

ANNEXTURE I

ROUTINE DIAGNOSTIC TESTS & PRODUCTION ACTIVITIES AT MRI -1991

Section		Work Output
1.	General Bacteriology	Tests Done - Cultures 5272 ABST 3107 Disinfectants 18 Prod. of Antibiotic discs 60000
2.	Entero Bacteriology	Tests done - Stools for Culture ABST 2427 Stools for Cholera 710
3.	Food & Water Bacteriology	Tests Done - Water Samples 403 Food Samples 49
4.	Anaerobic Bacteriology	Tests Done - Sterilizers Listed 16
5.	Leptospirosis	Tests Done 1017
6.	Serology	Tests Done 9803 Antigens Prepared 48570 ME ^{ML}
7.	Mycology	Tests Done 9540
8.	Natural Products	Preparation of parenteral solutions (Saline, Bicarbonate, Citrate, Glucose Distilled Water)
9.	Parasitology	Tests Done - Stools for Microphil exam. 123 Blood for Microfilarie 23 Blood for Malarial parasit 24 Blood for Filarial Antibodies 5944 Blood for Toxoplasma Antibodies 652
10.	Pharmacology	Hormone Assays 498

Section	Work Output
11. Vaccine	Anti-typhoid vaccine 69356ML Anti-cholera vaccine 24464ML Anti-rabies vaccine 234503ML Tests Done - JE, Dengue, 2, 3, Rubella 12770 Carve, Measles, Mumps, Rickettgiace, Mycoplasma, Hepatitis B, Polio, Herpies Simplex.
12. Virology I]	
13. Virology II - Rabies	Tests Done 1144
14. Pathology	Tests Done 12706
15. Bio-Chemistry	Tests Done 25477
16. Medical Entomology	Mosquito Surveillance at Ports & Airports . 25477 Colombo City and other areas.
17. Nutrition	Surveys Technical Committee -Janasaviya impact study - WHO -Janasaviya Nutrition Assessment - UNICEF -National Health Council -Mahaweli H5
18. RIA Diagnosis	Tests Done 831

Department of Virology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
1. Hepatitis B					
No. of samples tested	1390	2586	2885	3686	1248
No. positive for HBsAg	107	221	321	295	107
2. Japanese Encephalitis					
No. of DSF tested	824	850	1059	1251	571
No. positive for JE	114	106	131	164	59
No. of single blood tested	--	1238	982	861	394
No. of showing JE antibody	--	978	334	304	107
No. of paired blood tested	--	113	83	29	29
Evidence of recent infection	--	56	07	04	01
3. Dengue					
a) Dengue haemorrhagic Fever (DHF)					
No. of DHF cases	203	1121	867	557	201
Serilogically positive					
DHF cases	87	345	236	113	33
b) Dengue Fever					
No. of paired sera tested	1439	757	386	205	27
Evidence of recent infection	44	28	47	56	02
No. of single sera tested	--	3440	2448	2410	421
No. of positive for dengue antibody	--	2624	1368	938	117
4. Rubella					
No. of blood tested	263	489	641	812	393
No. of positive for rubella antibody	--	261	297	460	228
Evidence of recent infection					
Congenital infections	03	08	10	19	08
Pregnancy & others	--	05	04	05	04
	--	04	06	14	03
5. Cytomegalovirus					
No. of blood tested	17	395	435	772	*
No. positive for CMV antibody	--	264	234	577	

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
10. ALT (SGPT)					
No. Tested	1012	1222	791	992	364
No. Abnormal	450	315	402	546	192
No. of Tests Done	2419	2420	2772	2912	1024
11. Alk Phosphatase					
No. Tested	187	212	226	508	232
No. Abnormal	78	47	98	147	45
No. of Tests Done	423	316	770	1502	464
12. Acid Phosphatase					
No. Tested	63	81	53	84	46
No. Abnormal	16	3	13	23	17
No. of Tests Done	136	152	314	277	123
13. Tartrate Labile Acid Phosphatase					
No. Tested	63	81	53	84	46
14. Amylase					
No. Tested	34	25	53	73	33
No. Abnormal	3	3	19	26	15
No. of Tests Done	76	48	95	138	59
15. Cholinesterase - Acetyls					
No. Tested	101	336	374	286	118
No. Abnormal	9	69	61	10	13
No. of Tests Done	133	336	374	286	125
16. Pseudo Cholinesterase					
No. Tested	--	--	--	13	01
No. Abnormal	--	--	--	01	01
No. of Tests Done	--	--	--	51	04
17. Creatine Phosphokinase					
No. Tested	166	268	255	262	104
No. Abnormal	65	114	107	107	46
No. of Tests Done	409	400	354	700	259
18. Aldolase					
No. Tested	36	02	35	84	56
No. Abnormal	19	01	24	41	38
No. of Tests Done	72	04	70	220	124

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
19. Caeruloplasmin					
No. Tested	16	50	63	82	40
No. Abnormal	04	13	32	13	05
No. of Tests Done	48	150	189	246	165
20. Glucose-6-Phosphate Dehydrogenase-G6PD					
No. Tested	07	02	26	20	11
No. Abnormal	02	00	07	01	04
No. of Tests Done	10	02	26	63	33
21. Total Protein					
No. Tested	250	570	611	748	253
No. Abnormal	91	51	176	249	122
No. of Tests Done	741	1599	1910	2680	320
22. Albumin					
No. Tested	--	570	564	748	253
23. Slobulion	--	570	564	748	252
24. Electrophoresis					
No. Tested	10	--	98	167	39
No. Abnormal	04	--	89	150	33
No. of Tests Done	50	--	490	835	195
25. S Sodium					
No. Tested	201	247	248	276	140
No. Abnormal	76	62	134	99	49
No. of Tests Done	410	453	450	845	214
26. S Potassium					
No. Tested	201	247	248	276	92
No. Abnormal	76	62	60	92	30
No. of Tests Done	410	453	450	831	166
27. S Calcium					
No. Tested	73	109	155	144	83
No. Abnormal	39	31	95	95	43
No. of Tests Done	330	373	488	902	226
28. S Phospharus					
No. Tested	23	46	42	19	183
No. Abnormal	09	03	03	01	11
No. of Tests Done	86	121	105	92	60

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
29. Iron					
No. Tested	19	64	64	123	28
No. Abnormal	--	--	18	08	09
No. of Tests Done	--	--	169	246	55
30. Iron Binding Capacity					
No. Tested	08	30	37	115	26
No. Abnormal	--	--	17	10	09
No. of Tests Done	--	--	96	215	53
31. S Creatinine					
No. Tested	99	157	194	266	133
No. Abnormal	10	25	52	75	28
No. of Tests Done	274	358	401	606	276
32. S Uric Acid					
No. Tested	66	87	84	107	37
No. Abnormal	20	18	21	28	10
No. of Tests Done	222	249	201	330	102
33. Fibrinogen					
No. Tested	--	--	--	01	07
No. Abnormal	--	--	--	--	01
No. of Tests Done	--	--	--	03	14
34. S Magnesium					
No. Tested	--	--	--	30	10
No. of Tests Done	--	--	--	150	30
35. S Vitamin C					
No. Tested	--	117	12	--	--
No. of Tests Done	--	279	39	--	--
36. Urine Calcium					
No. Tested	--	03	03	07	06
No. of Tests Done	--	06	06	35	24
37. Urine Phosphorus					
No. Tested	--	03	02	05	02
38. Urine Creatinine					
No. Tested	20	23	29	44	17
No. Abnormal	06	10	24	23	11
No. of Tests Done	30	33	89	153	30

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
39. Creatinine Clearance					
No. Tested	--	23	29	35	16
40. Renal Calculus					
No. Tested	05	02	13	14	04
No. of Tests Done	25	10	111	76	24
41. Urine Cystine					
No. Tested	--	--	--	--	01
42. Urine Oxalate					
No. Tested	--	--	--	--	01
43. International External Quality Assessment Scheme - Biochemistry Quality Control Samples	12	10	11	10	04
44. National External Quality Assessment Scheme - Biochemistry Quality Control Samples	192	216	264	253	76
45. Quality Control Samples Prepared at MRI	48	--	--	--	--
46. Standards	4x16	3x18	3x22	3x23	19
Glucose, Urea	2	2	4	5	4
Cholesterol, Electrolytes					
Bilirubin, Protein	128	108	88	115	76

Department of Bacteriology & Mycology
Bacteriology I

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Throat swabs	165	191	304	484	230
2. Blood cultures	58	112	176	242	151
3. Sputum	356	231	380	462	210
4. Cerebrospinal fluid	94	191	240	345	151
5. Urine	1196	1366	3144	4212	2100
6. Pus	500	535	908	1121	480
7. Serous fluids	98	105	120	182	83
8. Disinfectant	12	15	18	22	09
9. Antibiotic disc preparation	83,100	79,000	60,000	--	--
10. WHO quality control specimen	08	08	08	08	02
11. Reference cultures	06	20	--	--	--

Department of Bacteriology & Mycology
Mycology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Scrapings from skin, nails, scalp & hair Mouth & throat swabs Ear swabs					
No. of samples	575	671	818	1001	474
No. of tests	1150	1342	1636	2002	948
2. Sputum					
No. of samples	315	173	205	292	97
No. of tests	1260	692	820	1168	388
3. CSF					
No. of samples	5	1	12	45	34
No. of tests	15	3	36	45	136
4. Serology					
No. of samples	157	124	196	228	71
No. of tests	628	496	784	912	284
5. Biopsy for culture					
No. of samples	31	26	33	26	24
No. of tests	155	130	165	130	120
6. Blood					
No. of samples	2	4	2	4	2
No. of tests	4	8	4	8	4
7. Miscellaneous					
No. of samples	26	24	33	30	18
No. of tests	52	48	66	60	36
8. Biopsy for histopathology					
No. of samples	9	4	12	7	18
No. of tests	36	16	48	28	72
Total					
No. of samples	1120	1027	1211	1633	738
No. of tests	3300	2735	3559	4353	1988

Department of Bacteriology & Mycology
Anaerobic Bacteriology Section

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Anaerobic culture test (all Island)	1980	3950	3100	3100	2960
2. High pressue sterilizer test (all Island)	24	90	42	57	18
3. Rheumatoid factor	--	--	--	--	345

Department of Bacteriology & Mycology
Enteric Bacteriology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Stool cultures	1105	1205	3137	3102	1076
2. Antibiotic sensitivity tests	201	248	640	654	217
3. Clot cultures	1278	1140	830	406	274

Department of Bacteriology & Mycology
Serology Section

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. ASOT	12,000	10,848	10,347	10,404	4432
2. Widal test	9296	9120	6694	9720	3640
3. Paul Bunnel test	924	1191	1287	1584	525
4. Brucella Agglutination test	372	388	484	996	300
5. Rheumatoid factor	1519	3388	5001	1445	(*)
6. Weil Felix	144	240	330	1244	684
7. Antigen Production c.c.	31,500	37,000	43,420	51,950	19,400

(*) Included in statistics of Anaerobic Bacteriology Section

Department of Bacteriology & Mycology
Leptospira Section

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Total No. of tests done	2306	4068	5067	4157	1075

Department of Pathology & Immunology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Histopathology					
No. of slides prepared	1590	2220	2400	3800	1680
Special stains	15	85	115	75	20
Immunohistochemistry	0	0	25	15	0
2. Haematology					
Routine (Hb, PCV, ESR, WBCDC etc.)	2104	1896	2633	2176	1003
Special (BTCT, prothrombin time, LE cells, BM etc.)	185	167	64	348	147
Abnormal Hb	404	217	335	402	197
HbA2	0	0	5	12	10
3. Urine Analysis					
Routine (FR, Bile etc.)	4280	941	1043	1344	608
Special (24hr urinary protein, porphyrin mucopolysacch etc.)	127	25	27	14	11
Urine for HCG	288	438	320	478	143
4. ANA	1425	3215	3415	3640	1447
5. Miscellaneous (Aspirated fluid, occult blood, seminal fluid, CSF protein etc.)	107	70	51	33	18
6. Cytology	--	13	92	68	28
7. National External Quality Assessment scheme					
NEQAS - Haematology					
QC samples	--	50x1	90x2	90x3	90x2
Secondary HICN Standard	--	--	25x1	26x1	26x1
Total	10525	9337	10730	12701	5518

Department of Pathology & Immunology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Simple electrophoresis	--	79	90	121	108
2. Immuo electrophoresis	--	20	32	26	25
3. Immunoglobulin levels					
IgG	--	--	--	15	56
IgA	--	--	--	15	56
IgM	--	--	--	15	56
4. Complement C3	--	--	--	--	29
5. Alpha fetu protein	--	--	--	32	30

Department of Virology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
1. Hepatitis B					
No. of samples tested	1390	2586	2885	3686	
No. positive for HBsAg	107	221	321	295	
2. Japanese Encephalitis					
No. of DSF tested	824	850	1059	1251	
No. positive for JE	114	106	131	164	
No. of single blood tested	--	1238	982	861	
No. of showing JE antibody	--	978	334	304	
No. of paired blood tested	--	113	83	29	
Evidence of recent infection	--	56	07	04	
3. Dengue					
a) Dengue haemorrhagic Fever (DHF)					
No. of DHF cases	203	1121	867	557	
Serologically positive DHF cases	87	345	236	113	
b) Dengue Fever					
No. of paired sera tested	1439	757	386	205	
Evidence of recent infection	44	28	47	56	
No. of single sera tested	--	3440	2448	2410	
No. of positive for dengue antibody	--	2624	1368	938	
4. Rubella					
No. of blood tested	263	489	641	812	
No. of positive for rubella antibody	--	261	297	460	
Evidence of recent infection	03	08	10	19	
Congenital infections	--	05	04	05	
Pregnancy & others	--	04	06	14	
5. Cytomegalovirus					
No. of blood tested	17	395	435	772	
No. positive for CMV antibody	--	264	234	577	

