on tuberculosis is carried out at the Respiratory Diseases Research Centre (RDRC) of KEMRI.

During the period under review progress was made in developing a regimen of treatment which can reduce the period of TB treatment from 18 to 8 months for patients staying in their homes through out the treatment period. This is one of the short course TB treatment regimens.

A BCG vaccination evaluation study started in 1985 continued. The aim of the study was to find out the efficacy of BCG as a protective vaccine against TB in children between 0 - 5 years.

A TB prevalence survey carried out during the period found out that the type of the disease has not changed since 1964. Severely ill patients are still seen. However as an index of the population the rate of TB incidence was found to have decreased although with the advent of AIDS the number of TB cases may be expected to rise.

A quality control pilot study to assess the quality of laboratory examination of smears was completed in selected district hospitals. The study found that the quality of work varies from district to district and there is need to standardise the tests. It was also felt that the investigation should be extended to other district hospitals.

In the area of TB diagnosis, the Centre is collaborating with the Medical Research Council of Britain to

develop an immunological technique for diagonizing TB from a blood sample. At present TB is diagnised from a sputum which takes up to 8 weeks to culture and is difficult to obtain from children.

Other studies are related to controlling TB through health education.

RESEARCH ON NON-TUBERCULOSIS RESPIRATORY DISEASES PROGRAMME

During the period under review the Respiratory Diseases Research Centre (RDRC) of KEMRI continued to strengthen research on priority non-tuberculosis diseases.

One of the areas being looked into is occupational respiratory diseases. These are diseases arising for example due to exposure to cement and asbestos dusts in factories and other work places. Followup work of surveys carried out in several factories will continue.

Another area where work continued was in respiratory diseases such as asthma. An evaluation on a traditional medicine for asthma carried out jointly with a traditional doctor and KEMRI's Traditional Medicines and Drugs Research Centre (TMDRC) found that the medicine was effective against the disease.

During the period the Kenya National Normal Lung Function Survey continued. The aim of the study is to develop a profile of normal lung function indices for Kenyans living in various geographical areas.

STATEMENTS OF ACCOUNTS FOR THE YEARS ENDED 30TH JUNE 1981 TO 30TH JUNE 1987

REPORT OF THE AUDITOR-GENERAL (CORPORATIONS) ON THE ACCOUNT OF THE KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE, 1981.

I have examined the Balance Sheet and the Income and Expenditure Account of the Kenya Medical Research Institute for the year ended 30th June, 1981, in accordance with the provisions of the Exchequer and Audit (Amendment) Act, 1985 (Cap 412). I have obtained all the information and explanations that I have required for the purpose of my audit. Proper books of account have been kept by the Institute and the accounts are in agreement therewith.

In my opinion the Balance Sheet and the Income and Expenditure Account, when read together with the management notes thereon, show a true and fair view of the state of affairs of the Institute as at 30th June 1981 and of its results for the year ended on that date.

W.A. Onono
Auditor-General (Corporations)

29th April, 1987.

Kenya Medical Research Institute Balance Sheet as at 30th June 1981

	1980/81
Assets Employed	Shs
Fixed Assets	1,163,971.10
Current Assets	
Cash at Bank	1,189,854.15
Cash on hand	77,494.30
Net current assets	1,267,348.45
Total Assets	2,431,319.55
Finance by	
Accumulated Fund Balance B/F	252,421.40
Add. Excess in Income Over Expenditure	2,178,898.15
	2,431,319.55

Prof. M. Mugambi
Director

Dr S.M. Abdullah
Chairman

27TH OCTOBER 1986.

Income and Expenditure Account for the Year ended 30th June, 1981.

Income		KShs
Grants in Aid		6,354,119.45
	Expenditure	
Transport Operating Expenses	735,211.75	
Travelling and Accommodation Expenses	750,671.45	
Postal and Telegrams Expenses	287,382.95	
Conferences, Committee Board Expenses	155,188.50	
Electricity, Water and Conservancy	63,063.70	
Medical Stores, Sera and Vaccine	44,029.50	
Uniform and Clothing	115,376.50	
General Libraries	40,727.50	
Stationery and Printings	201,787.85	
Rents and Rates	182,814.25	
Miscellaneous and Other charges	382,837.55	
Maintenance of Equipment	37,357.00	
	Depreciation	
Motor Vehicles	196,858.25	
Office and Furniture Equipment	81,913.75	
Total Expenditure	4,175,221.30	4,175,221.30
Excess Income Over Expenditure		2,178,898.15

Fixed Assets: Schedule V

	At Cost	Depreciation		Net Value
	Kshs	Rate	Amount Ksh	Ksh
Motor Vehicles	787,433.00	25%	96,858.25	590.574.75
Office & Laboratory Equipment	655,310.10	12 1/2%	81,913.75	573,369.35
	1,442,743.10		278,772.00	1,163,971.10

Trial Balance as at 30th June, 1981 in Kshs.

	Dr Shs.	Cr Shs.
Balance B/F 1979/80		252,421.40
Receipts-Grants & Grants-in-Aid 1980/81		6,354,119.45
Transport Operating Expenses	735,211.75	
Travelling and Accommodation expenses	750,671.45	
Postal and Telegrams expenses	287,382.95	
Conferences, Committee Board Expenses	155,188.50	
Electricity, Water and Conservancy	63,063.70	
Medical Stores, Sera and Vaccine	944,029.50	
Uniforms and Clothing	115,376.50	
General Libraries	40,727.50	
Stationery and Printings	201,787.85	
Rents and Rates	182,814.25	
Miscellaneous and other charges	382,837.55	
Additional Transport	787,433.00	
Purchase of Equipment	655,310.10	
Maintenance of Equipment	37,357.80	
Cash and Bank Balances on 30.6.81	1,267,348.45	
Depreciation Expenses		
Motor Vehicles	196,858.25	
Office Furniture & Equipment	81,913.75	
Provision for Depreciation		
Motor Vehicles		196,913.75
Office Furniture & Equipment		81,913.75
Total	6,885,312.85	6,885,312.85

Notes to the Accounts

1. Accounting Policies

The Accounts are prepared on the basis of Government accounting procedures modified to include the revaluation of assets. The Institute is a service and not a profit making body.

2. Grants-in-Aid

In addition to grants in Aid of Ksh 6,200,932.45 received during the year the Institute received Kshs 153,187.00 from the World Health Organization, Geneva as part of the purchase price of a Range Rover the cost of which was Ksh 204,193.00.

3. Personal Costs

It will be noted that there were no personal costs such as personal emoluments, gratuity, leave, medical expenses etc., in the accounts. The costs were wholly met by the Ministry of Health to which the Institute was attached.

4. Fixed Assets

The fixed assets are stated at cost and depreciated on the straightline method designed to write of the original cost of the fixed assets. The annual rates used for depreciation are:-

1. Motor Vehicles	25%
2. Machinery	12.5%
3. Office Furniture and Equipment	12.5%

Buildings will be included in the accounts when they are valued as it is difficult to estimate their value without valuation.

5. Cash

Cash and Bank balances are composed of balances held at Headquarters and the Centres as per schedule I, and include loss of cash of Kshs 48,184.35 not yet transferred to loss account during the year. Schedules II and III show the adjustment affecting Headquarters cash book bank balance as at 30th June, 1981 and which form part of Headquarters cash balance.

