

**THE MINUTES OF MEETING
BETWEEN
THE JAPANESE EVALUATION TEAM
AND
THE AUTHORITIES CONCERNED
OF THE GOVERNMENT OF THE REPUBLIC OF ZAMBIA
ON
THE INFECTIOUS DISEASES CONTROL PROJECT IN ZAMBIA**

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THE RECORD OF DISCUSSIONS
 BETWEEN
 THE JAPANESE IMPLEMENTATION SURVEY TEAM
 AND
 THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE REPUBLIC OF ZAMBIA
 ON THE JAPANESE TECHNICAL COOPERATION
 FOR THE INFECTIOUS DISEASES CONTROL PROJECT

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Dr. Yoshio Numazaki, visited the Republic of Zambia for the purpose of working out the details of the technical cooperation programme concerning the Infectious Diseases Control Project in the Republic of Zambia.


During its stay in the Republic of Zambia, the Team exchanged views and had a series of discussions with the Zambian authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Zambian authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Lusaka, Zambia
 21 March, 1995

沼崎 義夫

Dr. Yoshio Numazaki
 Leader,
 Implementation Survey Team,
 Japan International Cooperation
 Agency,
 Japan



Dr. Kawaye Kamanga
 Permanent Secretary for Health,
 Ministry of Health,
 The Republic of Zambia

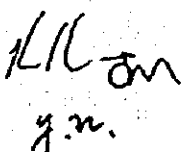


Dr. A. Siwela
 Vice Chancellor,
 University of Zambia

witness by:



Mrs. Ireen Kamanga
 Permanent Secretary,
 National Commission
 for Development Planning,
 Office of the President


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THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of the Republic of Zambia will implement the Infectious Diseases Control Project (hereinafter referred to as "the Project") in cooperation with the Government of Japan.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. MEASURES TO BE TAKEN BY THE GOVERNMENT OF JAPAN

In accordance with the laws and regulations in force in Japan, the Government of Japan will take, at its own expense, the following measures through JICA according to the normal procedures under the Technical Cooperation Scheme of Japan.

1. DISPATCH OF JAPANESE EXPERTS

The Government of Japan will provide the services of the Japanese experts as listed in Annex II.

2. PROVISION OF MACHINERY AND EQUIPMENT

The Government of Japan will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Project as listed in Annex III. The Equipment will become the property of the Government of the Republic of Zambia upon arrival to Consignee In Flight (C.I.F.) to to the Zambian authorities concerned at the airports of disembarkation. Upon the completion of the Project, Project vehicles and equipment shall remain at the the Project site.

3. TRAINING OF THE ZAMBIAN PERSONNEL IN JAPAN

The Government of Japan will receive the Zambian personnel connected with the Project for technical training in Japan.

4. SPECIAL MEASURES FOR PHYSICAL INFRASTRUCTURE

The Government of Japan will supply a portion of the local cost

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expenditures, necessary for the execution of the physical infrastructure, to ensure the smooth implementation of the Project.

5. SPECIAL MEASURES FOR TRAINING OF MIDDLE-LEVEL MANPOWER

The government of Japan will supplement a portion of the following local expenditures, necessary for the training programs for middle-level manpower conducted in the Republic of Zambia.

- (1) Travelling allowances, for the training participants between their assigned places and the site of the training.
- (2) Cost for the production of teaching materials.
- (3) Travelling cost of the training participants for their field trips.
- (4) Cost for procurement of supplies and equipment necessary for the training programs.
- (5) Travelling allowances of the local instructors of the training programmes accompanying the trainees on their field trips.
- (6) Remuneration of the instructors invited from institutions other than those directly connected with the Project.

Japanese funding for the above-mentioned expenses will be reduced annually. The reduction of the Japanese funding will be compensated by additional Zambian funding .

III. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF ZAMBIA

1. The Government of the Republic of Zambia will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through the full and active involvement in the Project by all related authorities, beneficiary groups and institutions.
2. The Government of the Republic of Zambia will ensure that the technologies and knowledge acquired by the Zambian nationals as a result of the Japanese technical cooperation will contribute to the economic and social development of the Republic of Zambia.
3. The Government of the Republic of Zambia will grant in the Republic of Zambia privileges, exemptions and benefits as listed in Annex IV and will grant privileges, exemptions and benefits no less favourable than those granted to experts of third countries or international

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organizations performing similar missions to the Japanese experts referred to in II-1 above and their families.

4. The Government of the Republic of Zambia will ensure that the Equipment referred to in II-2 above will be utilized effectively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.
5. The Government of the Republic of Zambia will take necessary measures to ensure that the knowledge and experience acquired by the Zambian personnel from technical training in Japan will be utilized effectively in the implementation of the Project.
6. In accordance with the laws and regulations in force in the Republic of Zambia, the Government of the Republic of Zambia will take necessary measures to provide at its own expense :
 - (1) Services of the Zambian counterpart personnel and administrative personnel as listed in Annex V ;
 - (2) Land, buildings and facilities as listed in Annex VI ;
 - (3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided through JICA under II-2 above;
 - (4) Means of transport and travel allowances for the Japanese experts for official travel within the Republic of Zambia;
 - (5) Assistance to find suitably furnished accommodation for the Japanese experts and their families for which JICA will pay.
7. In accordance with the laws and regulations in force in the Republic of Zambia, the Government of the Republic of Zambia will take necessary measures to meet:
 - (1) Expenses necessary for the transportation within the Republic of Zambia of the Equipment referred to in II-2 above as well as for the installation, operation and maintenance thereof;
 - (2) Customs duties, internal taxes and any other charges, imposed in the Republic of Zambia on the Equipment referred to in II-2 above;
 - (3) Running expenses necessary for the implementation of the Project.

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IV. ADMINISTRATION OF THE PROJECT

1. The Permanent Secretary for Health of the Ministry of Health will bear overall responsibility for the administration and implementation of the Project.
2. The Executive Director of the University Teaching Hospital, Board of Management, will be responsible for the general management and the budget allocation for the Project as the Project Director.
3. The Dean, the School of Medicine, University of Zambia will be responsible for the academic issues and research aspects of the Project as the Project Co-Director.
4. The Head of Department of Pathology and Microbiology, University of Zambia will be responsible for managerial and technical matters of the Project as the Project Manager.
5. The Japanese Team Leader (Chief Advisor) will provide necessary recommendations and advice to the Project Director, the Project Co-Director and the Project Manager on any matters pertaining to the implementation of the Project.
6. The Japanese experts will give necessary technical guidance and advice to the Zambian counterpart personnel on technical matters pertaining to the implementation of the Project.
7. For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee will be established whose functions and composition are described in Annex VII.

V. JOINT EVALUATION

Evaluation of the Project will be conducted jointly by the two Governments through JICA and the Zambian authorities concerned, at the the medium term and in the last six months of the cooperation

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term in order to examine the level of achievement.

VI. CLAIMS AGAINST JAPANESE EXPERTS (INDEMNITY)

The Government of the Republic of Zambia undertakes to bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Republic of Zambia except for those arising from the willful misconduct or gross negligence of the Japanese experts.

VII. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

VIII. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be five (5) years effective from 1st April, 1995.

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ANNEX I . MASTER PLAN

1. Objectives of the Project

(1) Overall Goal

To control infectious diseases in the Republic of Zambia through the development of human resources for the control of infectious diseases, the surveillance of infectious agents and the laboratory diagnosis of infectious diseases.

(2) Project Purpose

To strengthen the function of the Public Health Laboratory as an extension of the already existing Laboratory for the diagnosis of infectious diseases.

2. Outputs of the Project

(1) The quality of laboratory diagnosis on infectious diseases is to be improved at University Teaching Hospital (UTH).

(2) Clinical and epidemiological studies on infectious diseases are to be conducted at the hospitals and in the communities.

(3) Essential laboratory techniques for infectious diseases are to be improved at district level.

(4) Obtained data in the project are to be utilized effectively.

3. Activities of the Project

(1) To improve the quality of laboratory diagnosis on infectious diseases at UTH.

a) Virology

i) To improve the quality of laboratory diagnosis on infectious diseases at UTH.

ii) To improve the quality control of HIV testing.

b) Bacteriology

To improve bacteriological techniques.

c) Immunology

To establish techniques for immunological studies of infectious diseases.

(2) To conduct the etiological and epidemiological studies on infectious

diseases for the prevention and control at hospitals and communities.

- (3) To strengthen the disease surveillance systems for infectious diseases; e.g. poliomyelitis, measles, ARI and HIV.
- (4) To transfer essential laboratory techniques on infectious diseases to the district hospital staff.
- (5) To utilize the data from the project in line with health reforms.
- (6) To collaborate with primary health care activities.

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ANNEX II . LIST OF JAPANESE EXPERTS

1. Long term experts

- (1) Chief Advisor (Team Leader)
- (2) Coordinator
- (3) Experts in the following fields of:
 - 1) Epidemiology
 - 2) Virology
 - 3) Pediatrics
 - 4) Internal medicine
 - 5) Other fields mutually agreed upon as necessary

2. Short term experts

- (1) Virology
- (2) Bacteriology
- (3) Immunology
- (4) Epidemiology
- (5) Maintenance of Electron Microscopy
- (6) Maintenance of Equipment
- (7) Other fields mutually agreed upon as necessary

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ANNEX III. LIST OF MACHINERY AND EQUIPMENT

1. Equipment for training, research and laboratory diagnosis in the fields of Virology, Immunology and Bacteriology etc.
2. Equipment for surveillance.
3. Other equipment mutually agreed upon as necessary.

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ANNEX IV. LIST OF PRIVILEGES, EXEMPTIONS AND BENEFITS FOR JAPANESE EXPERTS

1. Exemption from income tax and charges of any kind imposed on or in connection with the living allowance remitted from abroad.
2. Exemption from import and export duties and any other charges imposed on personal and household effects, including foods, beverages and vehicles, imported or locally purchased ex-bond with 6 months of arrival which may be brought in from abroad or taken out of the Republic of Zambia.
Relevant duties will be paid if the vehicles are disposed to persons not privileged to the exemptions.
3. In case of an accident or emergency, the Government of the Republic of Zambia will use all its available means to provide medical and other necessary assistance to the Japanese experts and their families.