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
6. Measles					
No. of blood tested	39	203	19	67	
No. of positive for measles antibody	--	62	01	57	
No. of CSF tested	--	--	03	24	
No. positive for antibody	--	--	02	08	
7. No. of blood tested	03	33	44	33	
No. positive for antibody	--	00	08	08	
8. Mycoplasma					
No. of blood tested	03	39	08	69	
No. positive for antibody	--	00	00	13	
9. Varicella					
No. of blood tested	--	05	--	25	
No. positive for antibody	--	00	--	07	
10. Rickettsial Infection					
No. of blood tested	--	27	75	124	
Evidence of Rickettsial infection	--	03	06	10	
11. Hantavirus Infection					
No. of blood tested	--	131	148	145	
Evidence of hantavirus infection	--	08	02	01	
12. (a) Herpes Simplex Virus-Isolation					
No. of ulcer swabs tested	158	--	410	758	
No. positive for HSV	27	--	50	259	
(b) Herpes Simplex Virus-Serology					
No. of tested	17	391	--	--	
No. positive for antibodies	--	04	--	--	
13. Enteroviruses					
(a) No. of stools from Acute Flaccid paralysis cases	75	273	241	110	
No. positive for poliovirus	--	06#	00	02*	

(P1 wild)

* (P1 - 1 wild

- vaccine like)

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
No. of positive for non-polio	--	--	--	03	
No. negative for enteroviruses	--	--	--	105	
(b) No. of contacts tested	--	--	--	368	
No. positive for poliovirus	--	--	--	08A	
A (P1 - 7 all vaccine like P2 - vaccine like)					
No. positive for non-polio	--	--	--	11	
No. negative for Enteroviruses	--	--	--	349	
14. Chlamydia - Isolation					
No. of samples tested	27	19	--	--	
No. positive for chlamydia	00	00	--	--	

Department of Natural Products & Pharmacology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Vanil mandelic acid					
Total	29	336	300	400	165
Positive	02	15	31	11	02
2. 17 - Ketosteroid					
Total	71	51	62	70	23
Positive	05	13	17	08	08
3. 17 - Ketogenic Steroid					
Total	13	16	15	24	13
Positive	04	05	05	02	03
4. 5(OH) Indole Acetic Acid					
Total	05	14	16	25	08
Positive	00	00	01	00	00

Department of Entomology & Parasitology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
1. Microscopic examination for parasites Direct smear & concentration	132	154	123	216	60
2. Childhood diarrhoea project	--	--	--	--	250
3. Culture for amoebae	08	10	07	10	03
4. Blood for malarial parasites (MP)	46	29	24	54	20
5. Blood for microfilaria (MF)	52	112	42	30	12
6. Filarial fluorescent antibody test	943	2470	5954	7727	3069
7. Toxoplasma fluorescent antibody test	578	2002	652	1102	411
8. Vaginal smears for trichomonas	03	05	04	02	--
9. Examination of pus for amoebae	02	01	03	--	01
10. Identification of snakes	02	--	02	--	01
11. Identification of worms	02	--	02	01	01
12. Nutrition project Janasaviya recipients					
Blood for MP	--	--	--	190	--
Blood for FAT	--	--	--	190	--
Blood for toxoplasma	--	--	--	81	--
13. Project of Janasaviya recipients					
Stools for AOC	--	--	--	92	--

Department of Entomology & Parasitology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
<u>JE Survey</u> - District survey					
1. Polonnaruwa					
No. of adults	1067	7675	4763	4507	684
No. of larvae	--	548	962	808	162
2. Anuradhapura					
No. of adults	16,737	37,082	42,621	27,630	32,271
No. of larvae	--	1980	3209	2407	630
3. Kurunegala					
No. of adults	1755	2236	8537	4963	762
No. of larvae	--	476	683	651	118
4. Puttalam					
No. of adults	6454	6417	18,332	7961	1952
No. of larvae	--	571	1525	1428	267
5. Gampaha					
No. of adults	2135	6985	4674	3688	1040
No. of larvae	--	308	631	541	80
6. Kalutara					
No. of adults	3148	3440	15,764	6445	4213
No. of larvae	--	585	738	541	276

Department of Entomology & Parasitology

STATISTICS

<u>Tests</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
<u>DHF Survey</u> - No. of Larvae					
1. Colombo International Airport	470	656	1095	1019	170
2. Ratmalana Airport	295	673	916	833	112
3. Colombo Sea Port	1223	1121	1164	1121	107
4. City of Colombo	10,797	4390	5172	3171	179
5. Sri Jayawardenapura Kotte	3950	3654	5172	2691	355
6. Colombo Suburban Areas	---	11,563	14,749	11,171	1036

Department of Biological Production (Production Unit)

STATISTICS

<u>Tests</u>	<u>1991</u>	<u>1992</u>	<u>1993</u> (May)
<u>Vaccines</u> (Issues) (in mili litres)			
1. Goat Brain Rabies Vaccine	758,644	559,824	161,120
2. Cholera	30,800	35,012	13,798
3. TAB	69,335	53,351	39,972
<u>Parmaceuticals</u> (in litres)			
1. ARV buffer	620	730	250
2. Tuberculin buffer	9.5	10	3
3. Phosphate buffer (for Rabies Section)	25	23	13
4. Normal Saline for TAB Cholera	70	150	100
5. Normal Saline for lab use	400	35	50
6. Normal Saline - ampoules	46	9	4
7. 3.8% Na Citrate ampoules	36	16	7
8. Double distilled water ampoules	24	9	5
9. Double distilled lab use	220	80	20

ANIMAL ISSUES - 1991

	Weaned & Adults	Sucklings
<u>MICE - ICR</u>		
Dept. of Virology	1 734	2 445
Dept. of Biological Productions	1 897	77
Dept. of Entomology & Parasitology	80	---
Dept. of Pathology & Immunology	02	---
Electron Microscopy	05	---
Rabies Section	12	---
Animal Centre	121	---
National Drug Quality Control Ass. Lab	110	---
Medical Faculty	10	---
Open University	05	---
VRI	162	---
Others	26	---
Total	4 146	2 522
 <u>MICE - BALB/cA</u>		
Dept. of Virology	07	48
Dept. of Pathology & Immunology	30	---
Electron Microscopy	01	---
Animal Centre	41	---
Total	79	48
 <u>MICE - C3H/HeN</u>		
Animal Centre	67	---
Total	67	---
 <u>MICE - C57BL/6N</u>		
Medical Faculty	12	---
Animal Centre	09	---
Total	21	---
 <u>RATS - WISTAR</u>		
Dept. of Entomology & Parasitology	06	---
Electron Microscopy	02	---
Universities, Schools & Others (Sold)	117	---
Animal Centre	08	---
Total	133	---
 <u>HAMSTERS - SYRIAN (Albino & Golden)</u>		
Dept. of Bacteriology & Mycology (Leptospira)	08	---
Electron Microscopy	01	---
Others (sold)	25	---
Animal Centre	04	---
Total	38	---
 <u>GUINAE PIGS - HARTLEY</u>		
Dept. of Biological Productions	51	---
Dept. of Bacteriology & Mycology	04	---
Dept. of Entomology & Parasitology	01	---
Total	56	---

RABBITS - N2W

Dept. of Natural Products & Pharmacology	12
Dept. of Pathology & Immunology	06
Dept. of Biological Productions	03
Dept. of Entomology & Parasitology	01
Blood Bank (Maintained at the MRI)	10
National Drug Quality Control Ass. Lab	05
Total	37

Goats

ARV Production	No.
	940

ANIMAL ISSUES - 1992

	Weaned & Adults	Sucklings
<u>MICE - ICR</u>		
Dept. of Virology	284	5 078
Dept. of Biological Production	2 053	---
Dept. of Entomology & Parasitology	71	---
Dept. of Pathology & Immunology	01	---
Animal Centre	35	---
National Drug Quality Control Ass. Lab	40	---
Universities	120	---
Others	07	---
Total	5 141	5 078
<u>MICE - BALB/cA</u>		
Dept. of Virology	01	04
Dept. of Biological Production	22	---
Dept. of Entomology & Parasitology	40	---
Animal Centre	39	---
Medical Faculty - Peradeniya	10	---
Dept. of Pathology & Immunology	01	---
Total	113	04
<u>MICE - C3H</u>		
Dept. of Pathology & Immunology	02	---
Animal Centre	26	---
Medical Faculty - Peradeniya	30	---
Total	58	---
<u>MICE - C57BL</u>		
Dept. of Pathology & Immunology	01	---
Animal Centre	31	---
Medical Faculty - Peradeniya	10	---
Total	42	---
<u>RATS - WISTAR</u>		
Dept. of Entomology & Parasitology	12	---
Dept. of Pathology & Immunology	02	---
Electron Microscope	01	---
Animal Centre	02	---
University of Kelaniya	09	---
Others	126	---
Total	152	---
<u>HAMSTERS - SYRIAN</u>		
Dept. of Bacteriology & Mycology	02	---
Animal Centre	05	---
University of Peradeniya	12	---
National Zoological Gardens	20	---
Others	56	---
Total	95	---

Department of Virology

CADRE PARTICULARS

<u>Designation</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Medical Officer	4	5	7	8	8
Research Officer	-	-	2	2	2
Medical Laboratory Technologist	10	10	11	11	11
Lab Orderly Grade I	6	6	6	6	6
Lab Orderly Grade II	-	-	-	-	3
Casual Labourer	3	3	3	3	-
Total Staff	23	24	29	30	30

GUINAE PIGS - HARTLEY

Dept. of Biological Production	58	---
Dept. of Entomology & Parasitology	01	---
Dept. of Virology	57	---
City Microbiology Lab	02	---
VRI	10	---
Others	04	---
Total	132	---

RABBITS - N2W

Dept. of Biological Production	03	---
Dept. of Natural Products & Pharmacology	01	---
Dept. of Pathology & Immunology	02	---
Dept. of Bacteriology & Mycology	16	---
Dept. of Entomology & Parasitology	01	---
Blood Bank	12	---
NDQA Lab	24	---
IFS	03	---
Others	08	---
Total	78	---

ANIMAL ISSUES - 1993 (Jan - May)

	Weaned and Adults
<u>MICE - ICR</u>	
Dept. of Biological Production	900
Dept. of Virology	747
Dept. of Entomology & Parasitology	05
Dept. of Pathology & Immunology	02
Universities	234
Total	1 888
<u>MICE - BALB/cA</u>	
Other	06
Total	06
<u>MICE - C3H</u>	
Dept. of Biological Production	10
Medical Faculty - Ruhuna	50
Other	02
Total	62
<u>MICE - C57BL</u>	
Animal Centre	03
J'pura University	10
Other	02
Total	15
<u>RATS - WISTAR</u>	
Universities	135
Other	15
Total	150
<u>Hamsters - Syriyan (Golden & Albino)</u>	
Dept. of Virology	36
Dept. of Bacteriology & Mycology	06
Others	28
Total	70
<u>Guinae Pigs - Hartley</u>	
Dept. of Biological Production	24
Dept. of Virology	25
Others	05
Total	54
<u>Rabbits N2W</u>	
Dept. of Biological Production	15
Dept. of Natural Products & Pharmacology	01
Blood Bank	10
Total	26

PELLETED FEED PRODUCTION

1991

MONTH	RAT & MICE Kg.	RABBIT & GP Kg.	POULTRY Kg.	TOTAL Kg.
April	143.65	-	-	143.65
May	146.90	9.00	-	155.90
June	203.20	-	4.1	207.30
July	190.85	9.00	-	199.85
August	269.70	95.80	-	365.50
September	226.20	177.50	-	403.70
October	288.00	128.00	-	416.00
November	404.55	194.20	-	598.75
December	295.00	172.45	-	467.45
Total	2 168.05	785.95	4.1	2 958.10

1992

January	411.00	293.15	-	704.15
February	318.70	203.75	-	522.45
March	345.00	267.50	-	612.50
April	188.15	262.95	-	451.10
May	255.50	399.45	-	654.95
June	364.40	284.95	-	649.35
July	304.60	472.80	-	777.40
August	476.50	438.75	-	915.25
September	441.50	454.75	-	896.25
October	506.20	491.00	-	997.20
November	429.00	437.00	-	866.00
December	382.00	413.00	-	795.00
Total	4 422.55	4 419.05	-	8 841.60

1993

January	363.00	303.00	-	666.00
February	342.00	438.50	-	780.50
March	431.75	220.50	-	652.25
Total	1 136.75	962	-	2 098.75

Department of Bacteriology & Mycology
Bacteriology I

CADRE PARTICULARS

<u>Designation</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Medical Microbiologist	3	1	1	1	1
Medical Officer	-	1	1	1	1
Research Officer	1	-	-	-	-
Medical Laboratory Technologist	4	4	4	3	3
Lab Orderly	3	3	2	1	1
Labourer	-	-	-	1	1
Total - Staff	11	9	8	7	7

Department of Bacteriology & Mycology

CADRE PARTICULARS

<u>Designation</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Medical Microbiologist	3	3	3	3	3
Medical Officer	8	6	7	9	8
Research Officer	1	1	1	1	1
Medical Laboratory Technologist	17	20	18	18	18
Lab Orderly	14	15	13	10	9
Labourer	2	1	3	6	7
Total - Staff	45	46	45	47	46

Department of Biochemistry & Nutrition

CADRE PARTICULARS

<u>Designation</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Research Officer	3	3	2	2	2
Medical Officer	3	3	3	3	3
Medical Laboratory Technologist	9	10	10	10	10
Public Health Inspector	5	5	5	4	4
Nutrition Assistant	1	1	1	1	1
Lab Orderly Grade II	4	3	2	2	2
Orderly	1	1	1	1	1
Ordinary Labourer	-	-	1	2	3
Casual Labourer	1	2	1	1	-
Total - Staff	27	28	26	26	26

Department of Pathology & Immunology

CADRE PARTICULARS

<u>Designation</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Medical Officer	3	4	5	4	4
Medical Laboratory Technologist	3	5	7	4	4
Lab Orderly Grade I	2	2	1	1	2
Lab Orderly Grade II	-	-	1	2	2
Lab Orderly	1	1	1	1	1
Total - Staff	9	12	15	12	13

Department of Natural Products & Pharmacology

CADRE PARTICULARS

<u>Designation</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Research Officer	2	2	3	3	2
Medical Officer	2	2	2	2	2
Medical Laboratory Technologist	4	4	4	4	4
Lab. Orderly	5	5	3	4	6
Total - Staff	13	13	12	13	14