6. Accumulated Funds as at 1st July, 1980

(a) The accumulated fund of shs 252,421.40 was the cash balance as at 1st July, 1980. (Reference Schedule IV).

(b) The surplus for the year amounting to shs 2,178,898.15 is the excess of income over expenditure for the financial year 1980/81.

REPORT OF THE AUDITOR- GENERAL (CORPORATIONS) ON THE ACCOUNTS OF THE KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE, 1982.

I have examined the Balance Sheet and Income and Expenditure Account of the Kenya Medical Research Institute for the year ended 30th June, 1982, in accordance with the provisions of the Exchequer and Audit (Amendment) Act, 1985 (Cap 412). I have obtained all the information and explanations that I have required for the purpose of my audit. Proper books of accounts have been kept by the Institute and the Accounts are in agreement therewith.

In my opinion the Balance Sheet and the Income and Expenditure Account, when read together with the notes thereon, show a true and fair view of the Institute's state of affairs as at 30th June, 1982 and of its results for the year ended on that date.

W.A. Onono
Auditor-General (corporations)

29th April, 1987.

Balance Sheet as at 30th June 1982.

1980/81			1981/82
Shs	Assets Employed		Shs
1,163,971.10	Fixed Assets		5,075,489.30
	Current Assets		
1,189,854.15	Cash at Bank	1,140,068.90	
77,494.30	Cash on hand	84,054.30	
	Standing Imprest	5,800.00	
	Temporary Imprests	10,325.00	1,240,248.20
1,267,348.45			
1,267,348.45	Net current assets		1,240,248.20
2,431,319.55	Total Assets		6,315,737.50
	Financed by		
252,421.40	Accumulated Fund Balance B/F		2,431,319.55
2,178,898.15	Add. Excess in Income over Expenditure		3,884,417.95
2,431,319.55			6,315,737.50

Prof. M. Mugambi
Director

Dr S.M. Abdullah
Chairman

Income and Expenditure for the Year Ended 30th June 1982

Shs		Shs	Shs
6,354,119.45	Grants in Aid (Schedule IV)		10,400,000.00
	Expenditure		
Nil	Personal Emoluments	234,165.30	
Nil	Leave allowance	475.00	
735,211.75	Transport Operating expenses	1,022,670.20	
750,671.45	Travelling & Accommod.	815,428.00	
287,382.95	Postal & Telecom. expenses	321,406.75	
155,188.50	Conference Committee & Board Expenses	217,019.15	
63,063.70	Electricity, Water & Conservancy	80,020.00	
944,029.50	Medical Stores	733,574.40	
115,376.50	Uniforms and Clothing	102,453.00	
40,727.50	General Libraries	25,603.75	
201,787.85	Printing and Stationery	476,110.30	
182,814.25	Rent and Rates	1,188,384.75	
382,837.55	Miscellaneous Expenses	434,575.40	
37,357.80	Maintenance of Equipment	123,868.15	
	Depreciation		
Nil	Buildings	30,671.10	
196,858.25	Motor Vehicles	495,375.25	
81,913.75	Office Furniture & Equipment	213,781.55	
4,175,221.30	Total Expenditure	6,515,582.05	
			6515582.05
2,178,898.15	Excess Income over Expenditure		
			3884417.95

Schedule 1

Schedule of Fixed Assets as at 30th June, 1982

Assets	Opening 1st July 1981 at cost	Additons	Total	Depreciation for the year		Accumulated Depreciation	Net Value
				%	Amount		
	Shs.	Shs.	Shs.		Shs.	Shs.	Shs.
Land	-	1,175,493.00	1,175,493.00	Nil	-	-	1,175,493.00
Buildings	-	1,226,842.80	1,226,842.80	2.5	30,671.10	30,671.10	1,196,171.70
Motor Vehicles	787,433.00	1,194,068.05	1,981,501.05	25	495,375.25	692,2433.50	1,289,267.55
Office Furniture and Equipment	655,310.10	1,054,942.25	1,710,252.35	12.5	213,781.55	295,695.30	1,414,557.50
	1,442,743.10	4,651,346.10	6,094,086.20		739,827.90	1,018,599.90	5,075,489.30

Notes to the Accounts

1. Accounting Policy

The accounting policy remains unchanged, thus the accounts are prepared on the basis of Government Accounting Procedures modified to include the revaluation of assets, the Institute being a non-profit making body.

Accounts have been prepared on a cash basis accounting and not on accrual basis accounting.

2. Personal Emoluments and Leave and Passage

The personal emoluments and leave and passage expenditure was as a result of recruitment of staff by the Institute during the year. Staff who were in the Institute previous to this year were in the payroll of the Ministry of Health to which the Institute was attached.

3. Printing and Stationery and Rent and Rates

The Institute started expanding rapidly from this year and the new staff required housing which required leasing of houses.

Previous to this year the Institute relied on the Ministry for the supply of stationery. With effect from this financial year the Institute started purchasing its own stationery.

4. Land

The Institute through the District Commissioner, Kisumu District acquired land in June 1982 at a cost of KShs 1,175,493.00 for construction of Malaria and Other Protozoal Diseases Research Centre, which is one of the research stations of Kenya Medical Research Institute. The Institute has adopted a policy of leaving land at cost. (Reference Schedule 1).

5. Buildings

The institute found a need to construct additional temporary offices for the Malaria and Other Protozoal Diseases Research Centre who were inadequately housed by the Old Nyanza General Hospital: hence the incurring of expenditure of Ksh. 1,226,842.80. The buildings have been depreciated at a rate of 21.5 % (References Sch. 1)

6. Motor Vehicles

In the year 1981/82 the Institute acquired additional motor vehicles worth Kshs 1,194,068.05. Depreciation has been provided at the rate of 25% on cost. Accumulated depreciation to 30th June, 1982 is Ksh 692,233.50. (Reference Schedule 1).

7. Office Furniture & Equipment

In the year, the Institute purchased office furniture and equipment for Ksh 1,054,942.25. Depreciation has been provided at the rate of 12 1/2 on cost. Accumulated depreciation to 30th June, 1982 is Ksh 295,695.30 (Reference Schedule 1).

8. Cash and Bank Balances

The opening and closing cash and bank balances include Kshs 1,765.55 being cash book overcast carried down and carried forward on 1st July 1981 and 30th June, 1982 respectively. Opening also includes shs 1,270,746.85 which erroneously was credited to KEMRI account later adjusted in the month of December, 1981. (Reference Schedule II A and IIB).

9. Imprests

The only unsurrendered imprests issued to officers on duty as at 30th June, 1982 have been detailed on Schedule III. The rest of outstanding imprests were issued through Kenya Tuberculosis Investigation Centre to various hospitals as standing imprests to meet patient's expenses.

10. Accumulated Fund

(a) The accumulated fund brought forward on 1st July, 1981 is composed of reserves brought forward on 1st July, 1980 and excess of income over expenditure for the year 1980/81.

(b) The surplus for the year amounting to Kshs 3,884,417.95 is the excess of income over expenditure for the year 1981/82.

REPORT OF THE AUDITOR-GENERAL (CORPORATIONS) ON THE ACCOUNTS OF THE KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE 1983.