ANNEX V. LIST OF ZAMBIAN COUNTERPARTS AND ADMINISTRATIVE PERSONNEL

1. Project Director

The Executive Director of University Teaching Hospital, Board of Management

2. Project Co-Director

The Dean, School of Medicine, University of Zambia

3. Project Manager

The Head of Department of Pathology and Microbiology, University of Zambia

4. Counterpart Personnel

- (1) Medical doctors
- (2) Clinical officers
- (3) Laboratory technicians
- (4) Data management officers

5. Administrative Personnel

- 1) Administrative officer
- 2) Secretaries
- 3) Clerks
- 4) Other supporting staff mutually agreed upon as necessary

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ANNEX VI. LIST OF LAND, BUILDINGS AND FACILITIES

1. Land

2. Building and facilities

- (1) Sufficient space for the implementation of the Project
- (2) Offices and other necessary facilities for the Japanese experts
- (3) Facilities such as the supply of electricity, gas and water, sewage systems, telephones and furniture necessary for the activities of the Project
- (4) Other facilities mutually agreed upon as necessary

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ANNEX VII. JOINT COORDINATING COMMITTEE

1. Functions

The Joint Coordinating Committee will meet at least once a year and whenever the need arises, and work;

- (1) To formulate the annual work plan for the Project under the framework of the Record of Discussions,
- (2) To review and exchange views on major issues arising from or in connection with the Project,
- (3) To discuss any issues to be mutually agreed upon as necessary concerning the Project.

2. Composition

- (1) Chairperson: Permanent Secretary for Health or his representative,
Ministry of Health

- (2) Members:

Zambian side

- (a) Project Director
- (b) Project Co-Director
- (c) Project Manager
- (d) Technical counterparts to the Japanese experts
- (e) Other personnel as mutually agreed upon

Japanese side

- (a) Chief Advisor (Team Leader)
- (b) Coordinator
- (c) Experts
- (d) Resident Representative of JICA Zambia Office
- (e) Other personnel to be dispatched by JICA

- NOTE: 1. Official(s) of the Embassy of Japan in the Republic of Zambia may attend the Joint Coordinating Committee as a observer(s).
2. Secretary for Health may appoint any other Zambian members from the Ministry of Health or University of Zambia as necessary to address any specific issues concerning the Project.

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Project Design: Infectious Disease Control Project, as of 11th March 1986

Overall Goal	Available indicators	Means of Verification	Important Assumptions
<p>1. Overall Goal</p> <p>To control infectious diseases in ZAMBIA through development of human resources.</p>	<p>Research Reports</p> <p>Surveillance Reports</p> <p>Verification by WHO and other donors</p>	<p>Verification by Japanese Experts</p> <p>Verification by WHO and other donors</p>	<p>Ministry of Health will reflect the contents of the project to the policy making.</p> <p>Trained Japanese laboratory experts on infectious diseases are valued effectively</p>
<p>2. Project Purpose</p> <p>To strengthen the function of the Public Health Laboratory as an extension of the Veterinary Laboratory for the laboratory diagnosis of infectious diseases.</p>	<p>Research Reports</p> <p>Surveillance Reports</p> <p>Verification by WHO and other donors</p>	<p>Verification by Japanese Experts</p> <p>Verification by WHO and other donors</p>	<p>1. Principal Local inputs are provided by Zambian Side.</p> <p>2. Principal inputs are provided by Japanese Side.</p>
<p>3. Outputs</p> <p>(1) The Quality laboratory diagnosis on infectious diseases at University Teaching Hospital (UTH) is to be improved.</p> <p>(2) Clinical and epidemiological studies on infectious diseases are to be conducted at the hospitals and in the communities.</p> <p>(3) The disease surveillance systems to be strengthened.</p> <p>(4) Essential laboratory techniques for infectious diseases are to be improved at district level.</p> <p>(5) Out-patient clinics in the project area to be utilized effectively.</p>	<p>Research Reports</p> <p>Surveillance Reports</p> <p>Verification by WHO and other donors</p>	<p>Verification by Japanese Experts</p> <p>Verification by WHO and other donors</p>	<p>1. Principal Local inputs are provided by Zambian Side.</p> <p>2. Principal inputs are provided by Japanese Side.</p>
<p>4. Activities</p> <p>(1) To improve the quality of laboratory diagnosis on infectious diseases at UTH.</p> <p>a. Virology</p> <p>1) To improve the techniques of tissue culture and detection microscopy.</p> <p>2) To improve the quality control of IVF.</p> <p>b. Bacteriology</p> <p>1) To improve the bacteriological techniques.</p> <p>2) To establish techniques for streptococcal immunology.</p> <p>3) To conduct serological and epidemiological studies on infectious diseases for prevention and control at hospital and community level.</p> <p>c. Parasitology</p> <p>1) Ecological studies of snail fluid parasite cases.</p> <p>2) Laboratory support for paleo-entomology programmes.</p> <p>3. Malaria</p> <p>1) Assessment of problems on current malarial vaccination.</p> <p>2) Immunization for better vaccination programmes.</p> <p>4. Acute respiratory infection (ARI)</p> <p>1) Study of ARI among children.</p> <p>2) Epidemiology studies on influenza virus infections.</p> <p>(2) To strengthen the disease surveillance system for infectious diseases, in particular, poliomyelitis, measles, ARI and MVI.</p> <p>5. Establishment of laboratory based poliovirus surveillance.</p> <p>6. Technical support for measles virus surveillance.</p> <p>7. Laboratory support for HIV surveillance.</p> <p>8. Vaccine potency testing</p> <p>(4) To transfer essential laboratory techniques on infectious diseases to the district hospital staff.</p> <p>9. Training workshops.</p> <p>10. Dissemination of essential information</p> <p>(5) To utilize staff from the project in the health reforms.</p> <p>11. Publishing Newsletter.</p> <p>12. Scientific Seminar</p> <p>6. Information exchange with WHO, UNICEF etc.</p> <p>7. Preparing national guidelines for laboratory diagnosis on infectious diseases.</p> <p>(6) To collaborate with Primary Health Care activities.</p>	<p>Research Reports</p> <p>Surveillance Reports</p> <p>Verification by WHO and other donors</p>	<p>Verification by Japanese Experts</p> <p>Verification by WHO and other donors</p>	<p>1. Principal Local inputs are provided by Zambian Side.</p> <p>2. Principal inputs are provided by Japanese Side.</p>
<p>5. Inputs</p> <p>JAPANESE SIDE</p> <p>A. Experts</p> <p>(1) Long Term Experts</p> <p>a. Chief Advisor (Team Leader),</p> <p>b. Coordinator, c. Epidemiology,</p> <p>d. Virology, e. Pediatrics,</p> <p>f. Internal Medicine,</p> <p>g. Other Staff</p> <p>(2) Short Term Experts</p> <p>a. Virology, b. Bacteriology,</p> <p>c. Immunology, d. Epidemiology</p> <p>e. Microbiology</p> <p>f. Maintenance of Equipment</p> <p>g. Other Staff</p> <p>h. CP Training</p> <p>i. Virology, b. Bacteriology,</p> <p>c. Immunology,</p> <p>d. Maintenance of Equipment</p> <p>C. Provision of Equipment</p> <p>a. Laboratory Equipment in virology, bacteriology and immunology</p> <p>b. Vehicles for surveillance</p> <p>c. Others.</p>	<p>Research Reports</p> <p>Surveillance Reports</p> <p>Verification by WHO and other donors</p>	<p>Verification by Japanese Experts</p> <p>Verification by WHO and other donors</p>	<p>1. Principal Local inputs are provided by Zambian Side.</p> <p>2. Principal inputs are provided by Japanese Side.</p>
<p>6. Precedents</p> <p>1. Collaboration among WHO, UNICEF and UTH.</p> <p>2. Coordination with other donors, WHO, and UNICEF</p> <p>3. Laboratory and office space (Immunology, bacteriology, training laboratory, offices for Japanese experts, etc)</p> <p>4. Coordination of Laboratory activities.</p>	<p>Research Reports</p> <p>Surveillance Reports</p> <p>Verification by WHO and other donors</p>	<p>Verification by Japanese Experts</p> <p>Verification by WHO and other donors</p>	<p>1. Principal Local inputs are provided by Zambian Side.</p> <p>2. Principal inputs are provided by Japanese Side.</p>

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**LIST OF VARIOUS UTILITIES PROVIDED
FOR THE PROJECT BY ZAMBIA**

1. Salaries for the counterparts and other administrative staff
2. Electricity for the Virology Laboratory Building and the TB laboratory rooms
3. Water for the Virology Laboratory Building and the TB laboratory
4. Space secured for the TB Lab. Rooms in the Department of Pathology and Microbiology
5. Laboratory Protective Ware
6. Two Vehicles for Specimen Collection
7. Reagents for routine syphilis, rheumatoid factor (RF) and HIV screening and associated disposable items.
8. Space allocated for buildings the Virology Laboratory, generator house, animal care and stock room house, and car parking
9. Transports and facilities for the Workshop on March 1998
10. Transports, facilities and UTH cafeteria for the Workshop on March 1999

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**AMOUNT OF FUND ALLOCATED
FOR OPERATIONAL EXPENSES
OF THE PROJECT BY ZAMBIA**

Budget Categories	1998	1999
HRD/Training (Chuken Gijutsusha)	US\$ 1,000	
Equipment Maintenance (Kizai Hoshu Kanri)	US\$ 2,580	US\$ 5,160
Total	US\$ 3,580	US\$ 5,160

Note:

- (1) JFY denotes Japanese Fiscal Year, which begins in April and ends in March.
 (2) Figures for JFY99 are provisional.