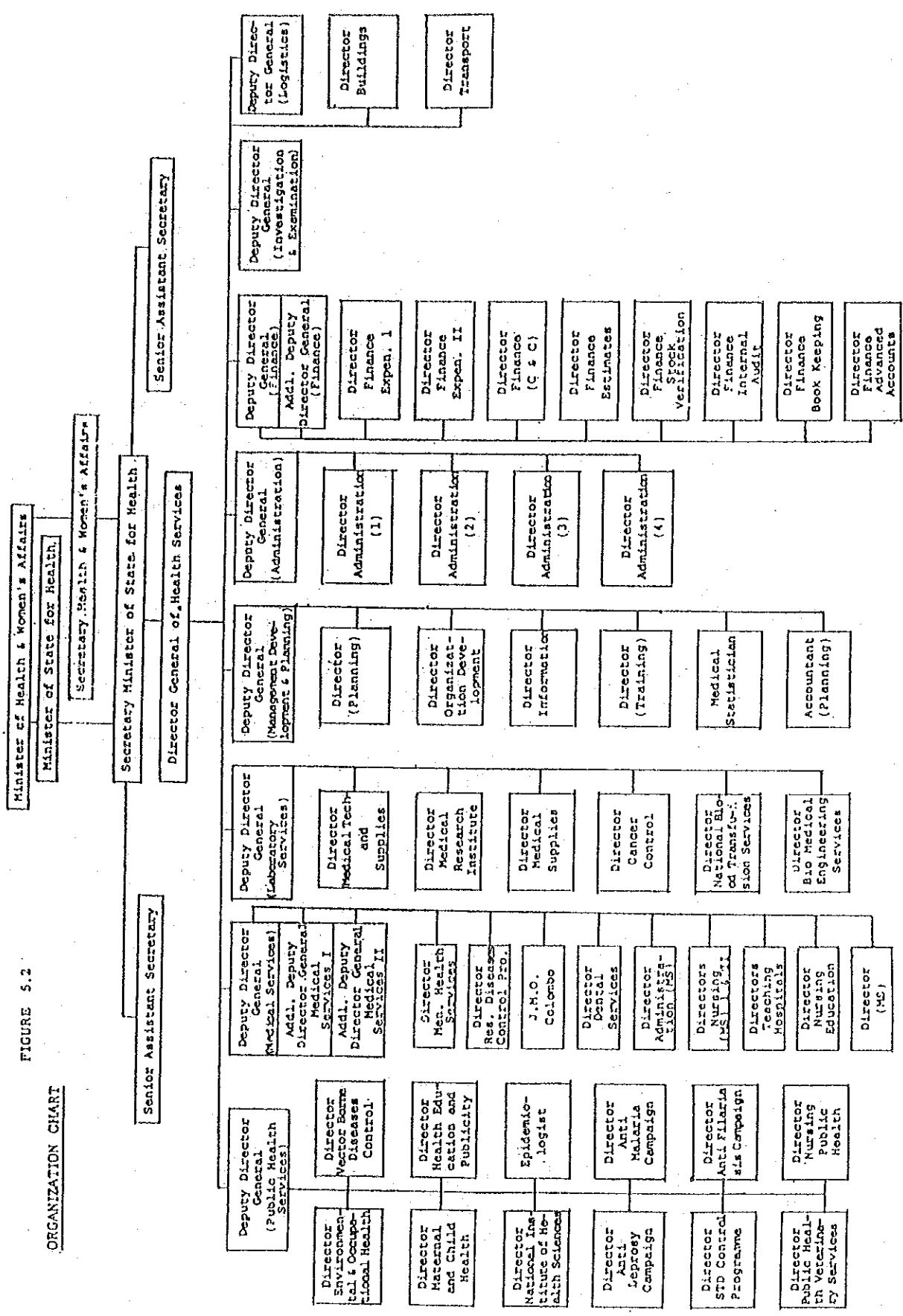


FIGURE 5.2

ORGANIZATION CHART

Material 1

Academic Achievements

- | | |
|------------------------|------------------------|
| 1. Dr Sathasivam | Production Unit |
| 2. Dr Wickremasinghe | Clinical Bacteriology |
| 3. Dr Ratnayake | Anaerobic Bacteriology |
| 4. Dr Herath | Natural Products |
| 5. Dr Munasinghe | Pharmacology |
| 6. Dr N Withana | Virology |
| 7. Dr Tissera | Pathology |
| 8. Mrs Uluwita | Radioimmuno Diagnosis |
| 9. Dr Premachandra | Biochemistry |
| 10. Dr G Gunawardena | Nutrition |
| 11. Dr Balakumar | Electron Microscopy |
| 12. Dr S Gunawardena | Immunology |
| 13. Dr Attapattu | Mycology |
| 14. Dr. S. Jayasekera | Animal Center |
| 15. Mr. M. Dassanayake | MKT School |

Production Unit

Academic achievements/MRI 1989-1992

Publications in International Journals

1. Intradermal antirabies vaccine evaluation as a cheaper alternative for developing countries
by Dr. A. Sathasivam and Prof. D. Ramdas in British Journal of Paediatrics.

Publications in Sri Lankan Journals

1. Rabies what you should know by Dr. A. Sathasivam
In Year Book of the Ladies Kennel Association of Sri Lanka (1989)
2. Ascending paralysis in Rabies, Ceylon Med. J. (1989), 34(1), 37-38.
3. Preliminary Studies on Sri Lankan Poisonous Snake Venom.
Dr. A. Sathasivam and K.A.D.N. Perera, Proceedings of the Annual Academic Sessions of Sri Lanka College of Microbiologists (1992).

Oral Presentations in academic meetings in Sri Lanka

1. Rabies situation in Sri Lanka - Clinical Lecture/demonstration,
General Hospital Colombo.
2. Rabies - a review - monthly lecture for the Sri Lanka Medical Association.

Presidential roles in academic meetings in Sri Lanka

President of the Sri Lanka College of Microbiologists 1992/1993.
Member of the Board of Study in Microbiology of the Post Graduate Institute of Medicine.

Overview table by itemized expenditures

JICA grant for preparation of tissue culture rabies vaccine.

Dept. of Bacteriology

Publications in Sri Lanka Journals 1989-1992

Loa loa in a Sri Lankan expatriate from Nigeria.

Wickremesinghe, R.S.B., Goonesinghe, S.K., and Samarasinghe S (1989)

Ceylon Medical Journal 1989 34, 31-34.

Oral Presentations in Academic meetings in Sri Lanka

Bacterial Diseases prevalent at Mullurajawela.

Wickremesinghe R.S.B. (1991)

Sri Lanka College of Microbiologists - Annual sessions.

Microbiology of Acute respiratory tract infections (ARI) in children under 5 years. A preliminary study.

Perera, M.S.A., Somaratne S, Wickremesinghe, R.S.B. and Perera B.J.C. (1992)

Sri Lanka College of Microbiologists - Annual sessions.

In preparation:

Cryptosporidiosis - Incidence in a 1000 cases of diarrhoeae.

Wickremesinghe R.S.B. and Samarasinghe S,

Anaerobic Bacteriology Department

JICA/M.R.I. project 1989- 1993

Anaerobic Bacteriology Sections

4. Secretary and later Honorary Treasurer of the Sri Lanka College of Microbiologists
2. Now Council Member of the above college.

5. Member of the Expert Committee on Standardization of Milk, Milk products beverages, (Bacteriological aspects) in the Sri Lanka Standards Institute
4. Life member of the Sri Lanka Medical Association and Sri Lanka College of Microbiologists.
5. Consultant in Anaerobic Bacteriology and Serology in charge of Anaerobic bacteriology section and Serology section of the Medical Research Institute.

Dept. of Natural Products

Some C. recocularines from Ceratocephnos palaestinus

W.H.M.W. Herath, M.H. Abu Zarga, S.S.Sabni, H. Gulnaudean and M. Shamma,
J. Nat. Prod. , 1990, 53, 1006.

Demethyl acrovestone from Achromychna pedunculato fruits.

L.B. de Silva, W.H.M.W. Herath, V.U. Ahmad and U. Sultana,
Phytochemistry, 1991, 30, 1709.

Preparation of 4H - Pyrazolo (1,5-a) Indole

H. Katayama, M. Sakunada, W.H.M.W. Herath, N. Takastu and J.K. Shan,
Chem. Pharm. Bull. 1992, 40, 2267.

Antifungal compounds from Immature Avocado fruit peel.

N.K.B. Adikaram, D.F. Ewing, A.M. Karunaratne and E.M.K. Wijeratne
Phytochemistry,
1992, 31, 93.

Chemical constituents of three Rubaceae species of Sri Lanka.

E.M.K. Wijeratne, B.M.R. Bandara, A.A.L. Gunatillake, Y. Tezuka and T.Kikachi,
J. Nat. Prod., 1992, 55, 1261.

High Performance Liquid Chromatography.

W.H.M.W. Herath - Bulletin of the Medical Research Institute 1991

Volume 5 - 52

Oral Presentations in Academic meetings in Sri Lanka.

Coumarins from *Pamburus misslons*,

V. Kumar, N.H.K. Bulumulla, S. Wijesinghe, L.B. de Silva and S.

Balasubramaniam,

Proc. SLAAS, 1989, 45, 104.

Invitation Lecture. "Editorial Plant Research and Its future developments"

L.B. de Silva,

19th Sessions Instl. of Chemistry, Sri Lanka.

Demethyl acrovestone from *Acronychia pedunculata*

(S. AnkNS), L.B. de Silva, W.H.M.W. Herath, C. Liyanage,

V.KumE. V.U.Ahmad and A. Sultana,

Proc. SLAAS, 1990.

A. Novel rearranged carbohydrate dimer from the fungus *Stachybotrys bisbi*

(Siriniwasan) Barron.

L.B. de Silva, W.H.M.W. Herath, D.S.S. Gunawardena, R.C. Wijesundera, S.A. Eedis,

M.I. Choudhary and J. Clardy.

Proc. SLAAS, 1990.

Antibiotics from Microorganisms.

L.B. de Silva, C.S. Liyanage, D.S.S. Gunawardena E.M.K. Wijeratne,

W.H.M.W. Herath, E.D. de Silva and R.C. Wijesundera,

Proc. SLAAS 1992.

Alkaloids of *Cananga odorata*

L.B. de Silva, C.S. Liyanage, E.M.K. Wijeratne, W.H.M.W. Herath, V. Kumar and

M.I. Chaudhary,

Proc. SLAAS 1992.

Bio-active Acetogenins from *Annona reticulata* (Annonaceae)

E.M.K. Wijeratne, L.B. de Silva, W.H.M.W. Herath, I.S. Weerasinghe, Y. Tezuka and

T. Kikanchi

Proc. SLAAS. 1992.

Chemical constituents of *Cyathocalyx zeylanica*

L.B. de Silva, W.H.M.W. Herath, Y. Tezuka and T. Kikanchi

Proc. SLAAS 1992.

Annexure 1.

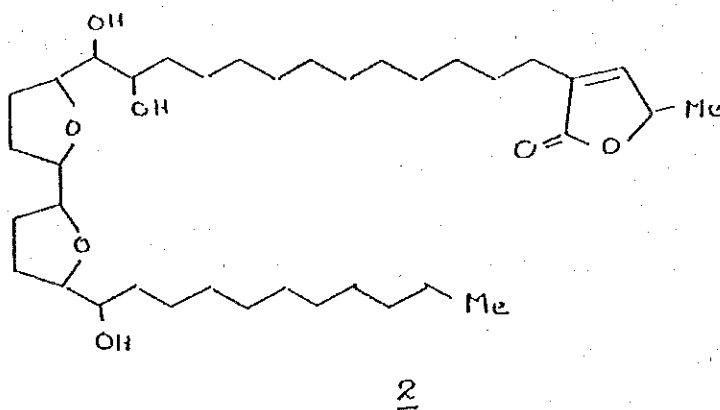
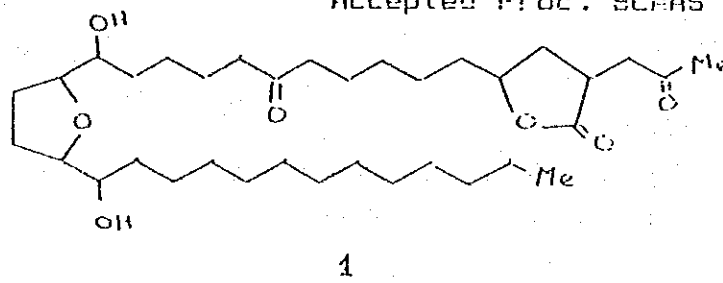
Description of the work done

The following papers are being read at the SLAAS Session 1992

1. Bioactive Acetogenins from Annona reticulata (Annonaceae)
E.M.K. Wijeratne, L.B. de Silva, W.H.M.W. Herath, I.E.
Weerasighe, T. Kikuchi and Y. Tezuka.

Bioassay monitored chromatographic separation of the chloroform soluble fraction from a MeOH extract of the bark of Annona reticulata (Meli-atha) has yielded two Cytotoxic acetogenins. Isoannonacin-10-one(1), mp 103-4° and 14-hydroxy-25-deoxyrollinin(2), mp 69-70°. Both acetogenins are biodegradable larvicides having 100% fatality rates on Aedes aegypti at concentrations of 2-4 µg/cc. The structures were determined on the basis of spectroscopic data.

Accepted Proc. SLAAS Sec. E, 1992.

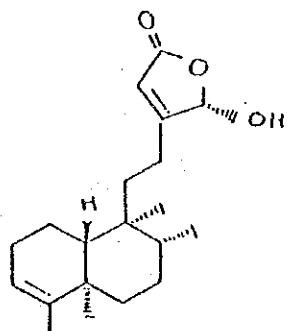


2. Chemical Constituents from CYATHOCALYS ZEYLANICA (Annonaceae)
E.M.K. Wijeratne, L.B. de Silva, W.H.M.W. Herath, T. Kikuchi
and Y. Tezuka.