I have examined the Balance Sheet and the Income and Expenditure Account of the Kenya Medical Research Institute for the year ended 30th June, 1983, in accordance with the provisions of the Exchequer and Audit (Amendment) Act, 1985 (Cap 412). I have obtained all the information and explanations that I have required for the purpose of my audit. Proper books of account have been kept by the Institute and the accounts are in agreement therewith.

In my opinion the Balance Sheet and the Income and Expenditure Account, when read together with the notes thereon, show a true and fair view of the Institute's state of affairs as at 30th June, 1983 and of its results for the year ended on that date.

W.A. Onono
Auditor-General (Corporations)

29th April, 1987.

Kenya Medical Research Institute Balance Sheet as at 30th June 1983

1981/82 Shs			1982/83 Shs
	Assets Employed		
5,075,489.30	Fixed	Assets	49,222,879.15
	Current Assets		
1,140,068.90	Cash at Bank	93,208.25	
84,054.30	Cash on hand	69,706.90	
5,800.00	Temporary Imprest	12,875.00	
10,325.00	Standing Imprest	18,100.00	
-	Debtors	13,085.00	
1,240,248.20		206,975.15	
	Less Current Liabilities		
-	Creditors	232,787.10	(25,811.95)
1,240,248.20	Net current assets		(25,811.95)
6,315,737.50	Total Assets		49,197,067.20
	Financed by		
2,431,319.55	Accumulated Fund Bal B/F		50,594,669.25
	Capital Grant		
3,884,417.95	Add Excess in income over exp		(1,397,602.05)
6,315,737.50			49,197,067.20
Prof. M. Mugambi Director			Dr S.M. Abdullah Chairman

Income & Expenditure Account for the Year Ended 30th June, 1983.

Shs	Income	Shs	Shs
10,400,000.00	Grants in Aid (Schedule III)		18,562,718.80
	Expenditure		
234,165.30	Personal Emoluments	8,039,706.30	
	Pensions & Gratuity	16,512.00	
	House Allowance	817,307.75	
475.00	passage & Leave Allowance	153,450.00	
1,022,670.20	Transport Operating Expenses	1,063,539.30	
815,428.00	Travelling & Accommodation	448,812.85	
321,406.75	Postal & Telephone Expenses	448,657.05	
	Official Entertainment	10,145.50	
217,019.15	Conference & Seminars	387,133.25	
	Expenses of the Board	104,614.05	
80,020.00	Electricity, Water & Conservancy	79,083.60	
733,574.40	Medical Stores, Sera & Vaccine	574,706.50	
	Food & Rations		
	Feeds for Animals	17,631.55	
102,453.00	Uniforms & Clothings	102,272.70	
25,603.75	Library Expenses	74,745.20	
476,110.30	Printing & Stationery	368,003.25	
1,188,384.75	Rents & Rates	2,128,890.80	
434,575.40	Miscellaneous & Other Charges	345,268.95	
	Training Expenses	40,035.00	
	Medical Expenses equipment	60,462.65	
123,868.15	Maintenance of Equipment	141,286.25	
	Depreciation		
30,671.10	Buildings	703,400.70	
495,375.25	Motor Vehicles	1,284,796.75	
213,781.55	(Office & Laboratory equipment	2,325,584.40	
	(Office Furniture)	241,267.50	
6,515,582.05	Total Expenditure		9,950,313.85
3,884,417.95	Excess Income over expenditure		(1,397,602.05)

Notes to Accounts

Introduction
Up to and including the time the final accounts for the year ending 30th June, 1982 were prepared, the Institute had a pool of fixed assets of which the value was not known. For that reason they were not recognized in the 1981/82 final accounts. The Institute, therefore found need to have them valued for the purpose of inclusion in the final accounts as well as other inventory records. The valuation of the assets which was carried out by M/S Wairagu & Co. included all Institutes' assets at the time of valuation. The movement of fixed assets is explained in the computational Schedule III. The following, then are the brief explanatory notes to the final accounts for the year.

1. Accounting Policy
We confirm that we have continued to adopt Governemnt accounting modified to include the revalaution of assets and providing for heir depreciation.

2. Personal Emoluments, Gratuity, House Allowance and Leave Passage Expenditure
During the year the Institute's staff in the Ministry of Health payroll were transferred to the payroll of the Institute and their house allowances as well as leave allowances were therefore paid by the Institute. This necessitated a drastic change in the Institute's expenditure on those items.

3. New Expenditure
The activities of the Institute increased in the year as a result of which those items previosuly not active started to incur expenditure. Details are given below:-

Seeds for Animals:
During the year the Institute kept and maintained some animals for research work hence the reason for expenditure on this item.

Training Expenses
As the Institute took off training was a vital aspect and the amount was to meet minor training expenses.

Medical Expenses
These expenses were as a result of staff being transferred from the Ministry of Health payroll to the Institute's. Their medical bills were paid by the Institute while previosuly the expenditure was under the Ministry.

4. Advances
The salary advances of Ksh 13,085.00 was outstanding as at 30th June, 1983. See Schedule IV.

5. Imprests
The amount of KSh 30,975.00 was still outstanding as at 30th June, 1983. See Schedule No.VI.

6. Clearance Accounts
The amount of KSh 232,787.10 was recovery made in the month of June, 1983 and prior months form KEMRI employees in respect of PAYE, NSSF, NHIF, SAYE, Co-operative Societies and Miscellaneous recoveries and not cleared as at 30th June, 1983. See Schedule No.V.

7. Cash
The cash and bank balances of KSh 162,915.15 include loss of cash of KSh 44,384.35 not transferred to loss account during the year, hence formed part of cash balance as at 30th June, 1983. See Schedule II.

8. The deficiency for the year amounting to KSh 1,359,305.30 is the excess of expenditure over expenditure income for the year 1982/83.

9. Accumulated Fund
The amount of KSh 50,594,669.25 is arrived at from valuation of Institute's assets during the year under review after deducting accumulated depreciation KSh 1,018,599.90 for the years up to and including 1981/82. Included in the capital fund is the cost of land KSh 1,175,500.00. See Schedule No.VII.

REPORT OF THE AUDITOR-GENERAL (CORPORATIONS) ON THE ACCOUNTS OF THE KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE, 1984.

I have examined the Balance Sheet and the Income and Expenditure Account of the Kenya Medical Research Institute for the year ended 30th June, 1984 in accordance with the provisions of the Exchequer and Audit (Amendment) Act, (Cap 412). I have obtained all the information and explanations that I have required for the purpose of my audit. Proper books of account have been kept by the Institute and the accounts which have been prepared on the bais of historical cost convention are in agreement therewith.

In my opinion the Balance Sheet and the Income and Expenditure Account, when read together with the notes thereon, show a true and fair view of the Institute's state of affairs as at 30th June, 1984 and of its results for the year ended on that date.

W.A. Onono
Auditor- General (Corporations)
29th April, 1987.

Kenya Medical Research Institute Balance Sheet as at 30th June, 1984.