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LIST OF JAPANESE EXPERTS DISPATCHED

I. SUMMARY TABLE

Fields of Experts	Long-term	Short-term
Chief Advisor	1	0
Project Coordinator	2	0
Virology	2	4
Bacteriology	1	1
Immunology	1	6
Others	1	3
Total	8	14

II. LIST OF EXPERTS

1. CHIEF ADVISOR	PROF. YOSHIO NUMAZAKI	L/T	1995.07.15 - 2000.04.02
2. COORDINATOR	MR. KATSUNORI SHIRAI	L/T	1995.06.18 - 1997.06.17
	MR. TAKASHI FUJISAKI	L/T	1997.06.01 - 2000.04.02
3. VIROLOGY	PROF. NAOKI YAMAMOTO	S/T	1997.03.31 - 1997.04.13
	DR. REIKO SAITO	L/T	1997.04.28 - 1998.04.27
	DR. KATSUMI MIZUTA	S/T	1997.05.22 - 1997.06.27
		S/T	1999.02.16 - 1999.03.06
	DR. KAZUFUMI KIMURA	L/T	1998.04.01 - 2000.03.31
	PROF. KIYOTO NAKAMURA	S/T	1998.07.19 - 1998.08.01
4. BACTERIOLOGY	DR. HARUMI SHISHIDO	S/T	1997.08.26 - 1997.09.16
	DR. SATOSHI MITARAI	L/T	1998.06.01 - 2000.03.31
5. IMMUNOLOGY	DR. HIROSHI TERUNUMA	L/T	1995.06.02 - 1997.06.01
		S/T	1998.01.04 - 1998.01.23
		S/T	1998.07.14 - 1998.08.15
		S/T	1999.07.17 - 1999.08.19
	DR. KAZUYA SAKO	S/T	1995.11.28 - 1996.01.31
	DR. MASAHIKO ITO	S/T	1997.03.27 - 1997.04.08
	MR. KOTARO TADA	S/T	1999.07.17 - 1999.08.19
6. EPIDEMIOLOGY/ SURVEILLANCE	DR. HITOSHI OSHITANI	S/T	1994.12.12 - 1995.01.24
		S/T	1995.06.03 - 1995.07.26
		S/T	1998.08.15 - 1998.09.01
7. PAEDIATRICS	DR. MASAYUKI SAJIO	L/T	1995.06.02 - 1996.06.01

Notes:

(1) L/T denotes Long-term (more than one year) and S/T denotes Short-term.

(2) Dates indicate those of departure from and arrival in Japan.

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ANNEX 3-5

LIST OF COUNTERPARTS TRAINED IN JAPAN

I. SUMMARY TABLE

Fields of Training	
Virology	5
Bacteriology	2
Immunology	3
Total	10

* Training for 2 more technologists, one each in virology and bacteriology, is planned for JFY 1999.

II. LIST OF COUNTERPARTS

I. VIROLOGY

Mr. Francis CHANGWE
1996.03.02 - 1997.03.01
Technologist, Department of Microbiology and Pathology, UTH
trained at Sendai National Hospital and other institutes

Ms. Mutinta Emellah SHISHOLEKA
1996.07.15 - 1997.07.14
Medical Laboratory Technologist, UTH
trained at Sendai National Hospital and other institutes

Dr. Francis Chisaka KASOLO
1996.11.04 - 1996.11.26
Medical Doctor, UTH
trained at Niigata University School of Medicine and other institutes

Mr. Thom Simon MSISKA
1997.05.29 - 1998.05.23
Senior Laboratory Technologist, Department of Microbiology and Pathology, UTH
trained at Sendai National Hospital and other institutes

Ms. Lucy Mazyanga LIWEWE
1998.05.12 - 1999.05.08
Medical Laboratory Technologist, University of Zambia School of Medicine
trained at Tohoku University School of Medicine

2. BACTERIOLOGY

Mr. Bupe S. KAMBASHI
1996.03.02 - 1996.10.01
Medical Laboratory Technologist, UTH
trained at Tokyo National Chest Hospital and other institutes

Mr. David LUBASI
1996.07.15 - 1997.05.26
Medical Laboratory Technologist, UTH
trained at Tokyo National Chest Hospital and other institutes

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3. IMMUNOLOGY

Prof. Nkandu P. LUO

1995.06.20 - 1995.07.28

Head, Department of Microbiology and Pathology, UTH
trained at Sendai National Hospital and other institutes

Dr. Lishomwa Chakanga NDHLOVU

1997.08.25 - 1998.08.14

Senior House Officer, Department of Microbiology and Pathology, UTH
trained at Tohoku University School of Medicine and other institutes

Ms. Georgina MULUNDU

1998.05.12 - 1999.05.08

Lecturer II, University of Zambia School of Medicine
trained at Tohoku Univ. School of Medicine and Yamanashi Medical Univ.

Notes;

(1) Dates indicate those of departure from Zambia and arrival in Japan.

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LIST OF EQUIPMENT PROVIDED BY JAPAN

I. SUMMARY TABLE

Unit: Japanese Yen, in thousands

Budget Categories	JFY95	JFY96	JFY97	JFY98	JFY99	Total
General Budget	52,240	47,287	44,969	28,976	27,199	200,671
Expert Support Budget (Keiko Kizai)	N/A	N/A	4,841	3,758	2,000	10,599
Total	52,240	47,287	49,810	32,734	29,199	211,270
(in USD, in thousands)	(435)	(394)	(415)	(273)	(243)	(1,761)

Notes;

- (1) JFY denotes Japanese Fiscal Year, which begins in April and ends in March.
- (2) Figures for JFY 99 are provisional and based on approved budget.
- (3) USD 1.00 = JPY 120.

II. LIST OF MAJOR EQUIPMENT

As attached.

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Equipment List in 1995

No.	Item	Specification	Qty	Location
1	FACScan System	Becton Dickinson FACScan sensor unit with built in laser FACScan transformer FACStation Macintosh Quadra 650 Software(FACScomp, Quickeys, Claris Works, Cell Quest, CONSORT) FACStation MO Drive	1	Laboratory 1
2	Voltage Stabiliser	UPS BACKUPS-5224 Capacity: 4kw	1	Molecular Lab.
3	UPS	Diesel Generator	1	Outside
4	DNA Thermal Cycler	Perkin Elmer DNA Thermal Cycler 480 (230-240V/50Hz) N801-0102	1	Bacteriology Lab.
5	Stabiliser for No.21 Item	Stabiliser	1	Molecular Lab.
6	Spectrophotometer	Beckman, DU-640	1	Training room
7	Printer for OD meter	Beckman, J1220	1	Training room
9	Cell Holder	50 ul single cell holder, 523382	1	Molecular Lab.
10	Microcell	50 ul micro cell, 523450	1	Molecular Lab.
11	Stabiliser	Stabiliser	1	Laboratory 1
12	Micro Centrifuge	Tomy; Handy Fuge HF-120	1	Training room
13	Table Centrifuge	Funakoshi; KR-0080-00	1	Training room
14	Shaker	Rotator; Taitec; RT-50	1	Laboratory 1
16	Hot Plate Stirrer	Sigma; H3895	1	Training room
17	Mixer	Sigma; Z12.100-2	1	Training room
18	Device for Electrophoresis	ADVANCE Model MUPID-II	1	Bacteriology room
19	Block Incubator	ASTEC; BI-515	1	Laboratory 1
23	Computer	Macintosh 7600/120, RAM36M, HD1GB	1	TB laboratory
24	Stabiliser	Stabiliser	1	Laboratory 1
25	Water Bath	Taitec; Personal-11/EX set	1	TB laboratory
26	UV crosslinker	Amersham; RPN2502	1	Bacteriology room
27	UV crosslinker spare UV tubes (254nm)	Amersham; RPN2504 Spare UV tubes(254nm)	1	Bacteriology room
28	Saw for autopsy	Striker; SIRAIMAU	1	Pathology Dept.
29	Autopsy set	Autopsy set; SIRAIMATU	1	Pathology Dept.
30	Pillow for autopsy	SIRAIMATU	1	Pathology Dept.
31	ELISA Reader	Labsystems MultiScan Bichromatic	1	Bacteriology room
32	Microplate Washer	Titer Tek; SS/12J	1	Training room
33	Liquid Nitrogen Container	Sigma F2344 Dewar Flask 35 L. beaker style	3	EM room
36	Polaroid Camera System	Sigma; MP-4P Polaroid MP-4+ Camera	1	EM room

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Equipment List in 1995				
No.	Item	Specification	Qty	Status
37	Computer	Compaq Presario	1	Laboratory 2
38	Copy Machine	Canon; NP2120	1	Molecular Lab.
39	Vehicle	Mitsubishi 4x4 Vehicle (Pajero, 2800cc Diesel)	2	Outside Carpark
40	Table Centrifuge	Jouan; DB 3.12	2	Training room
41	Electric Microscope	Olympus, BH2 Binocular Electric Microscope	3	Tissue culture
42	Medical Book	Medical Textbook	1	Molecular Lab.
63	Tube Opener	Perkin Elmer; N930-1386	1	Bacteriology room
68	Micropipette P2	Gilson Pipetman P2	5	Training room
69	Micropipette P20	Gilson Pipetman P20	5	Training room
70	Micropipette P200	Gilson Pipetman P200	5	Training room
71	Micropipette P1000	Gilson Pipetman P1000	5	Training room
76	PCR Micropipette	Funakoshi; 5-00-1001-X10 PCR Micropipettes 1-10ul	5	Bacteriology room
104	UV Ramp	UV ramp; UVP, inc.	1	Bacteriology Lab.
105	UV Safety Glasses	UVP inc. UV Safety Glasses	3	Molecular Lab.
106	Freezer (benchtop)	Stratagene STRATACOLER	2	Bacteriology room
152	Timer	Sigma; T6164	10	Laboratory 1
153	Magnet Bar	Sigma; S0393	1	TB laboratory
163	Pipette Aid	Sigma; Pipette-Aid Pumps with dual filtration	3	Tissue Culture(2) TB(2)
165	Pipette Helper	Sigma	3	Training room
171	Magnetic Bead Attractor	Stratagene;	1	EM room
178	Magnetic Bead Attractor	Dynal; MPC-2	1	EM room
182	Table Refrigeration Centrifuge	Kubota; type 1910	1	Training room
183	Angle Rotator	Kubota ; RA-50J	1	EM room
184	Adapter	Kubota ; 055-7590	1	EM room
185	Angle Rotator	Kubota ; RA-200J	1	EM room
188	Face Guard	SIRAIMATU	5	EM room
194	Dispenser	Dispenser ; Nichiryo	10	Tissue Culture
201	Blood Counter	(Improve Neuerber)	4	Tissue Culture
202	Table Top Clean Bench	TVS-1000	1	Training room
(Keikou Kizai)				
K-1	Percussion hammer	361-003-01	2	Molecular Lab.
K-2	Instrument Sterilising Tray	21x15x4cm	12	Training room
K-3	Modem for Macintosh	Sportstar SP-288A 28.8Kbps	1	Immunology Lab.
K-4	Battery(Apple)	M1908LL/A PB 500 Series	2	Immunology Lab.
K-5	Word Processor	SHARP WD-X800	1	Immunology Lab.
K-6	BOOK Player	SONY DD-25	1	Immunology Lab.
K-7	Printer	HP Desk Writer	1	Molecular Lab.
K-8	Medical Books		1 lot	Molecular Lab.
K-9	Camera	CANON; EOS 5 QD	1	Immunology Lab.