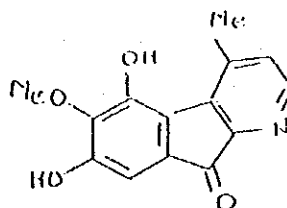
The leaves and stem bark of Cyathocalys zeylanica showed anti-feedant properties on pests. However the methanol extract from the stem bark of Cyathocalys zeylanica did not show anti-tumour activity on the Brine Shrimp Screen. The CH_2Cl_2 soluble fraction from the MeOH extract on Si gel chromatography gave 16-hydroxy cleroda-3,13(14)Z dien-15,16-olide (3).

A more polar fraction of the column gave red needles mp 222-24°, the structure of which was elucidated as 5,7-dihydroxy-6-methoxy-4-methyl-1-azafluorenone (4) from spectral data. In addition sitosterol glucoside mp 272-74° was isolated.

Accepted Proc. SLAAS Sec. E, 1992.



3



4

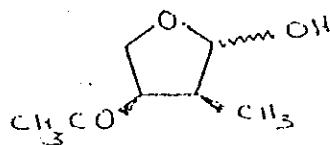
3. Antibiotics from microorganisms

L.D. de Silva, C.S. Liyanage, D.S.S. Gunawardana, E.H.K. Wijeratne, W.H.H.W. Herath, E.D. de Silva and R.C. Wijesundara.

In our search for new anti-biotics we have investigated a number of organisms, isolated from soil samples. Corynospora sp., Poria sp. and Botrydiplodia sp. are three fungi which showed anti-bacterial activity against Staphylococcus aureus, Klebsiella aerogenes, Streptococcus viridans and Pseudomonas aeruginosa. The chemical examination of Botrydiplodia species gave Botryodiplodin (5) which showed strong anti-bacterial activity against Streptococcus viridans.

The compound C, isolated from the mycelium of Corynospora sp. showed strong activity against methicillin resistant Staphylococcus aureus

Accepted Proc. SLANS Soc. E, 1982.



5

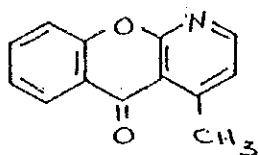
The colorless compound isolated from Streptomyces species (soil sample from MRI premises) showed strong activity against the fungi Aspergillus niger and Aspergillus flavus. The compound has been sent to the University of British Columbia for high resolution spectra.

4. Alkaloids of Cananga odorata

L.B. de Silva, C.S. Liyanage, E.M.K. Wijeratne, W.H.H.W. Herath, V. Kumar and M.I. Choudhary.

Cananga odorata (from Annonaceae) yielded the alkaloids onychin, eupolauridine, cleistopholine, oxopukateine, liriodenine and a new alkaloid 6.

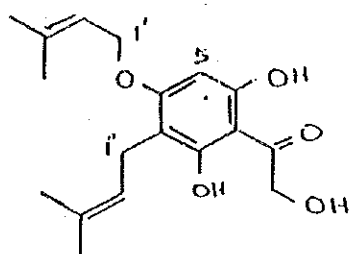
Accepted Proc. SLAAS Sec. E, 1992.



6

5. The fruit of the medicinal plant, Evodia lunu-ankenda yielded a new acetophenone, 4-(3'-methyl-2'-butenyloxy)-3(3"-methyl-2"-butenyl)- β ,2,6-trihydroxy acetophenone (7).

The structure was elucidated by means of variety of two-dimensional NMR techniques. The paper entitled, "A new Acetophenone from Fruits of Evodia lunu-ankenda" is being prepared for publication.



7

Annexure 2

Plan of work for the next half year

1. Bioassay directed fractionation of LGTDD a Chinese drug¹ has lead to the isolation of Salaspermic acid, an inhibitor of HIV reverse transcriptase and HIV replication in H 9 lymphocyte cells. Salaspermic acid has been isolated by Viswanathan from Salacia macroperma². Attempts are being made to isolate either salaspermic acid or an analogue from the local plant Salacia reticulata (Kotalahimbutu). So far several crystalline steroidal compounds and colored compounds have been isolated. Their spectra are being done by Prof. Katayama from Niigata University.
2. Our investigations on the Mangrove plants of Sri Lanka have revealed that two species exhibit strong antibacterial activity. The chemical investigations on these two plants will commence shortly.
3. The chemical investigations on the antibiotics produced by the microorganisms isolated from soil samples collected in Kurunegala have already commenced.
4. Synthesis of bioactive compounds
 - a) The synthesis of 3-deoxy-D-manno-2-octuloseic acid derivatives having antibiotic activity (speciall; against gram-negative bacteria) with mannose as the starting compound will be initiated shortly.
 - b) The synthesis of a new type of heteroaromatic compounds, the 4H-fyrazole [1,5-a] indole derivatives which may have anti-cancer activity has been initiated. The procedure for the basic skeleton is established by us.

References.

1. Ke Chen et al., J. Nat. Prod., **55**, 340 (1992).
2. N. L. Viswanathan, J. C. S. Perkin I, 349 (1979).

6. Two cytotoxic acetogenins have been isolated from Annona muricata seed. One is crystalline mp 88-89 and the other amorphous mp 85. Both are toxic to Brine Shrimp and mosquito larvae. Both compounds were tested by Dr. L.P. Molleyree from Ciba Geigy, Basle against agricultural pests on their screen and were found to be ineffective. However he confirmed the larvaecidal activity against Aedes aegypti and Culex in 1-2 $\mu\text{g}/\text{cc}$.

The ms indicated M^+ at 597 and the NMR which is under study shows that it is an acetogenin, but belonging to a different structural type from the three already known.

From the bark of Enicosanthum acuminata (Annonaceae), an antifeedent 16-hydroxy cleroda-3,13(14)Z dien-15,16-olide (3) was isolated and its structure was determined by spectroscopic methods.

Material 9: Academic achievements/ MRI 1989-1992


Progress reports for research grants from Sri Lankan Organizations.

Department of Pharmacology

The department is presently engaged in the conduct of a controlled clinical trial to evaluate the efficacy of 2 drug regimens in the control of maturity onset diabetes mellitus. This project is being funded by a grant from the M.R.I. research fund.

Progress of study:

The study has been designed and the study protocol identified. In the present stage patients are being allotted into each treatment group. This data collecting stage of the study is expected to continue for a further 6 months.


Dr. T.M.J. Munasinghe.
Dept Of Pharmacology.

Block, J., Samuel, S., Gibbs, A J and Vitarana, U T. Variation of the nucleotide and encoded amino acid sequences of the envelope gene from eight Dengue-2 viruses. Archives of Virology. (1989) 105, 39-53

Vitarana T. viral Hepatitis in Sri Lanka. Sir Marcus Fernando Oration. Ceylon Medical Journal (1989) 34, 163-177

Vitarana Tissa. Dengue Haemorrhagic Fever. Ceylon Medical Journal (1990) 35, 83-87

Block, J., A.J., McWilliam, S.M., and Vitarana, U.T. NS1 Gene sequences from eight Dengue - 2 viruses and their evolutionary relationship with other Dengue-2 viruses. Archives of virology (accepted for publication)

(Also had one publication each in WHO Dengue Newsletter, CDC Arbovirus Information Exchange, Bionews and MRI Journal; 9 papers in proceedings of WHO meetings)

Elevated Tumour Necrosis Factor in Dengue Fever and Dengue Haemorrhagic Fever

Vitarana, T., de Silva, H., Withana, N., Gunasekera, C., (1991) the Ceylon Medical Journal
36, 63-65

Vitarana, T., Lee Ho Wang, et al. The Detection of Haemorrhagic Fever with Renal Syndrome in Sri Lanka. Abstracts of Pacific Science Congress, Seoul, Korea (1987)

Vitarana, U T., Bandaranayake, V., Colombage, G., Peiris, L., Geekiyanage, J R., Gunasekera, H D N., Jayasekera, N. An increase of Dengue Haemorrhagic Fever in Colombo in the First quarter of 1989 and its possible significance Proc. Sri Lanka Ass. Adv.Sci (1989) 45, 18-19

Vitarana, U T., Colombage, G., Bandaranayake, V., Gunasekera H B
Hettiarachchi, L., Peiris, L Antibody responses following the use
of Japanese Encephalitis Vaccine manufactured in Korea and Japan
in a sample of Sri Lanka children.
Proc. Sri Lanka Ass. Adv. Sci (1989), 45, 20

Vitarana, U T and Jayasekera, N. Outbreak of Dengue Haemorrhagic
Fever in Sri Lanka. Proceedings of International Symposium on
Dengue and Dengue Haemorrhagic Fever, Bangkok, Thailand (1990), 37

Poliomyelitis in Sri Lanka

Withana, n. Bulletin of the Medical research Institute;
1987 vol 13 61-67

Elevated Tumour Necrosis Factor in Dengue Fever and Dengue
Haemorrhagic Fever

Vitarana, T; de Silva, H; Withana, N; Gunasekera, C; (9119) The
Ceylon Medical Journal
36, 63-65

Laboratory Investigations of Two Epidemic of Acute Haemorrhagic
Conjunctivitis

Withana, N; Hettiarachchi, U C; paper presented at the
centenary session of the Sri Lanka Medical Association (SLMA)
1987

Assessment of Polio Antibody pattern in New Born Babies
Withana, N; Kuganesan, K; Hettiarachchi, U C;
paper presented at the centenary session of the SLMA - 1987

Enterovirus Isolations From Faecal Samples - a 25 year study
Withana, N; Kuganesan, K
paper presented at the centenary session of the SLMA - 1987

Neonatal Conjunctivitis - Aetiology and Treatment Parera, J;
Withana, N; Seneviratne, M
Paper presented at the centenary session of the SLMA - 1987

Dengue Haemorrhagic Fever continuing problem in Sri Lanka
Vitarana, T, Jayasekera, N, Withana, N
Paper presented at the Second Asia Pacific Congress of Medical
virology, held in Thailand.

DEPARTMENT OF VIROLOGY

- Vitarana, T., Velauthapillai, K - Infectious Diarrhoea, a major problem among Sri Lankan children. Infectious Diarrhoea in the young (S.Tzipori ed) (1985) Excerpta Medica, New York, 92-94
- Vitarana, U.T - Sri Lanka; Epidemiology and prevention of Rabies, Poliomyelitis, Measles and Rubella, Virus Vaccines in Asian Countries (K Fuka ed.) (1985) Tokyo University Press, Tokyo, 43-49
- Vitarana, T., Kanapathipillai, M., Gunasekera, H D N. viral Hepatitis B in Sri Lanka. Asian Symposium on Strategies for large scale Hepatitis B Immunization (Nora el Goulli ed.) (1986) Science Press, Hong Kong, 27-31
- De Silva, H., Perera, D J B., Vitarana, T. Kawasaki Diseases in Sri Lanka; First Report. Ceylon Medical Journal (1986) 1, 37-41
- Vitarana, T., Jayasekera, N., Herath, P etal.
Japanese Encephalitis outbreak in Sri Lanka;
Association with new irrigation schemes. Virus Diseases in Asia (Thongcharoen and Kurstak ed.) (1988) Mahidol University, Bangkok, 193-196
- Vitharana Tissa., Herath Pushpa., Kalpage Kingsley., Jayasekera Nalini., Wickramasinghe Mervyn and Gunatillake, Varuni. Study of Mosquito-Borne Diseases in some new irrigation schemes in Sri Lanka, with particular reference to Filariasis and Arboviral Diseases. Proceedings of the workshop on Irrigation and Vector-Borne Disease Transmission (1986) International Irrigation Management Institute, Digana, 9-13
- Vitarana, T - Japanese Encephalitis; a growing problem in Sri Lanka. Journal of General Medical Practitioners (1988) 1, 23-31
- Vitarana, T., Lee, H W., Colombage, G., Bandaranayake, V. Human Hantavirus Disease in Sri Lanka, Lancet (1988) ii, 1263
- Vitarana, T, Directed revision of W.H.O. Manual on Japanese Encephalitis (1988) WHO, New Delhi

3. GRANTS FROM FOREIGN ORGANIZATIONS

- a. Dengue and Dengue Haemorrhagic fever (DHF) in Sri Lanka - Extent and control (Health education) - Japanese embassy project - commenced in July 1992.
A 30 minute broadcasting quality educational television programme on DHF was made. This was telecast over the Sri Lanka Rupavahini Corporation, and the response from the public has been very good. This will be made use of in the health education programmes.
- b. Emergence of DHF in Sri Lanka - WHO project - commenced in Nov. 1992
A School cohort study was carried out in 1992. Dengue virus isolation and typing was started and is being successfully carried out.

4. Research grants for Sri Lankan Organization

- Island-wide virological sero-survey - MRI project 91/92
A total of 1300 serum samples were collected from 13 districts (Age stratified, 100 samples from each districts). The following studies have been carried out.
- a) Haemagglutinating antibody to Dengue 2 & 3 and JE
 - b) Hantavirus antibody by indirect fluorescent antibody test
 - c) Neutralizing antibody to Polio 1,2 & 3
- Results are to be analysed and published.

6. Oral presentations in international academic meetings.
 - a) An Outbreak of DHF in Sri Lanka - International symposium on DF & DHF, Bangkok 1990 - Dr. U.T. Vitarana.
 - b) Haemorrhagic fever with renal syndrome (HFRS) in Sri Lanka-Virology congress, Korea 1992. Dr. U.T. Vitarana
7. Oral presentations in academic meeting in Sri Lanka several presentations covering AIDS, Viral Hepatitis, DHF, HFRS, life from outer space, Myths that are harmful to health. - Dr. U.T. Vitarana
Several presentations on AIDS, DHF, JE, Polio, Improvement of Virological Diagnostic services to hospitals. - Dr. Nalini Withana
9. Presidential role - Academic Meeting - Sri Lanka
Dr. U.T. Vitarana - President - Sri Lanka college of Microbiologists 1991
- President - Board of study in microbiology 1990/1991
10. Member of international academic committees
Dr. U.T. Vitarana - WHO Steering committee - laboratory network on polio eradication. SEAR 1991
- WHO SEAR advisory committee on Health Research 1990
- WHO technical advisory committee on DF & DHF 1990.
- Advisory panel of expert on viral diseases - WHO Geneva, since 1989
- Member of advisory panel for 4th, 5th & 6th Virology

Dr. Nalini Withana - WHO SEAR steering committee -
laboratory network on polio
eradication 1992.