1982/83 Shs	Assets Employed	Note		1983/84
49,222,879.40	Fixed Assets	(1)		151,365,867.90
	Current Assets			
93,208.25	Cash at Bank	(2)	12,609,610.85	
69,706.90	Cash on Hand	(2)	26,624.90	
30,975/00	Temporary Imprests	(3)	39.730.00	
13,085.00	Debtors	(4)	18,132.00	
206,975.15			12,694,097.75	
	Less Current Liabilities			
232,787.10	Creditors	(5)	150,978.10	
				12,543,119.95
(25,811.95)	Net Current Assets			12,543,119.65
49,197,067.20	Total Assets			
				163,908,987.55
	Financed by			
50,594,669.25	Accumulated Fund Balanced b/f			149,826,267.20
-	Capital Grant	(6)		20,040,400.00
(1,397,602.05)	Add.Excess in Income over Expenditure			5,957,679.65
49,197,067.20				163,908,987.55
-				

Prof. M. Mugambi
Director, KEMRI

Dr M.S. Abdullah
Chairman, KEMRI

Kenya Medical Research Institute

Income & Expenditure Account for the Year Ended 30th June 1984

Shs	Income	Shs	Shs
18,552,711.80	Recurrent Grant		21,696,000.00
	Income (A.I.A.)		495,332.60
	Total income		22,191,332.60
	Expenditure		
8,039,706.30	Personal Emoluments	10,863,680.15	
16,512.00	Pensions & Gratuity	569,400.55	
817,307.75	House Allowance	2,024,317.45	
153,450.00	Passage & Leave Allowance	193,850.00	
1,063,539.30	Transport Operation	803,309.90	
448,812.85	Travelling & Accommodation	461,762.20	
448,657.05	Postal & Telecommunications	415,019.95	
10,145.50	Official Entertainment	1,654.20	
387,133.25	Conference & Seminars	147,353.90	
104,614.05	Board Expenses	103,258.60	
79,083.60	Electricity Water & Conservancy	100,824.20	
574,706.50	Purchase of Medical Stores	556,252.95	
-	Food & Rations	2,317.00	
17,631.55	Feeds for Animals	16,158.55	
-	Publishing & Printing Expenses	7,574.00	
102,272.70	Uniforms & Clothing	79,036.00	
74,745.20	Library Expenses	73,670.00	
368,003.25	Purchase of Stationery	295,323.80	
-	Advertising & Publicity	10,755.00	
2,128,890.80	Rents & Rates	3,327,130.00	
345,268.95	Miscellaneous & Other Charges	107,342.90	
-	nsurance Expenses	220,517.95	
40,035.00	Training Expenses	6,820.00	
60,462.65	Medical Expenses	143,129.30	
141,286.25	Maintenance of Plant Machinery	160,206.25	
-	Maintenance of Buildings	53,999.00	
	Depreciation expenses		
703,400.70	Building	3,424,867.70	
1,284,796.75	Motor Vehicles	1,422,296.75	
2,325,584.40	Office & Lab. Equipment	2,342,9,6.50	
214,267.50	Office Furniture	214,267.50	
19,950,313.85	Total Expenditure	28,149,012.25	28,149,012.25
(1,397,602.05)	Excess Income over Exp.		(5,957,679.65)

Schedule No. 1

Schedule of Fixed Assets as at 30th June, 1984

Assets	Opening Balance On 1st July 1983	Additions	Total	Depreciation for year		Accumulated Depreciation	Net Value
				%	Amount		
	Shs.	Shs.	Shs.		Shs.	Shs.	Shs.
Land	1,175,500.00	-	1,175,500.00	Nil	Nil	Nil	1,175,500.00
Buildings	28,136,026.50	108,858,681.65	136,994,708.15	2.5	3,424,867.70	4,158,939.50	132,835,768.65
Motor Vehicles	5,139,187.00	550,000.00	5,689,187.00	25	1,422,296,75	3,399,327.00	2,289,860.00
Office & Lab. Equipment	18,604,675.00	138,655.55	18,743,330.55	12.5	2,342,916.50	4,964,196.20	13,775,134.35
Office Furniture	1,714,139.90	-	1,714,139.90	12.5	214,267.50	428,535.00	1,285,604.90
	54,769,528.40	109,547,337.20	164,316,865.60		7,404,348.45	12,950,997.70	151,365,867.90

Notes to the Accounts

Introduction

During the 1983/84 financial year the Institute moved to the new site. The cost placed on the buildings is Kshs 100,000,000.00. This has been recognized in the final accounts for the year. The Institute also took over the motor vehicles attached to the joint Kenya/Japan Laboratory and a Computer HPLC donated to Clinical Research Centre by World Health Organization, the values recognized in the accounts are Ksh 550,000 and Kshs 79,200 respectively. In the year the Institute realized Kshs 495,332.60 from miscellaneous receipts as well as house rents from staff occupying leased houses. This amount has been treated as Appropriation in Aid and offset against expenditure in the Income and Expenditure Statement.

1. **Accounting Policy**
   We confirm that we have continued to adopt Government Accounting Policy and procedures modified to include the revaluation of assets and providing for their depreciation.

2. **Advances**
   The amount of outstanding salary advance to staff was Kshs 18,132.00 as at 30th June, 1984. See Schedule IV.

3. **Imprests**
   The total amount of outstanding imprests was Kshs 39,730.00 as at 30th June, 1984. See Schedule III.

4. **Clearance and Suspense**
   Total on clearance and suspense accounts is Kshs 150,978.10. These were recoveries from staff which had not been cleared by 30th June, 1984 as well as Kshs 120,205.00 received from the Walter Reed Project for Mr Mebrahtu's salary which had been placed to suspense account. See Schedule V.

5. **Cash**
   Cash and Bank balances of Kshs 12,636,235.75 include loss of Ksh 11,222.10 which has not yet been transferred to loss account, and therefore forming part of the cash balance. See Schedule II.

6. There was excess expenditure over income of Kshs 5,957,679.65.

7. **Capital Fund**
   The capital fund for the year is composed of accumulated fund brought forward, and the acquisition during the year as explained in the introduction.

REPORT OF THE AUDITOR-GENERAL (CORPORATIONS) ON THE ACCOUNTS OF THE KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE, 1985.

I have examined the Balance Sheet and the Income and Expenditure account of the Kenya Medical Research Institute for the year ended 30th June, 1985 in accordance with the provisions of the Exchequer and Audit (Amendment) Act, 1985 (Cap 412). I have obtained all the information and explanations that I have required for the purpose of my audit. Proper books of account have been kept by the Institute and the accounts are in agreement therewith.

The Institute does not maintain a fixed assets register in which to record fixed assets owned by it. Accordingly, it is not possible in the absence of such a register to confirm the correctness of the fixed assets figure of Kshs 228,954,330.35 appearing in the Balance Sheet as at 30th June, 1985.

Subject to the above reservation, in my opinion the Balance Sheet and Income Expenditure Account, when read together with the notes thereon, show a true and fair view of the state of affairs of the Institute as at 30th June, 1985 and its results for the year ended on that date.

W.A. Onono
Auditor (Corporations)

29th April, 1987

Kenya Medical Research Institute Balance Sheet as at 30th June 1985.