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Equipment List in 1995

No.	Item	Specification	Qty	Location
K-10	Macro Lens	CANON; EF50mm/F2.5	1	Immunology Lab.
K-11	Zoom Lens	CANON; EF28-105mm /F3.5-4.5USM	1	Immunology Lab.
K-12	Macro Ring Light	CANON; ML-3	1	Immunology Lab.
K-13	Battery	Lithium 2CR5	10	Immunology Lab.
K-14	Battery	Alkaline	20	Immunology Lab.
K-15	Computer	Macintosh PB520 12MB/HD240	2	Immunology Lab.
K-16	RAM	SIMM for Mac/16MB	1	Immunology Lab.
K-17	Modem Cable		1	Immunology Lab.
K-18	Facsimile	Matsushita; UF-321-K	1	Molecular Lab.
K-19	FAX Modem	MICRO CORE; V34/V.FC MC288XL	1	Molecular Lab.
K-20	JEM-100SX EM Repair Parts	R.P. Oil MR-200 1.8L.	2	EM room
		V-Belt RECMF-6310	2	EM room
		O-Ring JICB2401 P7 4D	2	EM room
		O-Ring JICB2401 P6 4D	2	EM room
		Valve BC-6, CP-10 Type (4PC/SET)	1	EM room
		Aperture UB121127(01) 7*0.5T 0.5	1	EM room
		Aperture UB121186(01) 11*0.5T 0.5	1	EM room
		Aperture MB140431 (20.75.150.300)	1	EM room
		Aperture MB103221 (20.40.60.120)	1	EM room
		Fruores Screen UB151097 Large	1	EM room
		Fruores Screen UB151101 Small	1	EM room
		Oil Charge Box (4-LTR)	2	EM room
		DP Heater MB010055	1	EM room
		200V 600W 4-inch		
		Battery 5N-600AA 6V with Lead	1	EM room
		Variable Resistor GF201,158B 500	1	EM room
		Rotary Switch MP001918	1	EM room
		Rotary Switch MP001762	1	EM room
		Rotary Switch MP001770	1	EM room
		Pump WPT242 W/2PCS of Wrench	1	EM room
		Relay MSO-K12	1	EM room
K-21	Printer	Apple; Style Writer II	1	Immunology Lab.
K-22	Printer Cable	Apple; Style Writer II	1	Immunology Lab.
K-23	Computer Software	File Maker Pro v2.1	1	Immunology Lab.
		Claris Works 2.0 v2	1	Immunology Lab.
		Mac Wright II 1.5 v2	1	Immunology Lab.
K-24	Transformer	220/ 100V 100W	1	Immunology Lab.
K-25	Computer	Apple; Macintosh IICx	1	TB Laboratory
K-26	Display monitor	Apple; 13inchs	1	TB Laboratory
K-27	Stethoscope		2	Molecular Lab.

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Equipment List In 1996

No.	Item	Specification	Qty	Location
1	Battery Operated RPR Rotator	OMEGA Product Code OD171	1	Training Lab.
2	Solar Recharger	OMEGA Product Code OD181	1	Stock room
7	Multi Pipette 8 Channel with tip Ejector	5-50ul 414-2407	2	Laboratory 1
8	Multi Pipette 8 Channel with tip Ejector	50-300ul 414-2417	2	Laboratory 1
9	Digital Finnipipette	0.5-10ul 4027-000	5	Training Lab. Laboratory 1
10	Digital Finnipipette	40-200ul 4027-20	5	Training Lab. Laboratory 1
11	Digital Finnipipette	200-1000ul 4027-30	5	Training Lab. Laboratory 1
17	Vacuum Pump Compleat Pump System 2	SAM 14 STS Catch Bottles, Tubing & Filter and Space Filter	3	Training Lab.
18	Consumble for SAM 14 Disposable Bacterial air Filter	060 33VV STS	1	Stock room
19	Well Wash 8 way Handwash Head and stand, accessories	STS WW001A	2	Stock room
20	Gravity Feed, Manually Operated Washing System	STS WW001/2 Bottles and tubing	1	Stock room
28	Computer	Compaq Prolinea 577e Model 630/w Pentium 75MHz 8MB RAM 630MB HD	1	Laboratory 2
102	Pipette-Aid Pumps with dual filtration unit	Sigma P6550	3	Tissue Culture
120	Cell Counting Chamber	Iuchi	4	Tissue Culture
128	Balance	37P, B13-200 Model 1550SD	3	Stock room
130	Computer	Compaq Prolinea 5100e Model 630/w Pentium 100MHz 8MB 630MB HD	1	Laboratory 2
131	Computer Printer	HP Laser Jet 5	1	Laboratory 2
132	Computer Software	Lotus 1.2.3 VER 5.0	1	Immunology Lab.
133	Computer Software	Dbase V for WINDOWS	1	Immunology Lab.
134	Computer Software	Word Perfect 6.1	1	Immunology Lab.
135	Computer Software	MS DOS 6.22	1	Immunology Lab.
136	Computer Software	Havard Graphic	1	Immunology Lab.
137	Computer Software	Antivira - Fprof	1	Immunology Lab.
138	Computer Software	Windows 3.1	1	Immunology Lab.
140	Modem & Cable	Sportster VI 57600PBS 14.4 Faxmodem with Personal voice	1	Immunology Lab.
141	Macintosh soft	File Maker Pro Delta Graph	1 1	Immunology Lab. Immunology Lab.

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Equipment List in 1996

No.	Item	Specification	Qty	Location
143	Knives	Amputation (250mm steel blade)	5	Pathology Dept.
144	Knives	Brain-cutting type (250mm soft blade)	10	Pathology Dept.
145	Knives	PM-handles (Metal standard blue)	4	Pathology Dept.
146	Knives	PM-blades	40	Pathology Dept.
147	Scissors	Straight, round/round points 120, 145, 165mm blades	5	Pathology Dept.
148	Scissors	Straight, round/sharp points	5	Pathology Dept.
149	Scissors	Mayo's dissecting scissors Straight 230mm	5	Pathology Dept.
150	Scissors	Mayo's dissecting scissors Straight 145mm	5	Pathology Dept.
151	Scissors	Mayo's dissecting scissors Curved	5	Pathology Dept.
152	Hand Saw	(approx x 200mm blade)	2	Pathology Dept.
153	Scapels	Size no.4 handles	4	Pathology Dept.
154	Scapels	Size no.24 handles	100	Pathology Dept.
155	Virchow's skull breaker	(T-shape)	1	Pathology Dept.
159	Weighing Scale	20kg capacity	1	Pathology Dept.
161	Photomicrographic and Cinemicrographic System Camera	PM-10AD, OLYMPUS	1	EM room
162	Deep Freezer	So-Low; -80° C	2	Training Lab. Stock room
163	Deep Freezer	So-Low; -40° C	4	TB laboratory
164	Refrigerator	Coca-Cola Glass Door	3	Training Lab.
165	Slide Warmer		2	Pathology Dept.
166	Binocular Microscopes plus teaching	Nikon	1	EM room
167	Safety cabinet	NS-18 BW	2	Training Lab.
168	Incubator	15 900	2	TB laboratory
169	Autoclave	ES-315	1	TB laboratory
170	Autoclave	ES-325	1	TB laboratory
171	Freezer	MDF-38ZAT/SANYO	1	Stock room
172	Fridge	MPR-311DR/SANYO	1	Training Lab.
173	Centrifuge		1	TB laboratory
174	Electric Balance	HR-300	2	TB laboratory
175	Auto steriliser for water supply	Yamato	3	Sterilising room
176	Fluorescent Microscope	Olympus, BX-34-FLBD1	1	TB laboratory
177	Ordinary Microscope	Olympus, BX-50-32	1	TB laboratory
178	Cultural Medium Coagulator	Hirasawa C-200-CP型	1	TB laboratory
179	Media Dispenser	Hirasawa FH-10SS 型	1	TB laboratory
181	Dispenser	Nichiryō, Model 8100	10	Tissue Culture