11. Member of National academic committee

Dr. U.T. Vitarana - Secretary National Studying committee for
health & Medical Research Since 1983

- Member of advisory committee to health
Ministry on communicable diseases
since 1972

- Virologist on AIDS Task force & National
Committee

- Fellow of the National academy of
Science, Sri Lanka

- Founder member National Laboratory
Accreditation committee

Dr. Malini Withana

- Member Biotechnology steering committee
NARESA 1992

- Member advisory committee to Health
Ministry on communicable diseases 1992

- Member AIDS laboratory sub committee

- Secretary, Sri Lanka Medical Association
laboratory sub committee

GRANTS & FUNDS - 1989- 1992

WHO - WHO/DHF project 1992 - \$ 10,000/-

JAPANESE EMBASSY / DHF project 1992 \$14,000/-

Polio Regional reference laboratory 1992-\$10,000/-

JICA- Technical cooperation funds for equipment, reagent and
training

Training - 2 fellowship - 1989 & 1992

- 1992

DEPT. OF PATHOLOGY

Material 9

Publications in Sri Lanka journals

De. Tissera A., Balakumar L., Sereviratne A.,
Wickramasinghe P.,

Alpha Thalassaemic Syndrome of HbH disease/ in a Sri Lankan
family. Ceylon Medical Journal 1988, Vol.33, 135-139

Papers in the annual report of the MRI

Dr. Tissera A.

Haemoglobinopathies and a study of their incidence in Sri
Lanka. 1988, Vol. 4, 61-65

Progress report for research grants from foreign
organisations

1. JICA assisted project
An ethnic study of HLA types in Sri Lanka in progress-
about 50 samples examined so far
2. MRI research fund
Haemoglobin survey to establish national reference values
in progress 1388 samples from various districts of the
community tested so far

Member of panel of assessors of the Sri Lanka
Standards Institute

Material 3

Funding from foreign organisations

1. JICA technical co-operation
2. WHO assistance for QA assessment scheme in
Haematology

WORKSHOPS

1. June 91 for 6 days

Workshop in immunohaematopathology organised by Dept
of path-MRI conducted by 6 Japanese experts sponsor
JICA.
Participants 20 from 13 Govt. institutions, lectures-
open

Feb 92 for 1 day

Workshop on histopathology organized by Dept. of path conducted by Dept. of Path And JICA experts participants 20 Govt. hospitals

Aug. 92

Workshop on Antigen purification organized by Dept. of Path conducted by 3 Japanese experts sponsor - JICA Participants 20 - from MRI lectures-open



P.Uluwita

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Medical Research Institute

Radio Diagnostic Department

4. Progress reports.....

Prepared the progress report for the RIA Lab
for the year 1991

11. Appointments.....

1991-Member of the food additives committee
of the Srilanka Standards Institution.

12..Local Research grants:

M.R.I. Research funds, 1991-RP/91/7 Research grant
details annexed.

Dr.P.Premachandra Dept.of Biochemistry.

1. Publication in international journals.

1.1 Preparation and stability of low-cost Quality control serum stabilized with Ethanediol.

P.Premachandra,P.L.Wood, P.G.Hill, D.M.Browning and D.A.Vazquez R.Olazabal.

Clinical chemistry vol 33 No.6 - 851 - 852 1987.

2.Papers in the annual Report of M.R.I.

2.1 Quality control in clinical chemistry

Piyaseeli Premachandra

Journal of the Medical Research Institute of SRI LANKA.

Vol 1 P - 29-34 1985.

3. Oral presentations in Academic Meetings in Sri Lanka.

3.1 Vitamin C levels in heroin dependants.

3.2 Vitamin C levels in patients on long term aspirin.

3.3 Lipid profile and lipid tolerance in cronic renal faliture.

3.4 Serum and ascitic fluid amylase level in alcoholic cirrhotic patients.

K.Thirumavalavan, R.Madurawa, P.Premachandra, D.Silva, S.Ramachandran.

Sri Lanka Medical Association, Academic sessions, March 1991.

4 Appoinments as chairpersons and for members of international academic committees.

Dr.P.Premachandra.

4.1 Member of the WHO Expert Advisory panel on Health Laboratory Services.

5. Appoinments as chairpersons and or members of national and or local academic committees in Sri Lanka.

5.1 Member of the drafling committee of SRI LANKA Standard Institute.

Grants and funds from foreign organizations.

1. JICA technical co-operation

2. WHO assistance for National External Quality Assessments scheme in Clinical Chemistry CLR/001/

DEPARTMENTAL REPORTS (NUTRITION)

A) FIELD RESEARCH

1) Prevalence Studies of Nutritional Disorders for Nutritional Surveillance

- a) Protein Energy Malnutrition
- b) Iron Deficiency Anaemia
- c) Iodine Deficient Disorders
- d) Vitamin A Deficiency

ACTIVITIES

- a) Field Research by MOO., PHIL., MLTT.
 - 1) Nutritional Status
 - 2) Consumption Patterns
- b) Evaluation of Interventions [Impact Study]
 - eg. School Mid Day Meal
 - Janasaviya Programme
- c) Advicing Policy Makers regarding Interventions

2) ACADEMIC RESEARCH

- a) Lipid Profile Project
 - Factors influencing ischaemic heart disease.

3) DEVELOPMENT OF METHODOLOGIES FOR THE IMPROVEMENT OF THE NUTRITIONAL STATUS OF THE MOTHER & CHILD.

- a) Preparation of weaning foods in the community -
 - Training of volunteers, mothers
 - (with Janasaviya Trust Fund Board).
- b) Kola Kenda Preparations
- c) ARF Technology [AMYLASE RICH FOODS]

B) LABORATORY RESEARCH

- a) Development of Technology in the investigation of Nutritional Anaemia, IDD, Vitamin A Deficiency.
- b) Estimation of Vitamins and Minerals in Blood.
- c) Food Analysis

C) TRAINING

- a) Nutrition Education
- b) Training of Nurses, Nursing Sisters, Teachers
 - Training of Health Personnel
- d) Lectures to MSc Students
 - Food & Nutrition (Kelaniya University).
 - Food Technology (Sri Jayawardanapura University)

D] CONSULTATIVE SERVICES ETC.

- a) Development of Curricula/Manuals
- b) Food Advisory Board
- c) Industrial Development Board
- d) Sri Lanka Standards Institute
- e) Interministerial Subcommittee on Nutrition
(Ministry of Policy Planning & Implementation)
- f) National Health Council
- g) International Seminars/Workshops.

5. Oral Presentation in Sri lankan and International Academic meetings (Annexed).

6. Appointments as members of Academic Committees in Sri Lanka.

Mrs. N.Jayasekera served as

- (a) a member of the Advisory Committee on Communicable Diseases, Ministry of Health.
- (b) A member of the drafting committee for specifications for testing of mosquito coils.
- (c) Secretary of the Council of the Institute of Biology.

Research Publications: (in International & Sri Lankan Journals)

1. Peyton E.L., Jayasekera Nalini and Chelliah R.V., (1979).
The Biology and Immature stages of Uranotaenia
(pseudoficalba) srilankensis. Mosquito systematics.
11 (3): 215-220.
2. Jayasekera Nalini and Chelliah R.V. (1980).
An annotated checklist of mosquitoes of Sri Lanka.
UNESCO-MAB Publication (8) National science Council of Sri
Lanka.
3. Jayasekera N., Curtis C.F., Zielke E., Kuhlrow F., Jansen C.G.
and Chelliah R.V. (1980). Susceptibility of Liberian Culex
quinquefasciatus to Wuchereria bancrofti in Sri Lanka.
Tropenmedizin un Parasitologie 31: 507-512.
4. Samarawickrema W.A., Jayasekera Nalini, Chelliah R.V. and
Jansen C.G. (1981). Filariasis in Sri Lanka (I).
Susceptibility of Culex quinquefasciatus in Sri Lanka.
Journ. National Sci. Council SRL. 9 (2): 171-176.
5. Jayasekera Nalini, Samarawickrama W.A., Jansen C.G., and
Chelliah R.V., (1981). Filariasis in Sri Lanka (II).
Crossing relations of Natural Populations of Culex
quinquefasciatus in Sri Lanka.
Journ. National Sci. Council. Sri Lanka. 9 (2): 177-182
6. Samarawickrama W.A., Jayasekera Nalini, Jansen C.G., Chelliah
R.V., Karandawela F.R. and Pathmanadan S. (1982).
Significance of coconut husk pits as larval habitats of
Culex quinquefasciatus in the filariasis endemic belt of
Sri Lanka. South East Asian Journ. Med. Public Health
11 (4): 590-595.
7. Jayasekera Nalini, Gubler D.J., Chelliah R.V., Jansen C.G.,
Karandawela F.R. (1983). The prevalence and biting
habits of Aedes albopictus and Aedes aegypti in the city
of Colombo Sri Lanka.
W.H.O./Dengue News letter (Dec. issue) 30-32
8. Jayasekera Nalini. (1985) Studies on vectors of Dengue and
Dengue Haemorrhagic Fever in Sri Jayawardanepura, New
Capital of Sri Lanka.
Journ. Med. Res. Ins. of Sri Lanka. 1 : 61-64.

9. Jayasekera N., Chelliah R.V., Jansen C.G. and Pathmanadan S. (1986) - Mosquito studies in Sri Jayawardenepura- the New Capital of Sri Lanka. Mosquito-Borne Dis. Bull. 2 (4): 87-93.

10. Vitarana T., Herath P.R.J., Kalpage K., Jayasekera N., Wickramasinghe M.B., and Gunatilake V. (1986) - Study of Mosquito-Borne Diseases in some new irrigation schemes in Sri Lanka with particular reference to Filariasis and Arboviral Diseases. Proceedings of the workshop on Irrigation and Vector Borne Disease Transmission. (WHO/FAO/UNEP) 9-13

11. Herath P.R.J., Jayasekera N., Kalpage K., Wickramasinghe M.B., Gunatilake V. and Nanayakkara W.M. (1986) - Study of vector aspects of Mosquito-Borne Diseases in some irrigation schemes in Sri Lanka. Proceedings of the workshop on Irrigation and Vector Borne Dis. Transmission (WHO/FAO/UNEP) 22-32

12. Kurahashi H. and Jayasekera N. (1989). New Species of the Genus Onesia (Diptera, Calliphoridae) from Sri Lanka. Jpn. J. Ent. 57 (2): 391-397

13. Dissanayake S. and Jayasekera N. (1989). Bancroftian Filariasis in Sri Lanka. An overview of current knowledge. Journ. Natn. Sci. Coun. Sri Lanka. 17 (2): 141-160.

14. Horie H., Tsukamoto M., Jayasekera Nalini and Kamimura K. (1989). Laboratory colonization and bionomics of Toxorhynchitis minimus (Diptera: culicidae) from Sri Lanka. Jpn. J. of Sanitary Zoology. 40: 11-23

15. Jayasekera Nalini, Kalpage K.S.P. and de Silva C.S.S. (1990). The significance of low density microfilaraemia in the transmission of Wuchereria bancrofti by Culex quinquefasciatus in Sri Lanka. Transactions of the Royal Society of Tropical Medicine & Hygiene. 85: 250-254

Papers and Other Articles

1. Jayasekera N., De Silva C.S.S., Munasinghe C.H., Chelliah R.V., Jansen C.G. and Samarawickrama W.A., (1981). Transmission studies of *Culex quinquefasciatus* on carriers of *Wuchereria bancrofti* with different levels of microfilaraemia in Sri Lanka.

Paper presented at the W.H.O. Workshop on "Diagnosis of infection and evaluation of control in lymphatic filariasis" held in Colombo, 12th-16th October 1981.

2. Jayasekera N. (1984). Mosquito studies in New Capital of Sri Lanka. Paper presented at the symposium organised by SLAAS, Institute of Biology and Central Environmental Authority on "Mosquito Research in Sri Lanka"
3. Jayasekera N. The ecology and behaviour of Japanese Encephalitis vectors in Sri Lanka (1981). Final report submitted to NARESA.
4. Curtis C.F., Jayasekera N. (1979). Tests in Sri Lanka of *Filaria* susceptibility and cytoplasmic incompatibility of stocks of *Culex pipiens fatigans*. Articles in progress report of London School of Hygiene and Tropical Medicine 36, 12-14.
5. Herath P.R.J., Jayasekera N., Kalpage K.S.P. and Wickramasinghe M.B. (1985). "Mosquito Borne Disease problems in newly irrigated areas- Entomological aspects Working paper presented at IMII, Digana organized by WHO/PEEM.

Seminars/Workshops/Meetings - Papers Presented by Mrs. N. Jayasekera

1. WHO Inter-Regional Workshop on Japanese Encephalitis, New Delhi, India - March 1979.
2. WHO Workshop on "Diagnosis of Infections & Evaluation of Control in Lymphatic Filariasis" Colombo, Sri Lanka. October 1981.
3. WHO/FEEM Workshop on "Mosquito Borne Disease Problems in Newly Irrigated Area" Digana, Kandy Sri Lanka. 1985.
4. WHO Inter-country Consultative Meeting on Japanese Encephalitis, Colombo, Sri Lanka. June 1988.
5. WHO Inter-country training Course (Workshop) for Entomologists on ELISA Technique. Bangkok, Thailand. 1989.
6. Annual Academic Sessions Sri Lanka College of Microbiologists, Colombo. June 1991.
 - (a) Muthurajawela Seminar
 - (b) International Seminar on Dengue Haemorrhagic Fever.

ACADEMIC ACHIEVEMENTS / MRI

PUBLICATIONS IN SRI LANKAN JOURNALS

1. De Tissera A, Balakumar L, Seneviratne A, Wickremasinghe P, Alpha Thalassaemic Syndrome of Hb H disease in a Sri Lankan family. Ceylon Medical Journal 1988 Vol 33 135-139.

PROGRESS REPORTS FOR RESEARCH GRANTS FROM SRI LANKAN ASSISTANCE

MRI Research Fund- Was actively involved in visiting various districts in the country, and collecting blood samples from a total of 1388 patients in order to do a Haemoglobin survey and establish National Reference values.