1983/84 KShs.			1984/85
151,365,867.90	Fixed Assets	(1)	228,916,033.60
	Current Assets		
12,596,228.75	Cash at Bank	(2)	18,683,464.65
39,947.00	Cash on hand	(2)	49,020.40
39,730.00	Temporary Imprests	(3)	35,245.85
	Standing Imprests	(4)	283,955.00
18,132.00	Debtors	(5)	23,859.75
12,694,097.75			19,075,545.65
	Less Current Liabilities		
150,978.10	Creditors	(6)	888,586.25
			18,186,959.40
12,543,119.65	Net Current Assets		18,186,959.40
163,908,987.55			247,102,993.00
	Financed by		
149,826,267.20	Accumulated Fund Balance B/F		241,748,987.55
20,040,400.00	Capital Grant	(7)	15,446,000.00
(5,957,679.65)	Add: Excess in income over Expenditure		10,091,994.55
163,908,987.55			247,102,993.00

Prof. M. Mugambi
Director

Dr M.S. Abdullah
Chairman, KEMRI

Income & Expnediture Account for the Year Ended 30th June 1985.

Ksh		Shs	Shs
21,696,000.00	Recurrent Grant		30,792,400.00
495,332.60	Income (AIA)		200,831.35
22,191,332.60	Total Income		30,993,231.35
	Expenditure		
10,863,680.15	Personal Emoluments	14,195,048.80	
569,400.55	Pensions & Gratuity	942,535.80	
2,024,317.45	House Allowance	2,532,004.45	
193,850.00	Passage & Leave Allowance	178,995.15	
	Other Allowances	182,117.65	
803,309.90	Transport Operation	1,326,801.75	
461,762.20	Travelling & Accommodation	725,572.50	
415,019.95	Postal & Telecom.	690,970.85	
1,654.20	Official Entertainment	17,033.35	
103,258.60	Expenses of the Boards	466,206.50	
147,353.90	Committees & Conferences	-	
100,0824.20	Electricity, Water & Conservancy	448,310.20	
556,252.95	Purchase of Medical Stores	1,166,722.30	
-	Purchase of Research animals	24,745.00	
2,317.00	Food & Rations	8,423.05	
16,158.55	Feeds for Animals	14,699.75	
7,574.00	Publishing & Printing	35,849.95	
79,036.00	Uniforms & Clothings	260,327.80	
73,670.00	Library expenses	190,456.70	
295,323.80	Purchase of stationary	476,169.80	
10,755.00	Advertising & Publicity	65,453.00	
3,327,130.00	Rents & Rates	3,810,163.45	
103,342.90	Miscellaneous & other charges	214,672.95	
220,517.95	Insurances expenses	282,512.85	
6,820.00	Training expenses	46,765.10	
143,129.30	Medical Expenses	682,097.25	
160,206.25	Maintenance of plant machinery	91,977.00	
53,990.00	Maintenance of buildings	99,628.85	
-	Minior Alterations	110,391.90	
-	Kenya/Netherlands Joint Project	1,033,365.00	
-	Research Materials	348,126.30	
	Depreciation Expenses		
3,424,867.70	Buildings	5,528,350.85	
-	Residential Bulding	21,993.30	
1,422,296.75	Motor Vehicles	1,584,796.75	
2,342,916.50	Office & Lab Equip.	2,545,931.50	
214,267.50	Office Furniture	236,028.50	
28,149,012.25	Total Expenditure	41,085,225.90	41,085,225.90
(5,957,679.65)	Excess Income over Expenditure		(10,091,994.55)

Schedule No. 1

Schedule of Fixed Assets as at 30th June, 1985

Assets	Opening Balance	Additions	Totals	Depreciation for Year		Accumulated	Net Value
				%	Amount		
	Shs.	Shs.	Shs.		Shs.	Shs.	Shs.
Land	1,175,500.00	-	1,175,500.00	Nil	Nil	Nil	1,175,500.00
Buildings	136,994,708.15	84,139,325.65	221,134,033.80	2.5	5,528,350.85	9,687,290.85	11,146,745.45
Residential Buildings	-	879,731.45	879,731.45	2.5	21,993.30	21,993.30	857,738.15
Motors Vehicles	5,689,187.00	650,000.00	6,339,187.00	25	1,584,796.75	4,984,123.75	1,355,003.25
Office & Lab. Equipment	18,743,330.55	1,624,121.50	20,367,452.05	12.5	2,545,931.50	7,510,127.70	12,857,324.33
Office Furniture	1,714,139.90	174,088.00	1,888,227.90	12.5	236,028.50	664,563.50	1,223,664.40
	164,316,865.60	87,467,266.60	251,784,132.20		9,917,100.90	22,868,098.00	228,910,028.00

Notes to the Accounts

Introduction

During the 1984/85 financial year the Kenya Medical Research Institute Central Laboratories complex were completed. The cost placed on the buildings is Kshs 77,190,000.00. The Institute also received two ambulance vehicles as token of friendship and cooperation between Japan and Kenya. Value placed on the vehicles is Kshs 650,000.00. The value of both buildings and motor vehicles has been recognized in the accounts. In the year the Institute realized Ksh 200,831.35 from miscellaneous receipts as well as house rents from staff occupying leased houses. This amount has been treated/journalized to appropriation in aid and offset against expenditure in the Income and Expenditure Statement.

1. Accounting Policy

We confirm that we have continued to adopt Government Accounting Policy and Procedures modified to include the revaluation of assets and providing for their depreciation.

2. Advances

The amount of outstanding salary advance to staff was Kshs 23,859.75 as at 30th June, 1985. See Schedule V.

3. Imprests

(i) Temporary imprests outstanding as at 30th June, 1985 was Ksh 35,245.85. See Schedule III.

(ii) Unlike the previous financial years where centres were issued with imprests on monthly basis we adopted the reimbursement system to cater for the Centres expenditure. Hence standing imprests were issued to the Centres at the beginning of the 1984/85 financial year. See schedule IV.

4. Bank and Cash

Cash and Bank balances of Kshs 18,732,485.05 include loss of Kshs 12,322.10 which has not been transferred to loss account, and therefore forming part of cash balance.

5. Accumulated Fund

The fund is build up and analysed as below:-

Balance brought forward	Kshs 163,908,987.55
Central Laboratories Complex	77,190,000.00
Two ambulance vehicles	650,000.00
	241,748,987.55

REPORT OF THE AUDITOR-GENERAL (CORPORATIONS) ON THE ACCOUNTS OF THE KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE, 1986.

I have examined the Balance Sheet and the Income and Expenditure Account of the Kenya Medical Research Institute for the year ended 30th June, 1986 in accordance with the provisions of the Exchequer and Audit (Amendment) Act, 1985 (Cap 412). I have obtained all the information and explanations that I have required for the purpose of my audit. Proper books of account have been kept by the Institute and the accounts are in agreement therewith. In my opinion and subject to the matters referred to here below, the Balance Sheet and Income Expenditure Account, when read together with the notes thereon, show a true and fair view of the Institute's state of affairs as at 30th June, 1986 and of its results for the year ended on that date.

1. Fixed Assets Register

In my reports for the year 1984/85 attention was drawn to the Institute's failure to maintain a Fixed Assets Register for the purpose of recording all the fixed assets acquired and owned by the Institute. During the year under review, the position remained the same as no such register was maintained. In the absence of a fixed assets register it was not possible to confirm the correctness of the Balance Sheet Fixed assets figure of Kshs 240,923,448.20 as at 30th June 1986.