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Equipment List in 1996

No.	Item	Specification	Qty	Location
184	Practical Approach on CD ROM	Universal Unlock Macintosh Version Number 0-19-268370-5 Oxford University Press	1	Molecular Lab.
185	Greenfields Neuropathology	Editors; J.H.Adams, L.Duchen Publisher; Edward Arnold	1	Pathology Dept.
186	Textbook of fetal and Perinatal Pathology	Editors; J.Wigglesworth, D. Singer Publisher; Blackwell Scientific	1	Pathology Dept.
187	Pathology of gastrointestinal tract, Liver and Biliary tract		1	Pathology Dept.
188	Ophthalmic Pathology		1	Pathology Dept.
189	Colour atlas of Pathology of the nervous system	Editors; A. Hirano Publisher; Igaku-shoin	1	Pathology Dept.
190	Principles and Practice of Infectious Diseases	Mandell GL; Douglas RG Bennet JE Churchil Livingstone, London	1	Molecular Lab.
191	Clinical Bacteriology	Stoke EJ, Ridgeway GL Arnold-London	1	Molecular Lab.
192	Mackie & Macktney Medical Microbiology Vol. I	Duguid JP; Marmion BP Swain RHA, Churchil Livingstone	1	Molecular Lab.
193	Mackie & Macktney Practical Medical Microbiology Vol. II	Collex JG; duguid JP; Marmion BP	1	TB Laboratory
194	Manual of Clinical Microbiology	Balows A, Houslerws, Hermannk Isenberg HD, Shadomy HJ, ASM press	1	Molecular Lab.
195	Cowan and Steels' Manual for Identification of Medical Bacteria	Cowan ST; Steel; Cambridge University Press	1	Molecular Lab.
196	Laboratory Methods in Antimicrobial Therapy	Reeves DS, Phillips, Williams J.D. Churchil Livingstone	1	Molecular Lab.
197	Nelson Textbook of Paediatrics, 15th Edition	Behrman, Kliegman, Arvin	2	Molecular Lab.
198	Diseases of Children in the subtropics and Tropics	Fourth Edition Edited by Stanfield, Bucton, Chan, Parkin and Waterston ELBS with Edward Arnold	1	Molecular Lab.
199	Davidson's Principles and Practice of Medicine	Latest Edition ELBS Low priced edition	1	Molecular Lab.
200	Harrisin's Principles of Internal Medicine	McGraw Hill Kogakusha Intern. student edition	1	Molecular Lab.
201	Hutchison's Clinical Methods	Latest Edition Bailliere Tindall	1	Molecular Lab.

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Equipment List in 1996

No.	Item	Specification	Qty	Location
202	Manson Tropical Diseases	Twentieth Edition 1996 Edited by Gordon C. Cook W.B. Saunders Company London 24-28 Oval Road. London NW1 7DX	1	Molecular Lab.
203	Tuberculosis A Comprehensive International Approach	ISBN 0-8247-8852-4 Edited by Lee B. Reichman Earl S. Hershfield 1993/or recent edition Marcel Dekker Inc.	1	Molecular Lab.
204	Immunologic Disorders in Infants & Children	Edited by: E. Richard Stiehm Fourth Edition 1996 W.B. Saunders Company, London	1	Molecular Lab.

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Equipment List in 1997

No.	Item	Specification	Qty	Location
1	Computer	Pentium Minimum 8MB RAM Minimum 530MB HD	3	Laboratory 2
2	Computer Printer	HP Laser Jet 5	3	Laboratory 2
19	DNA Thermal Cycler 480	Perkin Elmer, 230-240V/60Hz	1	Bacteriology Lab.
20	Digital Finnipipette	Labsystems, 5-40ul, Cat. No. 4500030	10	Training Lab.
21	Digital Finnipipette	Labsystems, 0.5-10ul Cat. No. 4500020	10	Training Lab.
22	Digital Finnipipette	Labsystems, 40-200ul Cat. No. 4500040	10	Training Lab.
23	Digital Finnipipette	Labsystems, 200-1000ul Cat. No. 4500050	10	Training Lab.
74	Citadel 2000, Tissue Processor	Shandon	1	Pathology Dept.
75	Embedding centre	Tissue tek III	1	Pathology Dept.
76	Accu Cut Microtome Miles Laboratory		1	Pathology Dept.
77	Hot Plate		1	TB Laboratory
78	Thermostatically Controlled Water Bath		1	TB Laboratory
79	Air Condition		2	TB Laboratory
80	Automatic Plate Washer		1	Training room
81	Centrifuge		2	TB Laboratory
82	Oxotronics Balance	HR-300	1	TB Laboratory
83	Ultra Sound Diaenosis System		1	D-Block US room
84	Dry Incubator		2	TB Laboratory
K-1	Carbon Dioxide	CO2 in Steel Cylinder	1	Stock room
K-2	AC Adapter	Apple; For PowerBook 520	1	Immunology Lab.
K-3	Frigiment Dry Ice Maker	No. 9061	1	Stock room
K-4	Electrocardiograph	Fukuda denshi, FX-314	1	D-Block
K-5	MD Data Camera	SHARP, MDPS-1	1	Immunology Lab.
K-6	P/C Connection Kit	SHARP, AD PSIPK	1	Immunology Lab.
K-7	Close-Up Photography Stand	SHARP, AD-PSIST	1	Immunology Lab.
K-8	Nickel Battery Pack	SHARP, AD-PSIBT	1	Immunology Lab.
K-9	Relay-Double M.D.	SHARP, AD-DR140	10	Immunology Lab.
K-10	Hood Set for MUPID MINI GEL	Cosmo Bio	1	Bacteriology Lab.
K-11	Mini Gel Electrophoresis System MUPID-2 & MUPID Cooler	Cosmo Bio	3	Bacteriology Lab.
K-12	Poly Sealer	PC-300	1	Bacteriology Lab.
K-13	Ice Rack	IR-1	5	Training room
K-14	Fuze-Stick	IKEMOTO; 20-845	20	TB Laboratory
K-15	Nichrom Wire	Matsushita; 600W	1	TB Laboratory
K-16	Test Tube Stand	SANWA; SS16.5-50	1	TB Laboratory
K-17	Dyeing Basket	SANWA; B-20	1	TB Laboratory
K-18	Triangle Flask	SHIBATA; 1000ml	1	TB Laboratory
K-19	Triangle Flask	SHIBATA; 3000ml	1	TB Laboratory
K-20	Triangle Flask	SHIBATA; 5000ml	1	TB Laboratory

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Equipment List in 1997

No.	Item	Specification	Qty	Location
K-21	Syrinder	SHIBATA; 100ml	1	TB Laboratory
K-22	Syrinder	SHIBATA; 500ml	1	TB Laboratory
K-23	Syrinder	SHIBATA; 1000ml	1	TB Laboratory
K-24	Alcohol Lump		1	Tissue culture
K-25	Dyeing Vat		3	TB Laboratory
K-26	Ease Stick	IKEMOTO; 20-845	180	TB Laboratory
K-27	Nichrome Wire	Matsushita; 600W	19	TB Laboratory
K-28	Test Tube Stand	SANWA; SS16.5-50	49	TB Laboratory
K-29	Colouring Basket	B-20	4	TB Laboratory
K-30	Triangle Flask	SHIBATA; 1000ml	1	TB Laboratory
K-31	Triangle Flask	SHIBATA; 3000ml	1	TB Laboratory
K-32	Triangle Flask	SHIBATA; 5000ml	1	TB Laboratory
K-33	Measuring Cylinder	SHIBATA; 100ml	1	TB Laboratory
K-34	Measuring Cylinder	SHIBATA; 500ml	1	TB Laboratory
K-35	Measuring Cylinder	SHIBATA; 1000ml	1	TB Laboratory
K-36	Washing Bottle	500ml PE	5	TB Laboratory
K-37	Spoit Bottle	120ml, Brown, 45-135-052	3	TB Laboratory
K-38	Sprayer	KURAMATA, 700ml. 24-182-03	2	Laboratory 1
K-39	Funnel	Stainless, ϕ 250mm	1	TB Laboratory
K-40	Colouring VAT	15 x 22-171-01	2	TB Laboratory
K-41	Test Tube	ϕ 16.5x165mm, 56-296-04, 10/box	10	TB Laboratory
K-42	Power Mac 8600/250	Apple Macintosh	1	Immunology Lab.
K-43	Keyboard	Apple II	1	Immunology Lab.
K-44	Mouse-Turbo Mouse 5.0 Mac	Kensington	1	Immunology Lab.
K-45	17" Display	SONY; CPD-17GS	1	TB Laboratory

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Equipment List in 1998

No.	Item	Specification	Qty	Location
141	Bottle with plug	SIGMA, C6629, 10L	5	Laboratory I
142	Forceps	SIGMA, F4517, 10" length	10	
150	Balance	SIGMA; Z37,325-7 0.1mg-110g range	1	TB Laboratory
151	Air Conditioner	Panasonic Split Level, 25000BTU	2	TB Laboratory Training Lab.
158	Vehicle	MITSUBISHI PAJERO, 2800cc	1	Car Park
159	Medical Books		1セット	Undecided
3	Desktop Computer	Computer System Pro-400L and CRT	1	Immunology Lab.
4	Laptop computer	Apple; Macintosh PB-G3/233	1	Immunology Lab.
5	Video Projector	LCD Projector	1	Immunology Lab.
6	自動変圧器: 220V, 5KVA Automatic Voltage Regulator	AutoVoltage Regulator	5	Immunology Lab.
7	自動変圧器: 110V, 3KVA Automatic Voltage Regulator	AutoVoltage Regulator	5	Immunology Lab.
8	Sprayer		5	Laboratory I
14	Stainless Steel pots	Stainless Steel pots	10	TB Laboratory
22	Alcohol Lamp	Alcohol Lamp, 150ml	3	Laboratory I
33	Triangle Frask 1000ml	1000ml 56-017-06	5	TB Laboratory
34	Triangle Frask 3000ml	3000ml 56-017-08	5	TB Laboratory
35	Triangle Frask 5000ml	5000ml 56-001-13	3	TB Laboratory
36	Measuring cylinder	Measuring Cylinder; 100ml	5	TB Laboratory
37	Measuring cylinder	Measuring Cylinder; 500ml	5	TB Laboratory
38	Measuring cylinder	Measuring Cylinder; 1000ml	5	TB Laboratory
39	Measuring cylinder	Measuring Cylinder; 2000ml	5	TB Laboratory
40	Glass bottle with screw cap	Screw Bottle; 200ml	20	TB Laboratory
41	Glass bottle with screw cap	Screw Bottle; 500ml	20	TB Laboratory
42	Glass bottle with screw cap	Screw Bottle; 1000ml	20	TB Laboratory
43	Glass bottle with screw cap	Screw Bottle; 1000ml	20	TB Laboratory
44	Glass beaker	Glass Beaker; 1000ml	10	TB Laboratory
45	Glass beaker	Glass Beaker; 2000ml	5	TB Laboratory
46	Test tube	Test Tube, round bottom	50	TB Laboratory
47	Test tube	Test Tube, screw, round bottom	20	TB Laboratory
52	Spatula	Spatula	10	TB Laboratory
53	Spoon	Spoon	10	TB Laboratory
54	McFarland Equivalence Turbidity Standard	McFarland Equivalence Turbidity Standard	1	TB Laboratory
55	Quality control slide	QC Side AFB stain control	1	TB Laboratory
56	Pipette Silicon Cap	Pipette Silicon Cap	20	TB Laboratory
57	Diamond Styus	Diamond Styus	3	TB Laboratory
63	Molton cap	Molton cap	20	TB Laboratory
65	Refrigerator	Refrigerator	2	TB Laboratory
66	Hot air oven	Steriliser	1	TB Laboratory
67	Drying shelf	Drying Shelf	1	TB Laboratory
68	Blood counter	Manual Blood Counter Board, JIS-A	3	Laboratory I
69	Ultrasound pipette washer	US Pipette Washer	1	TB Laboratory