DR. Lulu Balakumar.

Material 9 :- Academic achievements/MRI - 1989-1992

Immunology Section/DepAt. of Pathology & Immunology

At present Immunology section is engaged in carrying out 3 research projects -

- Pr. 1. Comparison of HLA type in two major ethnic groups in Sri Lanka.
- Pr.2. Preparation of an ELISA kit for detection of HBs Ag.
- Pr.3. Preparation of an ELISA kit for detection of envenomation.

Progress of Study -

- Pr.1. So far 56 individuals have been tested for their HLA types. Final target is to test & compare HLA types of 200 sinhalese and 200 tamils.
- Pr.2. Initial training and purchase of equipment was funded by WHO. In 1990 the prepared kit was sent to CDC/Atlanta for quality control. As that kit was not sensitive enough to detect very low levels of HBsAg the project was restarted using the available resources given to the section by JICA. At present the coating antibody and the conjugate have been prepared and the kit is being tested by checker board titration.
- Pr.3. This project is carried out using the available resources provided to the laboratory by JICA.
We have been successful in preparing an ELISA kit for detection of envenomation. At present serum samples from patients following suspected snake bites are tested at various stages using the test kit prepared in the laboratory.

- 1 A study of tenia capitis in Sri Lanka. Journal of Medical and Veterinary mycology 1989 27 27-32
- 2 Fungal infections of hair and scalp. No more a rarity on Sri Lanka. Proceedings of the academic meeting of the Sri Lanka Medical association 1986
- 3 Detection of antibodies to Candida tropicalis infection using precipitation techniques. A comparison of immunodiffusion and counterimmunoelectrophorsis techniques. Annual academic meeting of the SLAAS 1988
- 4 Thesis for Doctorate in Medicine University of Colombo. "Aspergillus mediated lung disease in Sri Lanka. 1989
- 5 Scientific paper" fungal infection of the knee joint Proceedings of the academic meeting of the Sri Lanka Medical association 1990
- 6 Allergic Bronchopulmonary aspergillosis among asthmatics in Sri Lanka. Ceylon Medical Journal 36 (2) 1991 45-52
- 7 A search for fungal infections in sputum negative tuberculosis patients. Abstracted in Proceedings of the Annual academic meeting of the Sri Lanka Medical association. 1989
- 8 Skin test sensitivity to Histoplasmosis and coccidioidomycosis a preliminary report. Abstracted in Proceedings of the Annual academic meeting of the Sri Lanka Medical association. 1989
- 9 Rhinocerebral zygomycosis 1st reported case from Sri Lanka. Abstracted in Proceedings of the Annual academic meeting of the Sri Lanka Medical association. 1991
- 10 Serological evidence for the presence of pulmonary histoplasmosis in Sri Lanka. Abstracted in Proceedings of the Annual academic meeting of the Sri Lanka Medical association. 1991
- 11 Candida tropicalis infections. Abstracted in Proceedings of the Annual academic meeting of the Sri Lanka Medical association. 1991
- 12 The varied and unusual clinical presentations of mycotic disease . Abstracted in Proceedings of the Annual academic meeting of the Sri Lanka College of microbiologists 1991

- 13 Atypical presentation of pulmonary tuberculosis diagnosed by fiberoptic bronchoscopy. Accepted for publication by the Postgraduate Medical Journal London.
- 14 Merit award presented by Natural resources and energy Authority of Sri Lanka (National Science Council) for research work on pulmonary Mycotic disease in Sri Lanka.1991

Other consultancy services

Dr Premadasa
LCV
CV/B

NAMES OF COMMITTEES AND BOARDS WHERE DR.M.C. ATTAPATTU IS MEMBER

1. Membership in Professional bodies

- (a) Member International Society for Human and Animal Mycoses from 1979.
- (b) Council member, Section A, Sri Lanka Association for the Advancement of Science.
- (c) Founder member, Sri Lanka College of Microbiologists.
- (d) Treasurer, Sri Lanka College of Microbiologists from 1980-1988.
- (e) President, Sri Lanka College of Microbiologists 1989-1990.
- (f) Life member, Sri Lanka Medical Association.
- (g) Life member, Sri Lanka Association for the Advancement of Science.

2. Ministry of Health and Women's Affairs

- (a) Member, National Aids Committee
- (b) Member, National Task Force for Aids.
- (c) Member, Food Advisory Committee, Ministry of Health.
- (d) Member District Tuberculosis Control Officer's Committee (Advisory role).
- (e) Advisory Board on Communicable Disease
- (f) Member National Health Council, Government of Sri Lanka.
- (g) Member Technical Advisory group on Epidemics
- (h) Member, Advisory Committee for control of Respiratory Disease.
- (i) Steering Committee for MPI-JICA Project
- (j) Ministry of Health, Coordinating Committee for MRI-JICA

3. Post Graduate Institute of Medicine- (PGIM)
University of Colombo

- (a) Member Board of Studies in Microbiology, from the inception.
- (b) Examiner M.D. Microbiology, for all examinations held upto date. 1983, 1984, 1988, 1990, 1991 and 1992.
- (c) Lecturer, Mycology, Bacteriology and Immunology for M.D. Microbiology.
- (d) Course Director, Mycology component, diploma in Microbiology and M.D. Microbiology.
- (e) Lecturer, M.D. Pathology.
- (f) Lecturer, M.D. Community Medicine.
- (g) Lecturer, Diploma in Family Health.
- (h) Lecturer, on Mycotic infections in Animals. M.Vsc.
- (i) Lecturer, Diploma in Chest Diseases.
- (j) Member, Library Committee, P.G.I.M. from 1984.
- (k) Secretary, Board of Studies Microbiology, 1984-1986.

4. School of Medical Laboratory Technology

- (a) Director, Chairman, Advisory Committee.

5. Others

- (a) Member, Computer and Information Technology Council of Sri Lanka (CINTEC) Working Group, for Medical Section.
- (b) Member, Working Committee on Medical and Veterinary Science, Natural Resources, Energy and Science Authority, (NARESA), of Sri Lanka from 1984.
- (c) Chairman, Working Committee of NARESA for Medical and Veterinary Sciences from July 1983 to present.
- (d) Member Working Committee for "The inter agency committee for the continuous monitoring and review of water quality in Public Water Supply Schemes in Sri Lanka," The Central Environmental Authority, Ministry of Local Government Housing and Construction.

- (e) Consultant, to the Sri Lanka Standards Institute on Microbiological Test Methods, and member of committees for drawing up of Sri Lankan Standards for number of food items.
- (f) Member Inter agency committee for environmental health, Central Environmental Authority, Ministry of Local Government and Housing and Construction.

- * 1991 - Using the negative staining technique goat pox virus was demonstrated in a sample brought in by the Veterinary Surgeon / Virologist, Vaccine production, V.R.I., Peradeniya. As this was the first case of goatpox in Sri Lanka, this was presented at the annual academic sessions of the Veterinary Association.
- * Collaborating with the Colombo Medical Faculty I undertook the ultrastructural diagnosis of some renal biopsies for their renal project. This was acknowledged when the paper on this project was presented at the annual academic sessions of the Sri Lanka Medical Association. in March 1992.
- * As part of the M.R.I. 'combined diarrhoea project' I drew up the project proposal for the 'E.M. diagnosis of viral diarrhoea' - this awaits implementation.
- * 1992 -. In May the M.O. and the M.L.T. who trained under me in this unit were found by the D/M.R.I., to be adequately trained that the decision was taken to hand over the routine management of the unit completely to them.
- * I participated as consultant E.M. Pathology at the W.H.O. sponsored workshop in Histopathology at the faculty of medicine.
- * I have assisted my professional colleagues on request; when ultra structural markers were necessary for diagnosis. If I am permitted I like to continue these.

Animal Centre

Personnel in the animal centre - yearly flow

1990- begining- Only the old animal centre was functioning

- 01- Veterinary Surgeon
- 02- Lab Orderlies
- 03- Labourers

Mid 1990- Animals were brought from Japan to the new animal section.

End 1990- staff of animal centre

- 01- Veterinary Surgeon

New Section

- 01-MLT
- 01-Animal supervisor
- 04-Labourers
- 02-Lab Orderlies

Old Section

- 01-Animal Supervisor
- 04-Labourers

By April 1991 - Feed Section was commenced

Large animal Section was moved close to the feed section

Old animal section was closed

End 1991-staff of animal centre

- 01- Veterinary Surgeon

New Section

- 01-MLT
- 01-L.O.
- 08-Labourers

Large animal section &
Feed section

- 01-Animal Supervisor
- 03-Labourers

Nov. 1992-staff of animal centre

- 01-Veterinary Surgeon

New section

- 01-MLT
- 01-L.O.
- 09-Labourers

Large animal & Feed section

- 01-Animal Supervisor
- 03-Labourers

PELLETED FEED PRODUCTION

MONTH	RAT & MICE Kg.	RABBIT & G.P. Kg.	POULTRY Kg.	TOTAL Kg.
APRIL '91	143.650	-	-	143.650
MAY '91	146.900	9.00	-	155.900
JUNE '91	203.200	-	4.1	207.300
JULY '91	190.850	9.00	-	199.850
AUG. '91	269.700	95.800	-	365.500
SEPT. '91	226.200	177.500	-	403.700
OCT. '91	288.00	128.00	-	416.00
NOV. '91	404.550	194.200	-	598.750
DEC. '91	295.00	172.450	-	467.450
JAN '92	411.00	293.150	-	704.150
FEB. '92	318.700	203.750	-	522.450
MARCH '92	345.00	267.500	-	612.500
APRIL '92	188.150	262.950	-	451.00
MAY '92	255.500	399.450	-	654.950
JUNE '92	364.400	284.950	-	649.350
JULY '92	304.600	472.800	-	777.400
AUG. '92	476.500	438.750	-	915.250
SEPT. '92	441.500	454.750	-	896.250
OCT. '92	506.200	491.00	-	997.200

Animal supplies

1990 - Animals bred & issued from the old animal section

MICE	-1560(adult & weaned) -254(sucklings)
RATS	-03
GUINEA PIGS	-47
RABBITS	-47

1991- Animals bred & issued from the new animal section

MICE - ICR	-4164(adults & weaned) -2522(Sucklings)
-C3H/HeN	-67(adults & weaned)
-BALB/cA	-79(adults & weaned) -48(Sucklings)
-C57BL/6N	-21
RATS -WISTAR	-133
HAMSTER -Syrian & albino	-38
GUINEA PIGS-Hartley	-56
RABBITS -NZW	-37

1992-(up to Oct)Animals bred & issued from the new section.

MICE- ICR	-4358(adult & weaned) -4976(sucklings)
-C3H/HeN	-55(adult & weaned)
-BALB/cA	-148(adult & weaned)
-C57BL/6N	-42(adult & weaned)
RATS - WISTAR	-145
HAMSTER-Syrian & albino	-80
GUINEA PIGS- Hartley	-120
RABBITS - NZW	-68

GOATS - bought from outside & supplied to the Production unit.
1990- 1121
1991- 940
1992(up to Oct.)-616

Animals maintained for drawing of blood.

Poultry-1990-02	Geese-1990-04	Sheep-1990-04
-1991-04	1991-05	1991-03
-1992-03	1992-06	1992-05

School of Medical Laboratory Technologist.

Material - 15 Management of and education in MLT School.

Ministry of Health Government of Sri Lanka.

↓
Director General of Health Services

↓
Advisory Committee to the School of M.L.T.

Chairman: Deputy , .D.G.(L.S.)

Director - M.R.I.

3 Hospital Pathologists

2 Bacteriologists

1 Virologist

1 Haematologist

1 Parasitologist

Principal - School of MLT

Established in 1959. 25 batches of students were trained up to 1992
Total number of 864 technologists were passed out.

Administration: Director, Medical Research Institute.

Present Staff: 1 Principal
3 Tutors
5 External Tutors
1 MLT/ Demonstrator
2 Lab Orderlies
2 Casual Labourers

Teaching Staff: The Consultants attached to MRI, General Hospital, Lady Ridgeway Hospital, Medical Faculty Colombo conduct lectures and serve as examiners to the school.

Expenditure:

The expenditure estimates are annexed herewith. The total sum requested for the year 1993 is Rs.227,9440 while it was Rs.315,8000 for 1992.

The general expenditure on buildings and maintenance work is covered by the capital expenditure estimates M.R.I.

Buildings:

The school was provided a fully equipped laboratory under the JICA aid programme. In 1992 Feb. the school was housed in the old building M.R.I. it has a floor area of 384 Sq. m. for lecture halls and 468 Sq. m. for laboratories, it also consists of a Tutors room, washing room, reading room, and a Principal's Office. The water and electricity supplies were redone while gas supply is yet to be completed.

Students:

The last batch of students was enrolled in July 1991. Out of 44 enrolled only 38 is left today.

The breakdown is as follows:

Ministry of Health	19
Air Force	02
Police	02
Army	05
Navy	03
University	02
Local Govt.	03
Maldives Govt.	<u>02</u>
Total	<u>38</u> =====

The selection of students to the school of MLT is handled by the MOH. Presently no yearly flow of students are observed.

The students are from Sri Lankan Govt. Health Ministry and various other Govt. departments. The MOH trainees on completion of their training are appointed to the Ministry, Health Institutions while the others are sent back to their respective departments.

The graduates passed out resume their work places as Medical Laboratory Technologists.

Presently the flow of students at the school is not regular. 50 students could be trained at the school on a regular yearly flow basis.

To maintain a good teaching programme few more tutors should be appointed to the teaching staff.

Management of the School after 5 years from now.

The new school buildings are spaces enough to continue the teaching programme. The lecture halls and laboratories should be provided with modern teaching aids.

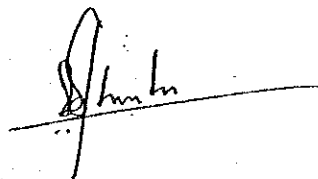
Most of equipments required for the school were supplied by JICA aid programme but some more items have to be purchased to cover all the teaching areas in both theory and Practicles.

A continuous yearly flow of students have to be observed without a breakdown at regular intervals.

More tutors should be appointed to the school so that a fully trained teaching staff could be maintained at the school.