2. Loss of Cash

Included in the Balance Sheet as at 30th June 1986 under current assets are unsettled losses amounting to Kshs 439,911.55 comprising of cash misappropriations of Kshs 11,222.00 and Kshs 428,689.55 by two officers of the Institute one of whom has since died. Recovery of the losses from the two officers concerned was not handled satisfactorily and the amount of Kshs 439,911.55 may have to be written off. Despite the evident fact that recovery of the lost cash may not be possible, no provision has been made in the accounts to cater for possible losses arising from the non-recovery of the misappropriated funds.

W.A. Onono
Auditor-General (Corporations)

29th April, 1987.

Kenya Medical Research Institute Balance Sheet as at 30th June 1986.

1984/85			1985/86
Kshs			Kshs
	Assets Employed		
228,916,033.60	Fixed Assets		240,923,448.20
	Current Assets		
18,683,464.65	Cash at Bank	19,649,459.80	
50,320.40	Cash on hand	1,949,213.25	
33,945.85	Temporary Imprests	91,677.75	
283,955.00	Standing Imprest	428,166.50	
23,859.75	Debtors	37,667.90	
	Unsettled losses	439,911.55	
19,075,545.65		22,599,096.75	
	Less Current Liabilities		
888,586.25	Creditors	294,235.95	22,304,860.80
18,186,959.40	Net Current Assets		22,324,860.80
247,102,993.00	Total Assets		263,228,309.00
	Financed By		
241,748,987.55	Accumulated Fund Balance B/F		249,847,993.00
15,446,000.00	Capital Grant		27,320,000.00
(10,091,094.55)	Add: Excess in Income Over Expenditure		(13,939,684.00)
247,102,993.00			263,228,309.00

Prof. M. Mugambi
Director

29th October, 1986

Dr M.S. Abdullah
Chairman

Income & Expenditure Account for the Year ended 30th June 1986.

1984/85		Ksh	Ksh
30,792,400.00	Recurrent Grant		41,935,200.40
200,831.35	Income (AIA)		229,734.95
30,993,231.35	Total Income		42,164,935.35
14,195,048.80	Personal Emoluments	19,287,463.70	
942,535.80	Pensions & Gratuity	1,679,994.10	
2,532,004.45	House Allowance	3,539,995.85	
182,117.65	Other Allowances	639,984.35	
178,995.15	Passage & Leave Allowance	128,551.85	
1,326,801.75	Transport Operation	1,499,997.60	
725,572.50	Travelling & Accommodation	691,988.80	
690,970.85	Postal & Telecommunication	993,108.10	
17,033.35	Official Entertainment	13,982.95	
466,206.50	Expenses of the Board Committees & Conferences	416,625.00	
448,310.20	Electricity, Water & Conservancy	910,137.45	
1,666,722.30	Purchase of Medical Stores	2,384,512.90	
24,745.00	Purchase of Research Animals	10,249.05	
8,823.05	Food & Rations	319,992.30	
14,699.75	Feeds for Animals	35,636.15	
35,849.95	Publishing & Printing Expenses	41,120.50	
260,327.80	Uniforms & Clothing	350,227.90	
190,456.70	Library Expenses	179,711.90	
476,169.80	Purchase of Stationery	271,439.70	
65,433.00	Advertising & Publicity	89,994.65	
3,810,163.45	Rent & Rates	3,516,400.00	
214,672.95	Miscellaneous & Other Charges	199,981.90	
282,512.85	Insurance Expenses	393,767.45	
46,765.10	Training Expenses	74,047.95	
682,097.25	Medical Expenses	1,319,982.90	
91,977.00	Maintenance of Plant Machinery	292,070.65	
99,628.85	Maintenance of Buildings	144,948.95	
110,391.90	Minor Alterations	70,908.05	
1,033,365.00	Kenya/Netherlands Joint Project	4,357,566.90	
348,126.30	Research Materials	1,385,187.00	
	Depreciation Expenses		
5,528,350.85	Buildings	5,531,434.15	
21,993.30	Residential Buildings	26,393.70	
1,584,796.75	Motor Vehicles	2,271,046.75	
2,545,931.50	Office & Laboratory Equipment	2,755,895.80	
236,028.50	Office Furniture	280,272.40	
41,085,225.90	Total Expenditure	56,104,619.35	56,104,619.35
10,091,994.55	Excess Expenditure over income	13,939,684.00	

Schedule No.1

Schedule of Fixed Assets as at 30th June, 1986.

Assets	Opening Balance on 1.7.85	Additions	Total	Depreciation for year		Accumulated Depreciation	Net Value
				%	Amount		
	Shs.	Shs.	Shs.		Shs.	Shs.	Shs.
Land	1,175,500.00	-	1,175,500.00		Nil	-	1,175,500.00
Buildings	221,134,033.80	8,236,784.55	229,370,818.35	2.5	5,531,434.15	15,218,724.50	214,152,093.85
Residential Buildings	879,731.45	9,857,007.40	10,736,738.85	2.5	26,393.70	48,387.00	10,688,351.85
Motor Vehicles	6,339,187.00	2,745,000.00	9,084,187.00	25%	2,271,046.75	7,255,170.50	1,829,016.50
Office &Medical Equipment	20,367,452.05	1,679,714.20	22,047,166.25	12.5	2,755,895.80	10,266,023.50	11,781,142.75
Office Furniture	1,888,227.90	353,951.25	2,242,179.15	12.5	280,272.40	944,835.90	1,297,343.25
	251,784,132.20	22,872,457.40	274,656,589.60		10,865,042.80	33,733,141.40	240,923,448.20

During the year the Japanese International Cooperation Agency donated eight vehicles to the Institute. The total value placed on the vehicles is Ksh 2,745,000. This value has been recognized in the accounts. In the year the Institute realized Ksh 204,201.20 being economic rent from leased houses occupied by staff and Ksh 25,713.75 from other miscellaneous receipts. These amounts have been treated/ journalized to appropriation in Aid and offset against expenditure in the Income and Expenditure Statement.

1. Accounting Policy
During the year the Institute spent Ksh 8,236,784.55 and Ksh 9,857,007.40 on office buildings and residential houses respectively. Although the cost is recognized in the accounts depreciation has not been provided on Ksh 8,113,452.55 on buildings and Kshs 9,680,990.65 on residential buildings because the construction is still going on. We however confirm that we have continued to adopt Government Accounting Policy and Procedures modified to include the revaluation of assets and providing for their depreciation.

2. Debtors
The amount of Ksh 37,667.90 represents the outstanding balances from staff in respect of salary advances, and bicycles advances granted during the year. See Schedule II.

3. Imprests
(i) Temporary imprests outstanding as at 30th June 1986 were Ksh 94,677.85. See Schedule III.

(ii) Centres continue to maintain imprests. Their expenditure is catered for through reimbursement system on a weekly basis.

However, due to increased activities at the Centres it was decided that the standing imprests be increased from Ksh 283,955.00 to Ksh 428,166.50 See Schedule IV.

4 Unsettled Losses
The amount of the unsettled losses is in respect of second payments made to suppliers who did not receive the original payments apparently misappropriated by the cashier. The case is already in court.