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Equipment List in 1998

No.	Item	Specification	Qty	Location
70	Sulphuric Acid Tank	Sulphuric Acid Tank	1	TB Laboratory
71	Hot plate	Hot Plate	1	TB Laboratory
72	Centrifuge with cooling device	Centrifuge/friged	1	TB Laboratory
72	Centrifuge with cooling device	Centrifuge/friged 1720	1	TB Laboratory
73	Rotor for centrifuge, RA-50J	Centrifuge/rotor	1	TB Laboratory
74	Rotor for centrifuge RA-200J	Centrifuge/rotor RA-200J	1	TB Laboratory
75	Rotor adapter	Centrifuge/rotoradaptor	1	TB Laboratory
76	pH meter	pH Meter	1	TB Laboratory
77	Crash Ice Maker	Flake Ice Maker	1	TB Laboratory
78	Pipette aid	Pipette Aid	2	TB Laboratory
81	Beaker	Stainless Container	10	TB Laboratory
K-1	Desktop Computer	Power Mac G3 DT 266 RAM:+128MB, VRAM:6MB	1	Molecular Lab.
K-2	Display	Mitsubishi, RD-21GX	1	Molecular Lab.
K-3	CD-ROM Writer	RW-6xR/PRO	1	Molecular Lab.
K-4	Modem	Panasonic, TO-BXF56K	1	Molecular Lab.
K-5	Humidifier Cooling Apparatus with Transformer	IWAKI; ANA-5510	1	Bacteriology Lab.
K-6	Alumi Block	IWAKI; ANA-5100-1	1	Bacteriology Lab.
K-7	Hot Plate Staler with Transformer	Taitec, PC-420	1	Bacteriology Lab.
K-8	Test Tube Mixer with Transformer	IWAKI; TM-251	1	Bacteriology Lab.
K-9	Stainless Test Tube Stand	SANWA; SS16.5-50	50	TB Laboratory
K-10	Glass Beads	(1kg/lot)	2	TB Laboratory
K-11	Micro tube rotator w/transformer	Iuchi; MTR-103	1	Training room
K-12	Tube holder	IUCHI; MTR-012	1	Training room
K-13	Tube holder	IUCHI; MTR-150	1	Training room
K-14	BIO FREEZING VESSEL	Nippon Freezer; 6pcs/box	1	Training room
K-15	Stirrer head	IUCHI; No.58, 15x58mm	3	TB Laboratory
K-16	Memory	Prinston PD168S-64 for Macintosh	1	Immunology Lab.
K-17	Software	Simantec; Norton Anti-Virus v.5.0.3J	1	Immunology Lab.

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ANNEX 3-7

**SUPPORT FOR OPERATIONAL EXPENSES
PROVIDED BY JAPAN**

Unit: Japanese Yen, in thousands

Budget Categories	JFY95	JFY96	JFY97	JFY98	JFY99	Total
General Expenses (Ippan)	6,651	11,025	6,000	6,070	5,501	35,247
LLDC Support (LLDC Tokubetsu)	0	386	5,000	2,213	2,561	10,160
Technical Exchange (Gijutsu Kokan)	0	454	909	0	0	1,363
HRD/Training (Chuken Gijutsusha)	0	11,746	2,587	1,399	0	15,732
Equipment Maintenance (Kizai Hoshu Kanri)	0	0	1,686	1,251	1,006	3,943
Infrastructure (Kiban Seibi)	19,058	0	0	0	0	19,058
Educacion/Promotion (Keimo Fukyu)	4,900	4,927	3,616	4,000	2,249	19,692
HIV/AIDS (AIDS Taisaku)	0	0	2,921	4,853	4,747	12,521
Total	30,609	28,538	22,719	19,786	16,064	117,716
(in USD, in thousands)	(255)	(238)	(189)	(165)	(134)	(981)

Note:

- (1) JFY denotes Japanese Fiscal Year, which begins in April and ends in March.
- (2) Figures for JFY 99 are provisional and based on approved budget.
- (3) USD 1.00 = JPY 120.

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ANNEX 4

SUMMARY OF THE PROJECT ACTIVITIES

Objectives	Activities	Achievements (quantitative)	Achievements (descriptive)
<p>Objective 1: To improve the quality of laboratory diagnosis on infectious diseases at UTH</p>	<p>1) Virology: To improve the techniques of tissue culture and electron microscope</p>	<p># (kinds) of viruses isolated using the technique: - tissue culture: 10 - electron microscopy: 2 Results of proficiency test for polio virus isolation by WHO: Accredited # of Zambian counterparts competent in these techniques: 6</p>	<p>One doctor and 6 laboratory technologists have received training in Japan during the period of the Project in order to implement the tissue culture technique introduced in the previous project (IDP). Virus isolation and identification have been performed using the microplate method that includes HEF, HEP-2, Vero, and MDCK cell lines. Specific areas of the whole culturing process were assigned to individual technologists so that each technologist was proficient in one's part. Several viral pathogens including influenza virus, adenovirus, enterovirus, mumps virus, and cytomegalovirus were isolated and identified. Influenza isolates have been submitted to the reference laboratory in Australia.</p>
	<p>2) Virology: To widen the range of HIV diagnostic methodologies available at UTH lab.</p>	<p># of newly introduced microbiological techniques for HIV: 3 (qualitative/quantitative PCR, Flow cytometry) # of Zambian counterparts competent in these techniques: 4</p>	<p>Several techniques, such as rapid test, Particle Agglutination (PA), Enzyme Linked Immuno-Solvent Assay (ELISA), Western Blot, and Polymerase Chain Reaction (PCR) have been introduced to the virology laboratory. Lymphocytes analysis using Flowcytometer has been done by Zambian technologists in order to evaluate the immunological status of HIV infected patients.</p>
	<p>3) Bacteriology: To improve the TB diagnostic techniques</p>	<p># of TB cases diagnosed using transferred methods: more than 3,000 # of Zambian counterparts competent in these techniques: 3</p>	<p>Facilities for mycobacterium culturing have been installed and the TB (tuberculosis) laboratory was opened officially on 27th April 1999. One JICA TB expert has since June 1998 been working in UTH. The routine smear staining examination using auramine-phenol method and culturing methods using egg based media (Loewenstein-Jensen & Ogawa) have been established. The growth of <i>Mycobacterium tuberculosis</i> H37Rv standard strain on both L-J and Ogawa media has been satisfactory. Over one hundred strains have been isolated already by the end of May 1999.</p>

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	<p>Flow cytometry was introduced into the virology laboratory for further investigation of immunological status of HIV infected individuals and other cell analysis. This is actually the only flow cytometer in use in Zambia. This machine is used to determine CD4 and CD8 lymphocyte numbers and thus the level of immunity against infectious diseases in HIV/AIDS patients. The information can also be used in evaluating treatment including anti-retroviral therapy. The machine is also being used to evaluate the efficacy of treatment in various HIV/AIDS studies. It is not only utilised for research but also for clinical purposes. Some of the requests to measure CD4/8 are coming from clinics and hospitals within and outside Lusaka. Payment is made in this case in order to provide funds for maintenance of the machine and procurement of reagents. This has helped sustain operations of flow cytometer. Approximately 15-30 samples for CD4 and CD8 counts are examined per week.</p>	<p># of HIV positive cases analysed by flowcytometry: 15-30 samples per week</p> <p># of Zambian counterparts competent in these techniques: 6</p>	<p>4) Immunology: To establish techniques for infectious diseases immunology</p>	<p>Objective 2: To conduct etiological and epidemiological studies on infectious diseases for prevention and control at hospitals and communities</p>
<p>Stool samples have been collected from Zambian and Tanzanian children with AFP and sent to the UTH Virology Laboratory for the virological investigation of Poliomyelitis. The etiological studies of AFP cases have been conducted as part of the WHO/ National EPI poliovirus surveillance network. Between 1993 and May 1999, a total of 323 AFP cases (131 Zambian and 197 from Tanzania) have been processed by the UTH Virology Laboratory with support from the Project.</p> <p>Additional information on polio surveillance is provided as supplement tables to this ANNEX</p>	<p># of stool samples tested: 93/4 95/6 97/8 99/00 Zambia 11 61 33 26 Tanzania 21 27 95 54</p> <p># of wild polio viruses isolated: 93/4 95/6 97/8 99/00 Zambia 0 7 0 0 Tanzania 3 3 0 0</p> <p># of research papers published: 2</p>	<p>1) Polio: Etiological studies of acute flaccid paralysis (AFP) cases, in support of the polio eradication programme</p>	<p>2) Measles: Assessment of Problems on current Measles vaccination programme</p>	<p>Objective 2: To conduct etiological and epidemiological studies on infectious diseases for prevention and control at hospitals and communities</p>
<p>Studies analysing hospital records and active measles surveillance (hospital based) have been conducted by the Project over the last three years and major findings have been published in international journals and also reported in the <i>IDCP Newsletters</i>. The Project also participated in the design of the Health education study on knowledge and practices of measles control in Zambia.</p>	<p># of studies conducted for the assessment of measles vaccination programme: 4</p> <p># of research papers published: 4</p>	<p>3) Measles: Recommendation for better vaccination programme</p>	<p># of critical recommendations made for measles vaccination programmes: 2</p>	<p>Objective 2: To conduct etiological and epidemiological studies on infectious diseases for prevention and control at hospitals and communities</p>
<p>The Project was involved in the writing of the national measles control document and made recommendations based on findings from epidemiological studies as described above.</p>				