A clerical assistant should be appointed to the school to maintain records and attached to clerical duties at the school.

The school should be able to handle inservice training to serving officers in various subject areas.



Principal,
School of Medical Laboratory Technology,
Medical Research Institute,
Colombo 8.

研修員からのレポート

Evaluation Report.

- Name : Dr. Mrs. R. K. A. De Tissera.
- Subject of Training : Electron Microscopy.
- Duration : Nine and a half months including one month of Japanese Language.
- Aspects of Training :
- * Introduction to electron microscopy.
 - * Instrumentation of
 - a. transmission electron microscope.
 - b. scanning electron microscope.
 - c. some accessory instruments.
 - * Processing and examination of tissues for transmission EM, scanning EM-basic methods.
 - * Basic processing of samples for TEM virology.

Achievements at the M.R.I. following training.

- * The transmission E.M. and the scanning E.M. gifted by the Govt. of Japan under the M.R.I. Project had been installed in Feb. 1990. After my return in April 1990 I checked and installed the accessory instruments eg. ultra microtome, vacuum evaporator, critical point drier, ion sputter, knife maker, photo developing and enlarging units etc..
- * Necessary glassware, equipment and other items were obtained from the Dept. of Pathology and from M.R.I. stores.
- * The E.M. unit of the M.R.I. was thus established.
- * One Medical officer and one Medical Laboratory technologist were taken in to the unit for training in E.M. techniques.
- * After receiving the reagents in Sept. 1990, processing of specimens was started. The various techniques were tried out and adapted to suit our conditions. All accessory instruments were used. Basic procedures were thus perfected and established while training the M.O. and M.L.T..

TRAINING ON THE MANAGEMENT OF LABORATORY ANIMAL CENTRE

Period of training -July'89- Jan.'90

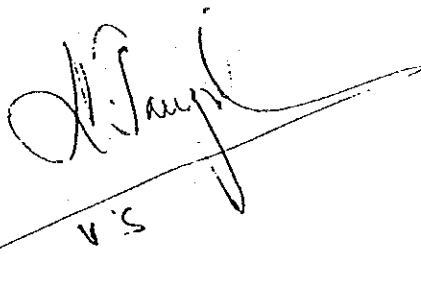
01Month -Induction & Japanese language course.

05Months -

Training on breeding & management of mice, rats hamsters, rabbits & guinea pigs. Also handling of animals
Training on inoculation , bleeding & anesthesia techniques in laboratory animals as well as skin grafting & techniques of euthanasia in animals.
Training on microbiological monitoring in lab . animals.
Training on feed production.

Work carried out after returning to the MRI

- Preparation of animal areas.
- Deciding on procedures to be carried out once the animals are brought in & finding suitable bedding material to be used.
- Training staff to handle, manage & breed animals brought in from Japan. Also training staff to set up isolators & maintain animals in clean racks & isolators.
- Breeding animals brought in & supplying adequate numbers required by the researchers as well as maintaining the breeding colonies.
- Carrying out P.M.s of animals which die & also in some of the animals which are culled in order to check infections in the colonies.
- Assisting researchers to train & carry out inoculation , bleeding & anesthesia techniques in lab. animals.
- Deciding & checking the availability of raw materials to be used in the preparation of animal feed.
- Formulating feed formulae for rats & mice , & rabbits & G.pigs.
- Training & supervising staff on preparation of feed.
- Checking mice & rat feed - carrying out feed trial on mice.


V.S.

Name Dr. T.M.J. Munasinghe

Year of Fellowship 1990

Summary of training during fellowship.

First Department of Internal Medicine.

The training in this Department was mainly concerned with the techniques of radioimmunoassay and its application to clinical endocrinology. Specifically, we were trying to see how the rate of albumin excretion in microalbuminuria correlates with the changes observed in diabetic nephropathy. In addition I underwent training in Immunoradiometric assay and the technique of labelling antibodies with radioisotopes. I also underwent training in the methods of inoculating experimental animals and purifying antibodies by such methods as affinity chromatography.

Department of Pharmacology.

The major training here was in the principals and techniques of high performance liquid chromatography and its application to measurement of drugs and hormones in body fluids. In addition I had a comprehensive training in the principals of Pharmacokinetics and principals of clinical pharmacology related to therapeutic drug monitoring.

Department of laboratory Medicine.

I underwent training in the methods of conduct of controlled clinical trials and their statistical analysis and also on the methods of statistical validation of a laboratory assay. I also had some training in Laboratory quality control procedures related to maintaining of proper laboratory standards.

Tamaoyama Hospital Nippon Medical School.

I underwent training in the principals and practical methodology of therapeutic drug monitoring during my stay in this hospital.

Summary of achievements at the MRI following this training.

The training I had in the conduct of clinical trials has helped me to plan and implement an ongoing clinical trial related to diabetes mellitus. The training in statistical analysis would be very helpful in the evaluation of the results.

I have been able to introduce some laboratory quality control measures which are necessary for the proper management of a clinical laboratory.

The knowledge gained in the principals of pharmacokinetics and the training received in drug monitoring methodology would be very helpful to establish these techniques here. If the necessary equipment and reagents are supplied it would be possible to commence this work immediately and this could function as the starting point for a much larger Therapeutic Drug Monitoring Program.

TRAINING IN JAPAN - JICA/NRI TECHNICAL COOPERATION
MARCH 1989 - DEC. 1989 - DR. NALINI NITHANAG
DEPT. OF VIROLOGY

TRAINING PROGRAMME - PREPARATION OF DIAGNOSTIC REAGENTS

1. TIC - HATAGAYA
 - JAPANESE LANGUAGE COURSE - Spoken
 - Written - Hiragana & Kathakana

2. DEPT. OF VIROLOGY, SCHOOL OF MEDICINE, NIIGATA UNIVERSITY
 - 2(a) HANTA VIRUS)
 -) Practical training
 - (b) HEPATITIS A VIRUS)
 - growth in tissue culture
 - preparation of antigen slides
 - fluorescent antibody test

3. DENKA SEIKEN COMPANY, GOSEN, NIIGATA
 - 3(a) Preparation & purification of IgG
 - Detection of IgG and IgM
 - Protein assays - Chemical
 - Spectrophotometric
 - 3(b) Preparation, purification and standardization of fluorescein Isothiocyanate (FITC) and horseradish peroxidase (HRP) conjugates
 - 3(c) Preparation of Reverse-passive Haemagglutination reagents (RPHA) for HB eAg detection
 - glutaraldehyde treatment
 - tanning
 - coating with antibody
 - testing the final product
 - 3(d) Monoclonal Antibody production
 - preparation of tissue culture and infecting with PCV (respiratory syncytial virus)
 - harvesting and purification of PCV antigen
 - mice inoculation
 - fusion
 - semicloning/cloning of hybridoma
 - testing for antibody production
 - Prepare antigen coated plates for ELISA test
 - inoculation in to mice for collection of ascitic fluid
 - purification of ascitic fluid
 - maintenance of cell cultures and hybridomas

4. SPECIAL REFERENCE LABORATORY (SRL) TOKYO

- Diagnostic methods in virology
- Immunofluorescence - chlamydia
- Electron microscopy - diarrhoeal viruses
- Cell culture - ROTAVIRUS
- ELISA, HAT, CFT
- Internal quality control system
- General organization of a virus laboratory including safety procedures

5. NATIONAL INSTITUTE OF HEALTH TOKYO

- JE HA antigen preparation
- Potency testing of JE vaccine plaque neutralization assay using primary chick-embryo fibroblast cultures
- Rickettsiae-fluorescent antibody test

ACHIEVEMENTS

2 units (virology 1 & 20 that were in 2 locations (MRI & Colombo South_Kalubowila) under 2 consultants (Dr. U.T. Witharana & Dr. Nalini Withana) are now functioning as one department under one consultant (Dr. Witharana is away for 2 years) without any major problems.

My contributions to the dept. from 1990 to date (with help and guidance from the chief virologist - Dr. Witharana)

1. Re-organization of the dept. of Virology

- (a) After shifting the Colombo South virus laboratory to the MRI the activities of the 2 units were coordinated in a way that there will function as ONE DEPARTMENT
- (b) The system of specimen receipt, entry and distribution was changed
 - One specimen receiving counter
 - One master register containing all the relevant details about specimens virology dept number given to specimens (earlier sectional members)
- (c) A central washing room was set up
- (d) Storage system for specimens was established
- (e) The use of microtitre pipettes of various kinds

- (f) Schedules were prepared for the different test
 Eg. arbovirus - once a week (TCUS-Thursday)
 - reporting on Friday
 Hepatitis - daily or every other day
- (g) Delays in reporting on chemical specimens were reduced to a minimum
- (h) Regularised reporting to the epidemiological unit
 (Arbo-once a week; Acute flaccid paralysis - daily)

2. HANTA VIRUS

Sero-diagnosis unit was set up (already had a trained technician trained in S.Korea)

3. ARBOVIRUS

Serology unit was re-organised fully

- Use of modern equipment
- Use of microtitre plate for storage of serum extracts (instead of tubes)
- Use of microtitre plates for the pre-treatment of serum with goose cell (instead of tubes which take a very large quantity of goose cells)
- Done away with master dilution

4. EUFEROVIRUS UNIT

- use of biohazard cabinet
- regularised virus isolation & serology

WHC has now designated this laboratory a regional reference laboratory in SEA region.

5. CFT WAS RE-STAINED & REGULARISED

6. NEW TESTS

- Hepatitis A (Igm) ELISA
- Rubella (Igm) ELISA
- Chlamydia FA
- Hepatitis (HEPAg) EPMA

7. REAGENT PREPARATION

- Dengue virus isolation - (Dr. 2, 3, 4)
- Dengue antigens for HAI test
- JE antigen for HAI test
- Dengue FITC conjugate

Planned for next (1992) year- Respiratory reagent antisera against RSV, Measles, Influenza, Para influenza, Adenovirus, Anti rabbit FITC conjugate.

Clinical and Laboratory training course in Anaerobic bacteriology
and phage typing

* Clinical and Laboratory training course in anaerobic bacteriology was held from June 1990 to 1st April 1991 at the Gifu school of Medicine Gifu Japan under Prof. K.Ueno and Dr.K.Watanabe.

The training programme was as follows.

1. Preparation of media (eg. GAM, BBE, Semisolid agar, CCFA, C. Perfringens agar, selective and non selective agar) for initial processing procedures of anaerobes.
2. Preparation of transport media and other techniques of transport method for anaerobic bacteria were done.
3. Anaerobic culture techniques (Jar techniques prio bag, pre reduced anaerobically sterilized (PRAS) Anaerobic chamber techniques Gas pase, Blood culture method not), were studied.
4. Processing clinical speciments and isolation of anaerobes with the help of Macroscopic and Microscopic examination colony merphology on differant media and grown under differant O₂ and CO₂ condition aero tolerance tests were studied.
5. Identification of anaerobes were done by Grame staining Biochemical tests, Suger Susceptibility testing Rap ID ANA !! Kit, by using screening tests (Revers CAMP test Nagler test spor test ect) and by the gas liquid cromatography method.

- 6) Susceptibility testing of anaerobes were done by macrodilution test, microdilution test, agar dilution test and beta cactamase tests were done by nitrocephin stick and paper methods.
- 7) Stock cultures were prepared by freeze-drying method.
- B] Clinical and Laboratory training course on phage typing of staph aureus was held from 01.04.1991 to 20.06.1991 at the laboratory of drug resistance in bacteria, Gunma University school of Medicine, Maebastu, Japan under Prof. H.Hashimoto and Dr.M.Inoue. The training programme was as follows:-
1. Preparation of media for phage typing of staph aureus eg. B.B.L. trypticase soy broth, oxoid nutrient broth, solid media with and without Ca^{+2} 400/mcg/ml.
 2. Basic set of 23 phages were used for typing -
Group 1) 29. 52. 52A. 79. 80.
2) 3A. 3c. 55. 71.
3) 6 42E. 47. 53. 54. 75. 77. 83A. 84. 85.
Misc. 81. 94. 95. 96.
 3. Basic 23 phages were titrated and 23 propagating strains were used to estimate the routine test dilution (R.T.D.). Routine typing technique was done at the laboratory at RTD and 100 x RTD for the strains not lysed by the phages at RTD.
 4. Pro-phage typing was done on the strains not lysed by 100 x RTD, mytomycin C and UV light was used for induction of phages. The phages were tested on 23 propagating strains.
 5. Coagulase typing of staph aureus was done with 8 types of antisera.
 6. Propagation of phages: Oxoid nutrient broth with CaCl_2 was prepared for propagation. Dried cultures and phages were used. Soft agar layer method of Swanstrom and Adonis were used as propagation methods.

Counterpart Training- JICA/MRI Project- Rabies Tissue Culture Vaccine

Name of participant-Dr.Mrs.Omala V.Wimalaratne

Training Institutions-1. The Chemo SERO Therapeutic Research Institute
Kumamoto, Japan.
2. National Institute Of Health,
Tokyo, Japan.

Duration of training- 26.11.91.-29.9.92.

1. Bulk preparation and sterilization of the media and reagents required for rabies vaccine production.
2. Preparation of primary chick embryo cell culture.
3. Virus inoculation and harvesting.
4. Virus inactivation with beta propiolactone.
5. Ultrafiltration and membrane filtration of inactivated virus suspension.
6. Ultracentrifugation.
7. Homogenization.
8. Final bulk preparation.
9. Final product preparation
 - a) Dispensing and lyophilization.
 - b) Capping and labelling.

Training in quality control at The Chemo Sero Therapeutic-Research Institute and National Institute of Health

1. Haemagglutination test done to determine the virus titres.
2. Enzyme linked immunosorbent assay to determine the virus G protein content.
3. Potency testing using mice.
4. Sterility testing for bacteria, fungi and mycoplasma.
5. Inactivation test in suckling mice and hamsters.
6. Test for abnormal toxicity using mice and guinea pigs.
7. Test for protein nitrogen content-Micro Kjeldahl method.
8. Test for moisture content.
9. Test for H⁺ ion concentration.
10. Test for identity-immunodiffusion.
11. Staining test.
12. Test on control cell culture for extraneous viruses.