5. Sundry Creditors Schedule V
The amount of Ksh 294,235.95 is composed of payments on account which were due but could not be cleared before the closure of the financial year as follows:-

	Kshs
Retention fees	6,382.20
NSSF	80.00
Miscellaneous	235,006.45
Suspense Account	52,767.30
	294,235.95

6. Accumulated Fund
The fund is build up and analysed as follows:-

Balance brought forward	Shs	247,102,993.00
Eight Motor Vehicles	Shs	2,745,000.00
	Shs	248,847,993.00

REPORT OF THE AUDITOR-GENERAL (CORPORATIONS) ON THE ACCOUNTS OF THE KENYA MEDICAL RESEARCH INSTITUTE FOR THE YEAR ENDED 30TH JUNE, 1987.

I have examined the Balance Sheet and the Income and Expenditure Account of the Kenya Medical Research Institute for the year ended 30th June, 1987 in accordance with the provisions of the Exchequer and Audit (Amendment) Act, 1985 (Cap 412). I have obtained all the information and explanations that I have required for the purpose of my audit. Proper books of account have been kept by the Institute and the Accounts are in agreement therewith. In my opinion, the Balance Sheet and the Income and Expenditure Account, when read together with the notes thereon, and subject to the matters referred to here below, give a true and fair view of the Institute's state of affairs as at 30th June, 1987 and of its results for the year ended on that date.

1. Fixed Assets

In the previous two year's Reports, mention was made of the Institute's failure to maintain a Fixed Assets Register for the purpose of recording all the Fixed Assets Register, I am unable to fully confirm the correctness of the Balance Sheet Fixed Assets figure of Kshs 255,017,323.00 as at 30th June, 1987.

2. Loss of Cash

In the Report for the year 1985/86 attention was drawn to the fact that recovery of cash losses amounting to Kshs.439,912.00 was in doubt due to the unsatisfactory manner in which the issue was being handled. During the year 1986/87, the Institute wrote off Kshs.12,322.00 out of the total losses of Kshs 439,912.00 leaving unsettled losses totalling Kshs.427,590.00 as at 30th June, 1987. Although recovery of the balance of Kshs. 427,590.00 is still considered to be in doubt, no provision was made in the Accounts of the Institute for the year 1986/87 to cater for any eventual non-recoverability of the outstanding amount.

A.J. Okoth
Auditor-General (Corporations)

10th March, 1988.

Kenya Medical Research Institute Balance Sheet as at 30th June, 1987.

1985/86		1986/87
Kshs	Assets employed	Kshs
240,923,448.20	Fixed assets	255,017,323.35
	Current assets	
19,649,459.80	Cash at bank	23,899,138.15
1,949,213.25	Cash on hand	8,068.55
94,677.75	Temporary imprests	7,249.20
428,166.50	Standing imprests	450,000.00
37,667.90	Debtors	106,046.65
439,911.55	Unsettled Losses	427,589.45
	Less current liabilities	
(294,235.95)	Creditors	(242,409.00)
22,324,860.80	Net current assets	24,655,683.00
263,228,309.00	Total net assets	279,673,006.35
	Financed by	
249,847,993.00	Accumulated fund	267,326,899.00
27,320,000.00	Capital grant	27,740,000.00
(13,939,684.00	Excess in Income over expenditure	(15,393,892.65)
263,228,309.00		279,673,006.35

Prof. M. Mugambi
Director

Dr M.S. Abdullah
Chairman

12th October, 1987

Income and Expenditure Account for the Year ended 30th June, 1987.

1985/86		KShs	Kshs
41,935,200.00	Recurrent grant		48,896,940.00
229,734.95	Income (AIA)		277,522.05
42,164,935.35	Total income		49,174,462.05
19,287,463.70	Personal Emoluments	24,275,390.95	
1,679,994.10	Pension and Gratuity	2,593,296.75	
3,539,995.85	House Allowance	4,507,949.85	
639,984.35	Other Allowances	505,386.15	
128,551.85	Passage and leave expenses	184,147.70	
1,499,997.60	Transport Operation	1,794,815.75	
691,988.80	Travelling & Accommodation	540,970.05	
993,108.10	Postal & Telecommunication	1,389,180.20	
13,982.95	Official Entertainment	17,752.15	
416,625.00	Expenses of the Board, committees & Conferences	254,614.75	
910,137.45	Electricity, Water & Conservancy	1,158,940.95	
2,384,512.90	Purchase of Medical Stores	3,161,086.20	
10,249.05	Purchase of Research Animals	5,486.00	
319,992.30	Food & Rations	222,385.45	
35,636.15	Feeds for Animals	31,063.75	
41,120.50	Publishing & Printing Expenses	59,128.25	
350,227.90	Uniforms & Clothings	292,526.00	
179,711.90	Library Expenses	261,225.15	
271,439.70	Purchase of Stationery	308,819.25	
89,994.65	Advertising & Publicity	108,760.00	
3,516,400.00	Rents and Rates	3,748,538.25	
199,981.90	Miscellaneous & other charges	135,748.30	
393,767.45	Insurance expenses	306,578.90	
74,047.95	Training Expenses	116,793.05	
1,319,982.90	Medical Expenses	2,103,353.70	
	Losses of Cash	12,322.10	
292,070.65	Maintenance of Plant, Machinery & Equipment	242,407.05	
144,948.95	Maintenance of Buildings	141,818.45	
70,908.05	Minor Alterations	171,814.50	
4,357,566.90	Kenya/Netherlands Joint Project	4,357,360.30	
1,385,187.00	Research Materials	1,306,904.95	
	Depreciation Expenses		
5,531,434.15	Buildings	5,734,270.50	
26,393.70	Residential Buildings	105,524.80	
2,271,046.75	Motor Vehicles	1,025,500.00	
2,755,895.80	Office & Laboratory Equipment	3,074,331.40	
280,272.40	Office Furniture	294,133.15	
56,104,619.35	Total Expenditure		64,568,354.70
13,939,684.00	Excess Expenditure over Income		15,393,892.65

Schedule 1

Schedule of fixed Assets as at 30th June, 1987

Assets	Opening Balance on 1-7-86	Additions	Disposals	Closing Balance on 30th June 1987	Depreciation		Accumulated Depreciation
					%	Amount	
	Shs.	Shs.	Shs.	Shs		Shs.	Shs.
Land	1,175,500.00	-	-	1,175,500.00	-		
Buildings-Office	229,370,818.35	6,370,488,05	-	235,741,306.00	2.5	5,734,270.50	20,952,995.00
Buildings Residential	10,736,738,85	11,200,186.00	-	21,936,924.85	2.5	105,524.00	153,911.80
Motor Vehicles	9,084,187.00	4,098,590.00	6,176,687.00	7,006,090.00	25	1,025,500.00	2,103,983.50
Office & Medical Equipment	22,047,166.25	2,547,484.95	-	24,594,651.20	12.5	3,074,331.40	13,340,354.90
Office Furniture	2,242,179.15	110,886.00	-	2,353,065.15	12.5	294,133.15	1,238,969,05
	274,656,589.60	24,327,635.00	6,176,687.00	292.807,537.60		10,233,759.85	37,790,214.25

Notes to the Accounts

Accounting Policy
We confirm that we have continued to adopt Government accounting policy and procedures modified to include the revaluation of assets and providing for their depreciation.