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	<p>4) ARI: Etiological studies on ARI among children</p>	<p># of swab samples processed</p> <table border="1"> <tr><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td></tr> <tr><td>2,340</td><td>2,415</td><td>2,197</td><td>2,491</td><td>1,525</td></tr> </table> <p>(figure for 99 is up to May 99)</p> <p># of etiological viruses isolated</p> <table border="1"> <tr><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td></tr> <tr><td>237</td><td>277</td><td>121</td><td>132</td><td>112</td></tr> </table> <p>(figure for 99 is up to May 99)</p> <p># of research papers published:</p> <p>4</p>	95	96	97	98	99	2,340	2,415	2,197	2,491	1,525	95	96	97	98	99	237	277	121	132	112	<p>2 study sites were set up for this purpose with supports from the Project at George and Chilinjje health centres.</p> <p>During the current phase of cooperation (up to May 1999), a total of 10,968 throat swab samples were processed at the UTH Virology Laboratory. A total of \$79 viruses were isolated and identified.</p> <p>Details are provided in supplement tables to this ANNEX.</p>
95	96	97	98	99																			
2,340	2,415	2,197	2,491	1,525																			
95	96	97	98	99																			
237	277	121	132	112																			
<p>5) ARI: Epidemiological studies on influenza virus infections</p>	<p># of studies conducted:</p> <p>4</p> <p># of research papers published:</p> <p>3</p>	<p>The studies have shown that influenza virus infection is a common cause of ARI among Zambian children. The studies have also shown that Flu occurs mainly during the dry-cold season in Zambia. Flu A (H1N1 & H3N2) and Flu B have been isolated among Zambian ARI patients. These findings have been reported to the influenza reference centres and WHO. Flu C virus, however, is not isolated from Zambian ARI patients up to present.</p> <p>The monthly isolation of Flu viruses during the current phase of cooperation is shown in the supplement figure to this ANNEX.</p>																					

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<p>6) HIV: Epidemiological, immunological studies on HIV</p>	<p># of studies conducted: 2 (no papers yet)</p>	<ul style="list-style-type: none"> Research evaluating the long-term changes of immunological status of asymptomatic HIV infection and opportunistic conditions has been implemented. If the study shows the usefulness of early testing of individuals, it may be expected to lead to a wider acceptability of HIV testing as people who would otherwise have reservations about having a test would then wish to know their HIV status so that they could benefit from treatment or prophylaxis. This would assist current efforts to control the HIV epidemic, as more people would demand Voluntary Counselling and Testing (VCT). Counselling will include information on the need to prevent further spread of the virus. The nested PCR system to detect the proviral DNA in infants has been established and has been used to determine the risk for vertical transmission. 306 and 309 mother and infant pairs (that included 3 set of twins) were recruited at UTH. Whole blood samples from these infants were screened at birth and at 1 month for HIV-1 using serological tests and nested HIV proviral DNA PCR. Maternal blood was screened for HIV-1 using serological tests while CD4 and CD8 counts were determined using flowcytometer. The HIV sero-prevalence among childbearing women was found to be 30% (92/306). The rate of vertical transmission of HIV was 10% and 22.4% among infants at birth and at 1 month respectively. Low CD4+ and high CD8+ T-cell counts among the women studied at the time of delivery correlated with the detection of HIV-1 DNA in the corresponding infants at 1 month of age but not at birth.
<p>7) TB: Epidemiological studies on drug resistance among <i>M. tuberculosis</i></p>	<p># of studies conducted: 1 (no papers yet)</p>	<ul style="list-style-type: none"> The susceptibility tests using resistant ratio method and proportional method (recently introduced) have shown good results in the initial phase. From a preliminary data, 20 strains were isolated from matched patients and they were identified as <i>M. tuberculosis</i> using biochemical and molecular biological methods. These isolates show 20%(4/20) resistance against INH, 10%(2/20) against RFP, 5%(1/20) against EB, and 10%(2/20) against SM using resistant ratio method. There has been little discrepancy between resistant ratio method and proportional method except for SM. The proportional method has shown 30%(6/20) resistance against SM.
<p>8) Other infectious diseases: Epidemiological studies on other infectious diseases</p>	<p>Hepatitis # of studies conducted/publication: 4/2 Rotavirus # of studies conducted/publication: 2/2</p>	<ul style="list-style-type: none"> The epidemiological studies on other infectious diseases such as hepatitis B, C and syphilis have also been conducted. Dr. H. Oshitani et al. published the result from HBV immunological studies in 1996.

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<p>Objective 3: To transfer essential laboratory techniques on infectious diseases to the district hospital staff</p>	<p>1) Workshop on HIV testing / Polio Eradication (Jan., 1996, Kitwe, Zambia)</p>	<p># of participants 31 medical doctors and laboratory technologists, from 3 Provinces (Copperbelt, Luapula and Northwestern)</p>	<p>The Project in collaboration with the National AIDS/STD/TB/Leprosy Programme and UTH, conducted a workshop for medical doctors and laboratory technologists from three provinces, the Copperbelt, Luapula, and Northwestern, from 18th to 19th January 1996 in Kitwe, for the purposes of:</p> <ul style="list-style-type: none"> a. Updating the participants on current trends on HIV/AIDS and related diseases; b. Updating participants on HIV testing and laboratory safety measures; c. Updating participants on polio outbreak and surveillance in Zambia; d. Facilitating appropriate collection and transportation of clinical specimens to the reference laboratory for the investigation of suspected polio cases.
<p>2) Workshop on HIV testing / Polio Eradication (May, 1996, Lusaka, Zambia)</p>	<p># of participants 119 doctors and laboratory technologists, from the rest of the Provinces not covered in previous one</p>	<p>The Project in collaboration with the National AIDS/STD/TB/Leprosy Programme and UTH, conducted a workshop for medical doctors and laboratory technologists from the provinces not covered by the previous one, at Andrew Motel, Lusaka on 10th and 11th May, 1996, for the purposes of: (As above)</p>	
<p>3) Workshop on HIV testing / Polio Eradication (March, 1997, Lusaka, Zambia)</p>	<p># of participants 25 doctors and laboratory technologists, from non-MOH/private laboratories in Lusaka area</p>	<p>The Project in collaboration with the National AIDS/STD/TB/Leprosy Programme and UTH, conducted a workshop for medical doctors and laboratory technologists from non-MOH/private laboratories in Lusaka on 19th March, 1997, for the purposes of: (As above)</p> <p>The participants were from the private health care laboratories in Lusaka area. The clinics represented were, Grand Clinic, Atom diagnostic Centre, Midlands Medical Centre, Permanent Clinic, Lusaka Adventist Clinic, Twikatane Clinic, Hilltop Hospital, ZCCM Mine Hospital, Medical Clinic Centre, and Mairia Soko Military Hospital.</p>	
<p>4) Training Workshop for HIV testing and Polio surveillance (March, 1998, Lusaka, Zambia)</p>	<p># of participants 26 laboratory technologists, from 4 Provinces (Central, Eastern, Western and Southern) % of participants retained at the laboratories</p>	<p>The Project conducted a training workshop for the technologists to upgrade their skill and knowledge from 25th to 27th, March 1998 at the UTH Virology Laboratory. The trainees came from central, eastern, western, and southern provinces. The training subjects included basic information about HIV, polio testing and surveillance and some on other STDs. The major objectives of this workshop were as follows:</p> <ul style="list-style-type: none"> a. To improve the laboratory technique in HIV testing b. To provide adequate training on specimen collection and transportation for polio c. To provide the accurate information on surveillance of polio, HIV and other STDs 	

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	<p>5) Training Workshop for HIV/STDs & TB testing and Polio Surveillance (March, 1999, Lusaka, Zambia)</p> <p>6) Preparation of standard manuals for laboratory diagnosis of major infectious diseases</p>	<p># of participants 25 laboratory technologists, from 4 Provinces (Northern, Northwestern, Copperbelt and Luapula)</p> <p># of manuals produced and circulated: 2</p>	<p>- The Project conducted a training workshop for the technologists to upgrade their skill and knowledge on laboratory diagnosis of HIV/STDs and polio, from 4th to 6th, March 1999 at the UTH Virology Laboratory.</p> <p>- The laboratory manual on HIV and related diseases was published in 1996. Using this manual, the technologists from the virology laboratory and other peripheral hospitals/clinics have been trained and have refined their skill and knowledge through workshops organised by the Project.</p>
<p>Objective 4: To strengthen the surveillance system for infectious diseases, in particular, poliomyelitis, measles, ARI, and HIV</p>	<p>1) Establishment of laboratory based poliomyelitis surveillance</p> <p>2) Technical support for measles virus surveillance</p> <p>3) Technical support for influenza virus surveillance</p>	<p>% of Provinces covered: 100%</p> <p>Trend in annualised AFP rate in children <15</p> <p>% of AFP cases stool samples collected and examined appropriately: 100%</p> <p>% of Provinces covered: 100%</p> <p># of outbreaks confirmed by the Project: at least 5</p> <p># of vaccines tested for potency: 8 batches annually</p>	<p>- During the current phase of cooperation, with collaborative work with the national EPI programme and WHO, the UTH Virology Laboratory has been designated as the national and inter-country reference centre for poliomyelitis surveillance.</p> <p>- The Project remains the only specialised centre that provides technical support for the measles virus surveillance. In collaboration with EPI program the Project has provided support in investigating outbreaks of measles and also in the evaluation of the measles vaccines.</p> <p>- A system for ARI and influenza virus surveillance has been set up with the support from the Project. The epidemiology of influenza virus in Zambia has been established and a laboratory system for detecting influenza outbreaks is in place. WHO recognised the UTH Virology Laboratory in April 1997 as a national institute for influenza.</p>

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	<p>4) Laboratory support for HIV surveillance</p>	<p># of sentinel surveillance conducted: 1 (1998) about 12,000 samples</p> <p>% of Provinces covered: 100%</p> <p># of HIV subtypes identified: 1</p>	<p>- The project has conducted HIV sentinel surveillance for the National AIDS Prevention Programme. The Project is also currently participating in HIV population surveys and has recently started conducting surveillance of HIV genotypes circulating in Zambia.</p>
	<p>5) Vaccine Potency Testing</p>	<p># (kinds, quantity) of vaccines tested: 2 (measles, polio)</p>	<p>- The Project has set up vaccine potency testing programs for poliovirus vaccine and measles vaccine. Several batches of both polio and measles vaccines have been tested by the Project. Of these vaccines at least one measles batch failed potency testing and these findings have been reported to the national EPI managers for action.</p>
<p>Objective 5: To utilise data from the project in line with health reforms</p>	<p>1) Publishing Newsletters</p>	<p># of Newsletters and other reports published and circulated 5 newsletters (200 copies each) 3 annual reports (500 copies each)</p>	<p>- The Project has continued to disseminate its findings through the IDCP Newsletter. Between 1995 and 1999 a total of 5 newsletters and 3 Annual reports have been published and circulated. There is a plan to publish a comprehensive project report to mark the end of the project in March 2000.</p>

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<p>2) Scientific Seminars</p>	<p># of local workshops conducted/supported by the Project: 5</p> <p># of participants of major international seminars from the Project staff: 8</p> <p># of presentations by the Project staff in major seminars/symposiums: more than 20</p>	<p>- Several members of the Project have participated in local as well as international scientific seminars and major findings from the project have been presented. In addition, the Project has organised several seminars and workshops domestically. Some of the workshops at which IDCP data was presented include:</p> <p>I) International</p> <ul style="list-style-type: none"> - 7th International Congress for Infectious Diseases (Hong Kong), 1996. - XIVth International Congress for Tropical Medicine and Malaria (Japan), November 1996. - Disease Surveillance and Data Management Workshop, (Kenya), November 1996. - PI Managers Meeting (Ethiopia) March 1997. - 12th World AIDS (Geneva), 1998. - Polio Lab directors and data management course, (Harare), 1998. - EPI Managers meeting, (Nairobi), 1998. - EPI Managers and integrated disease surveillance meeting 1999. - XIth International Conference on AIDS and STDs in Africa (Lusaka), 1999. <p>II) Local</p> <ul style="list-style-type: none"> - HIV testing/Polio Eradication, Kitwe Zambia, Jan. 1996. - HIV testing/Polio Eradication, Lusaka Zambia, May 1996. - HIV testing/Polio Eradication, Lusaka Zambia, March 1997. - HIV testing/Polio Eradication, Lusaka Zambia, March 1998. - HIV, STD, TB testing/Polio Eradication, Lusaka, Zambia, March 1999
<p>3) Information Exchange with external organisations</p>	<p># of organisations: 3 (UNAIDS, WHO, UNICEF)</p>	<p>- The epidemiological information produced by the Project on ARI especially influenza, poliovirus and HIV have been constantly reported to WHO, UNICEF and UNAIDS. This information has been published in several WHO bulletin.</p>
<p>4) Preparing national guidelines for laboratory diagnosis of infectious diseases</p>	<p># of guidelines/manuals prepared and circulated: 4</p>	<p>- The Project has helped prepare national guidelines for several infectious diseases, i.e.</p> <ul style="list-style-type: none"> - Laboratory Manual for Technicians in Zambia - Central Board of Health (CBOH) Standard Operation Procedures - Surveillance guidelines and laboratory testing guidelines for notifiable viral diseases

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<p>Objective 6: To collaborate with primary health care activities</p>			<p>The Project has set up strong collaboration with several PHC activities in Zambia. These include:</p> <ul style="list-style-type: none"> • Laboratory support for EPI program • National service for voluntary counselling and testing for HIV. • Out break investigations e.g. a measles outbreak in Lundazi, Eastern Province and Mpulungu, Northern province and a hepatitis outbreak in Solwezi, North western Province.
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SUPPLEMENT TABLES FOR ANNEX 4

1. Aetiological studies of acute flaccid paralysis (AFP) cases

i) Age distribution of AFP Cases

Age (months)	Zambia	Tanzania	Total
<11	10	8	18
12	21	27	48
24	23	35	58
36	16	24	40
48	8	21	29
>60	53	82	135
Total	131	197	328

ii) Results of Virus Isolation from stool samples of AFP cases.

Zambia

	1993/4	1995/6	1997/8	1999/2000	Total
Polio					
Polio-1 W	0	7	0	0	7
Polio V	0	0	1	0	1
Non-Polio E	4	6	1	2	13
No Virus	7	48	31	24	110
Total Cases	11	61	33	26	131

Tanzania

	1994/5	1996/7	1998/9	1999	Total
Polio					
Polio-1 W	3	3	0	0	6
Polio V	5	0	1	3	9
Non-Polio E	1	0	6	0	7
No Virus	12	24	88	51	175
Total Cases	21	27	95	54	197

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iii) Yearly reporting of cases of AFP in each province in Zambia: 1993 to May 1999

Province	1993/4	1995/6	1997/8	1999	Total
Central	0	5	3	10	18
Copperbelt	0	4	3	2	9
Eastern	0	2	1	1	4
Luapula	0	1	1	2	4
Lusaka	11	35	13	7	66
Northern	0	3	0	2	5
Northwestern	0	2	0	1	3
Southern	0	3	3	1	7
Western	0	0	2	5	7
Province N/A	0	6	0	2	6
Total	11	61	26	33	139

iv) Geographical Distribution of confirmed poliomyelitis cases (wild polio 1) in Zambia and Tanzania

A) Zambia

A total number of seven confirmed cases of wild poliovirus 1 infection have been confirmed since AFP surveillance was started. Five cases of wild poliovirus infection were from Lusaka, One from Kafue and one from Salunginga (Northwestern province).

B) Tanzania

A total number of six confirmed cases of wild poliovirus 1 infection have been confirmed among AFP cases from Tanzania since 1994. Two cases were from Mbeya while one each was from Kigoma, Arusha, Dodoma and Mtwara provinces.

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2. Aetiology of ARI among children

i) Annual isolation of ARI viruses from samples collected from two Urban Health Centres in Lusaka, 1995 to May 1999

Virus Type	1995	1996	1997	1998	1999	Total
No of Samples	2,340	2,415	2,197	2,491	1,525	10,968
FluA	55	19	24	17	0	115
FluB	0	19	20	0	35	74
Parainfluenza	2	0	0	0	0	2
RSV	5	62	2	5	17	91
Adeno	46	22	11	10	0	89
Polio	33	21	5	16	3	78
Non Polio Entero	6	28	17	50	14	115
Measles	9	0	0	0	0	9
Mumps	8	7	0	4	1	20
CMV	0	6	0	0	0	6
HSV	73	93	42	30	42	280
Total	237	277	121	132	112	879

ii) Overall monthly distribution of Influenza and RSV during the period 1995 to May 1999

Virus Type	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
FluA	0	9	0	0	1	16	68	6	2	12	0	0
FluB	8	30	11	0	6	2	12	20	3	1	0	0
RSV	11	6	12	14	12	20	11	6	1	0	0	0
Total	19	45	33	14	19	38	91	32	6	13	0	0

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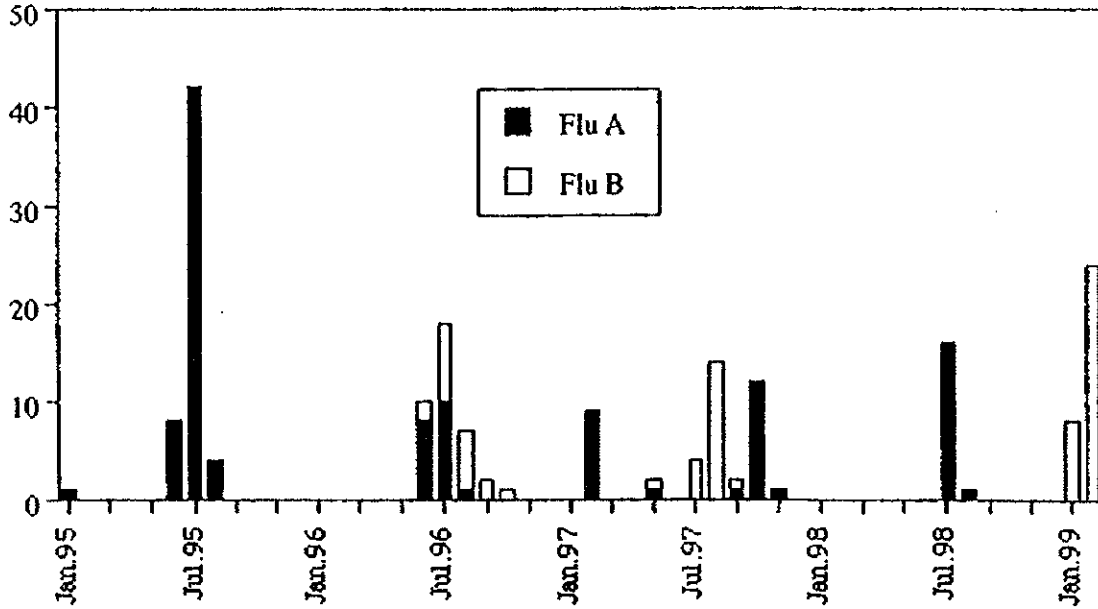
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iii) Monthly distribution of influenza viruses isolated

Monthly Isolation of Influenza Viruses
1995-1999, Lusaka, Zambia



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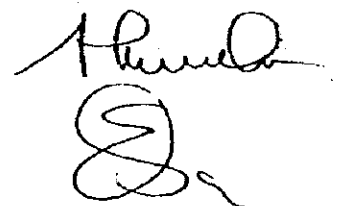
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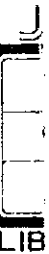
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