Depreciation - Motor Vehicles
At the closure of the Financial Year 1986/87, the vehicles purchased/acquired between financial years 1980/81 and 1982/83 had been depreciated fully. Those acquired in 1983/84 had been depreciated three quarters, 1984/85, half and 1985/86 quarter. Since the revaluation of motor vehicles includes the vehicles acquired/purchased during 1984/85 financial year, the depreciation to date on these vehicles has been transferred to motor vehicles account, thereby reducing the balance on accumulated depreciation carried forward.

Depreciation Summary

Financial Year

1983/84	137,500.00
1984/85	162.500.00
1985/86	686,250.00
1986/87	39,250.00
	1,025,500.00

Buildings
During the year expenditure of Kshs 6,370,488.05 and KShs 11,200,186.00 was incurred in respect of construction of office buildings and residential buildings. This expenditure and part of 1985/86 expenditure in respect of these items has not attracted depreciation charge since the construction work had not been completed as at the closure of the financial year.

Acquisitions
Through external funds, the Institute bought a vehicle KXL 164 for Kshs 157,000.00. Since this was outside Exchequer funds, the value has been recognized in the accounts and treated as an acquisition.

Appropriation in Aid
The Institute realized Kshs 186,145.40 being economic rent from the institutional/leased houses occupied by staff, Kshs 91,371.55 from other miscellaneous receipts. These amounts have been journalized to appropriation in aid and offset against expenditure in the income and expenditure statement.

20% Training Levy
Up to 1985/86 Kshs 235,006.45 was recovered in respect of 20% training levy. In 1986/87 Kshs 4,447.80 was recovered in respect of the same. The total amount being Kshs 239,454.25 is included in the creditors figure.

Debtors
The amount of Kshs 106,046.65 represents the outstanding balances in respect of salary advances, bicycles advances granted during the year and balance outstanding on the suspense account as detailed and summarized in schedule II.

Imprests
(i) Temporary imprests outstanding as at 30th June 1987 were Kshs 7,249.20. The amount was advanced in respect of Safari Imprest just before the closure of the financial year and we confirm that the officers were still in the field on 30th June, 1987.

(ii) Centres continue to maintain Standing Imprests. The expenditure is catered for on a weekly reimbursement system. However due to increased activities at the centres and hence to facilitate the smooth running of the centres, the total standing imprests has been increased from Kshs 428,166.50 to Kshs 450,000.00.

Unsettled Losses
The amount of the unsettled losses is in respect of second payments made to suppliers who did not receive the original payments apparently misappropriated by our cashier. The case is already in court awaiting judgement.

Losses of Cash

The breakdown is shown below.

D.O. Umara (deceased)	Kshs	11,222.10
Cash shortage HQS	"	1,100.00
		12,322.10

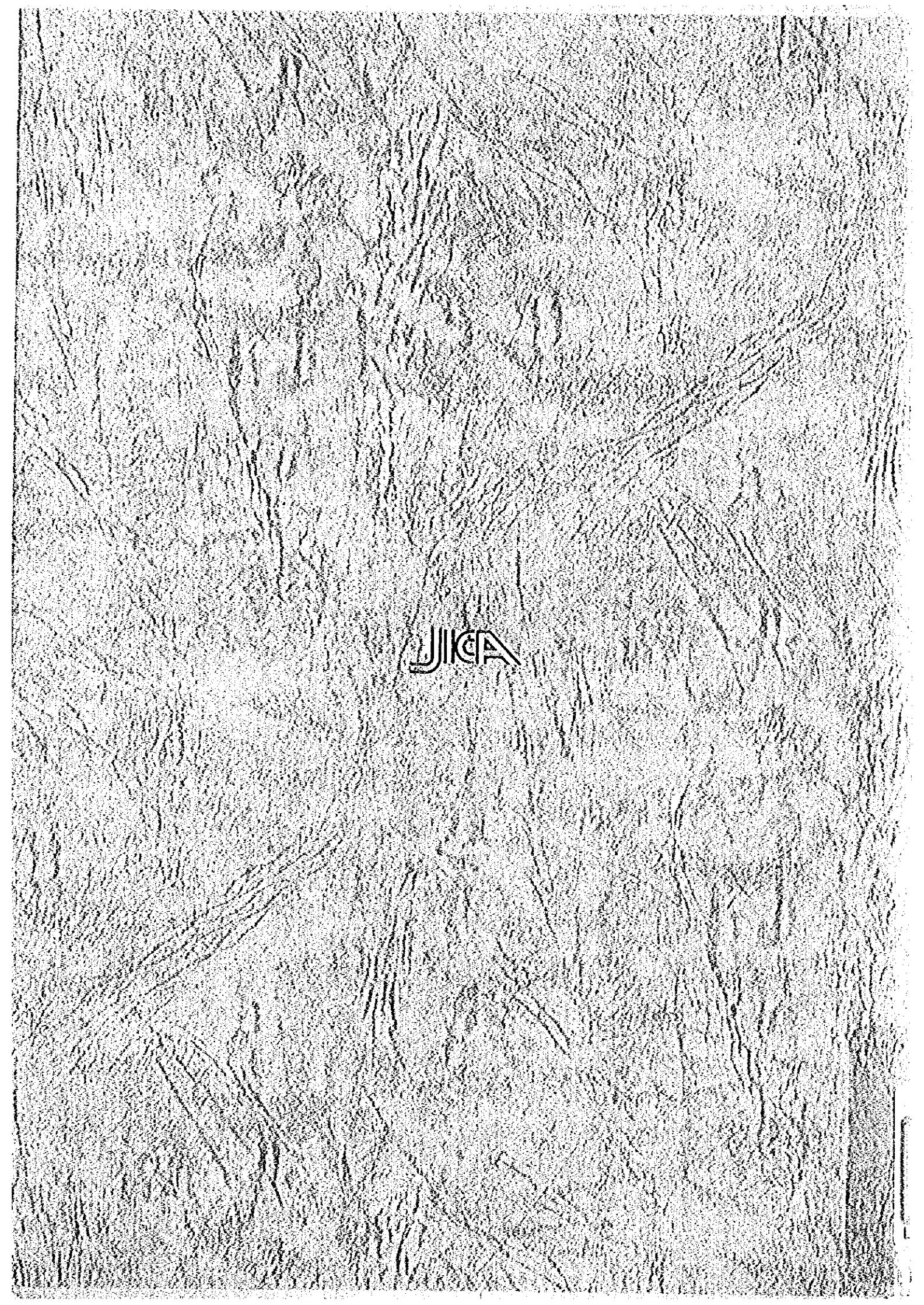
We confirm that approval was sought and granted by the Board of Management to have the amount written off to income and expenditure account.

Sundry Creditors
The amount of Kshs 2,954.75 is composed of payments on account which were due but could not be cleared before the closure of the financial year. The summary is in schedule V.

Accumulated Fund

The fund is build up and analysed as follows:-

Balance brought forward	Kshs 263,228,309.00
Acquisition during the year	157,000.00
Revaluation of Motor Vehicles	3,941,590.00
	267,326,899.00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