Quality control tests done on Japanese Encephalitis vaccine

1. Rabbit pyrogen test.
2. Test for protein content-Lowry test.
3. Test for moisture content and H⁺ ion concentration.
4. Test for thimerosal content.
5. Test for formaldehyde content.

Determination of rabies antibody levels

1. Enzyme immuno assay-tissue culture method.
2. Rapid florescent focus inhibition test-RFFIT test.
3. Serum virus neutralization test in mice.

Implementation of new techniques at M.R.I.

1. I hope to start on a pilot project with 500 embryonated eggs initially, to produce rabies tissue culture vaccine, once I am provided with the necessary equipment, media, reagents and the staff required.
2. I have already submitted the list of requirements to J.I.C.A. in March 1992.
3. A clinical trial will have to be done on a selected number of patients to determine the rabies antibodies after vaccination.
4. I would like to request to J.I.C.A. to send a Japanese counterpart to M.R.I. for guidance and advice, till I am able to produce a safe and effective vaccine on my own.

Counterpart Training - JICA/MRI Project
in Immunology - duration Nov 1991 - 1992 A

1. Production of monoclonal antibodies - Niigata University
 - starting from the hybridoma stage
 - both in vitro & vivo
 2. Immunofluorescence - Niigata University
 - labelling and purification of antibodies
 3. Fractionation of lymphocytes - Niigata University
 4. SDS polyacrylamide gel electrophoresis
 5. Iso electric focusing
 6. Immunoblotting
 7. HLA typing
 8. Collection of anti sera from placental blood for HLA typing
- } Shinrak^uen Hospital
Niigata
- } Tokyo University
Hospital
9. Purification of 60 KD protein from Legionella pneumophila
 - BML laboratory-Saitama
 10. Preparation of protein G labelled peroxidase conjugate
 - BML laboratory - Saitama

Achievements -

1. Collection of placental blood have been started. These will be tested for the presence of antibodies and used in HLA typing.
2. Conjugate preparation (Item no. 10 in page 1) was carried out successfully.
3. A research project was started using a test kit prepared in the laboratory, to detect envenomation following snake bite.

M.M. Dassanayaka,
Principal, School of Medical Laboratory Technology,
Medical Research Institute, Colombo.

JICA Technical Corporation Counterpart Training
in Japan from February 1992-September 1992.

Training Institutions.

01. College of Bio Medical Technology - Nigata University
02. Shinrakuen Hospital, Nigata.
03. Juntendo University, Tokyo.

Field of Study : Medical Laboratory Technology (Teaching)

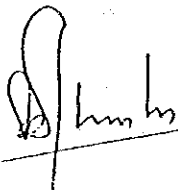
01. Observed the methods adopted in lecture, practice, demonstrations & discussions in MLT education.
02. Participated in the preparation of practicals for MLT students with equipment, reagents and practice materials.
03. Studied the planing of MLT education programmes, management and administration of MLT training schools.
04. Used modern teaching educational instruments for lecture practice and discissions.
05. Comparable study was made in different MLT educational institutions managed by universities and private sector organisations, in Kanto and Kansai areas.
06. Intensive training was obtained in autopsy examinations, routine and special histopathological staining techniques, cytology, cryostat sectioning of tissues, histochemistry, enzyme histochemistry and preparation of materials for electron microscopy.
07. Visited large laboratory organisations and gained experience in quality control programmes, serving officers employment opportunities and condition of employment after graduation.
08. Gained experience in automation technology, use of computers for recording, reporting and filing.
09. Management of large laboratories employing around 90-100 technologists and the organisation of day to day duties were studied.
10. Teaching material, lecture notes, references, were made for the School of MLT Sri Lanka.

PRESENT DEVELOPMENTS AT THE SCHOOL OF MHP
AFTER THE TRAINING.

01. More reforms were introduced to the general administration and management of the School.
02. 33 hours of teaching per week was introduced.
03. Established a histopathology practicing laboratory.
04. Installed microphones to lecture halls and practicing laboratories in the school of MHP.
05. Introduced the new teaching system with theory, demonstrations, practice, discussions and assessments.
06. Started teaching immunology as a subject area.
07. Held practice assessment examinations.
08. Conducted a series of lectures to serving officers to uplift their knowledge in Laboratory Technology.
09. Started in the preparation of teaching manuals in MHP education.
10. Conducted a talk on MHP education in Japan to MRI staff.
11. Identified the present subject area to seven subjects for teaching purposes.

PLANS FOR THE FUTURE DEVELOPMENT IN MIF EDUCATION

01. To prepare and print laboratory manuals in MIF education.
02. To negotiate with the Ministry of Health to raise the entry qualifications from G.C.E. (OL) to G.C.E. (AL).
03. To increase the duration of the course by one year to make a three year course.
04. To get more MIF tutors for teaching purpose.
05. Appoint a clerical officer to the School of MIF.
06. To increase the annual intake to 50 students.
07. To teach new subject areas necessary for MIF education and use modern teaching methods in teaching.
08. To hold lectures or workshops to serving officers to uplift their knowledge in selected fields of Laboratory Technology.
09. Use of computer for recording, filing and preparation of lectures.
10. To introduce a student record book.
11. Publish text books in MIF education.



M. M. Jaisankar.

10th Dec '92

Training in Japan (W.H.M.W.Herath)

- (1) The compound, 4H pyrazolo (1,5-a) indole was synthesized (chem. Pharm. Bull., 40 (9) 2267 (1992) at the Department of Chemistry, Niigata College of Pharmacy under the guidance of Professor H. Katayama.

Studies on Organic synthesis have lead to the discovery of highly non-hormonal pregnancy terminating agents belonging to various classes of tricyclic compounds characterized by similar spatial arrangement. One such class of compounds includes the pyrazolo (1,5-a) indoles. They are also considered to be potential anti-tumour compounds. The anti-cancer activity is attributed to the possible formation of the cross-linked DNA adducts as suggested for mitamycins.

- (2) Studies on, seperation of biological substances, such as adenine nucleotides, inositol phosphates and inositol phospholipids, using HPLC, HPTLC and related techniques were carriedout at the Department of Pharmacology, Niigata University School of Medicine.
- (3) Underwent a brief training in the operation and maintenance of several instruments, including, EM, HPLC, IR, UV etc.
- (4) The synthetic work on pyrazolo compounds is being continued in the Department.

Enteric Bacteriology

Dr G K D Karunaratne - MO

Training on Enteric Bacteriology

Section - Enteric Bacteriology - Department of Bacteriology

Achievements in the Section

1. Improvement in the isolation technique at bacteria from stool sample by introducing selenile F broth as the enrichment medium.
2. Introduction of LIM medium which helps in isolation and identification of enteric bacteria from routine stool cultures.
3. Introduction of techniques for isolation and identification of Campylobacter from stool samples.

EVALUATION SHEET

Date : 23/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.
 not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs Malini Withana

Department : Department of Virology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	⑤ 4 3 2 1 5 ④ 3 2 1	Japanese team and JICA have done quite well in the management of this project. As for the Sri Lankan side : (a) Several important areas have to be looked into. e.g. Maintenance servicing and testing of equipment - particularly in relation to the safety cabinets and air conditioning. (b) We have to make sure that we get a regular supply of diagnostic reagents (particularly for Virology) without which the diagnostic system will collapse.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 ⑤ 4 3 2 1 5 4 ③ 2 1	Although the Virology Department was very keen to get a long term expert, this was not possible because the scientists who were requested by us could not leave their work and come. During their short periods of stay the short-term consultants were able to effectively transfer knowledge and technology to our staff. The workshops held were useful to our staff as well as to other staff members of the MRI. The equipment and reagents that were brought in by these consultants were very valuable to this department. We recommend that at least one short-term expert be sent each year, to improve the virological diagnostic service.

<p>3. Training in Japan</p> <p>Term Frequency Achievement</p>	<p>⑤ 4 3 2 1 ⑤ 4 3 2 1 ⑤ 4 3 2 1</p>	<p>One consultant was trained in 89/90 and a research officer is being trained at present. The training programme were well organised and was fairly flexible. As training was not confined to one institute only, the trainees were able to gather more knowledge and experience. Working at a production company and at a busy diagnostic laboratory became very useful in setting up the new laboratory. With regard to the training programme in molecular biology, our department would need further support to set up a proper Gene Technology Unit - particularly in the area of reagent supply. The two training programmes were adequate for our department.</p>
<p>4. MRI facility Building Others</p>	<p>⑤ 4 3 2 1 5 4 3 2 1</p>	<p>Regular maintenance of the building is important. (Leaks and cracks have appeared already.) Regular efficient cleaning service is essential - this has broken down in the recent past. There have been regular air conditioning problems - these are being looked into now.</p>
<p>5. Donated Materials Equipment</p>	<p>⑤ 4 3 2 1 ⑤ 4 3 2 1</p>	<p>Regular supply of spare parts (e.g. filters for air safety cabinets, A/C filters) is essential.</p>
<p>6. Project as a whole</p>	<p>⑤ 4 3 2 1</p>	<p>TC project commenced in 1989 and the new building was opened in 1990. There were lot of teething problems but we have overcome most of them and we are able to show results now. This is no doubt that the virus department has improved tremendously with the supplies given by JICA.</p>

<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<ol style="list-style-type: none"> 1. Regular supply of viral diagnostic reagents is essential. (At present some tests have come to a standstill for want of reagents.) 2. Short-term consultants to set up new techniques. 3. Collaboration with Japanese scientists - Virology - glue technology.
<p>8. Other comments</p>		<p>The Japanese and the Sri Lankan side will have to think of the future of the MRI. Since the commencement of the IC programme, funds were available and the departments were able to order whatever they wanted. Now the budgetary allocation is restricted only to specific projects and as such cannot get all the necessary reagents. The work that have been started can be continued only if reagents are made available on a regular basis and this has to be looked into.</p>

EVALUATION SHEET

Date : 22/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs M C Attapattu - Head, Dept. of Bacteriology & Mycology

Department : Department of Bacteriology & Mycology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 ④ 3 2 1 5 ④ 3 2 1	There should be more involvement of other grades of staff in matters pertaining to the project. At present details are discussed at the steering committee meetings although the relevant particulars should be conveyed to the other grades by the heads of departments, this does not agree to take place. More care should be taken to ensure that all relevant staff is involved in decision making, management and in management. Management is at the highest level.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 ③ 2 1 5 ④ 3 2 1 5 4 3 ② 1	It is recommended that long term or medium term experts in the same calibre as those sent for the Animal Experimentation Centre, or Virology Department should be made available to Bacteriology and Mycology Department also. This unit deals with major infections in the country. It is important that experts are directly related to the needs of the department. It is regretted that up to now no expert have been sent exclusively for the improvement of this department. The members of the department, as a whole, are of the opinion that this department had been badly neglected in this context.

<p>3. Training in Japan Term Frequency Achievement</p>	<p>5 ④ 3 2 1 5 ④ 3 2 1 5 ④ 3 2 1</p>	<p>Two medical officers have already been trained. Dr Mrs K Karunaratne and Dr M Gunathilake. One other Dr Cooray is already in Japan. Dr Mrs P Perera is recommended for training in 1993. It will now be beneficial if senior consultant and junior officer be sent for shorter training courses. (3 - 6 months for junior officer and 1 month for senior consultant. Anaerobic bacteriology and Enteric bacteriology sections have improved markedly in both diagnostic and research activities.</p>
<p>4. MRI facility Building Others</p>	<p>5 ④ 3 2 1 5 4 3 2 1</p>	<p>Room for improvement, sharing of equipment and use of common equipment could be improved. Need for more staff - especially medical officers, research officers and technical grades.</p>
<p>5. Donated Materials Equipment</p>	<p>5 ④ 3 2 1 5 ④ 3 2 1</p>	<p>Donated material is of high quality. Common use of equipment should be more frequently used by many sections/departments. This should be encouraged.</p>
<p>6. Project as a whole</p>	<p>5 ④ 3 2 1</p>	<p>Progress is considered good although could be better. There is an overall improvement in the quality of work carried out by the institute and a sense of satisfaction that reagents etc. would be readily available when necessary.</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>Yes. For 3 years. Should concentrate on selected areas to be decided on collectively; for e.g. infections prevalent in Sri Lanka, infections associated with immunodeficiency states.</p>

8. Other comments

Research activity has commenced with JICA assistance should go in depth into these aspects. Special reference to prevention, early diagnosis and therapy. Should have more high quality Japanese consultants for 'on the job' training of staff after remaining in the MRI for 1 - 2 months at least. The present practice of the arrival of JICA experts - short term for workshops mainly is not adequate. Workshop should be followed by introduction of techniques, in situ - as were done in chromosome analysis in the Department of Pathology & Immunology.

EVALUATION SHEET

Date : 16/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.
 not involved.

Your profession Doctor Technician Others

Your name : Dr R S B Wickremasinghe - Bacteriology I

Department : Department of Bacteriology & Mycology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 ④ 3 2 1 5 ④ 3 2 1	If the requests made for materials for a project are modified, it is important for the Sri Lankan side to be informed as soon as possible.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 ③ 2 1 ⑤ 4 3 2 1 5 ④ 3 2 1	All experts should have a good command of English. The short term experts were excellent. The long term experts should be more involved in transfer of appropriate technology.
3. Training in Japan Term Frequency Achievement	5 ④ 3 2 1 5 4 3 2 1 5 4 3 2 1	Training in Japan should be perhaps, more evenly distributed among the different departments.

<p>4. MRI facility Building Others</p>	<p>5 ④ 3 2 1 5 ④ 3 2 1</p>	<p>Adequate continuous maintenance is issential.</p>
<p>5. Donated Materials Equipment</p>	<p>5 ④ 3 2 1 5 ④ 3 2 1</p>	
<p>6. Project as a whole</p>	<p>5 ④ 3 2 1</p>	
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		
<p>8. Other comments</p>		

EVALUATION SHEET

Date : 17/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.
 not involved.

Your profession Doctor Technician Others

Your name : Dr I J P Ratnayake - Medical Microbiologist

Department : Department of Bacteriology & Mycology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 3 2 ① 5 4 3 ② 1	---
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Not granted to my two sections - Serology & Anaerobic Bacteriology. Not granted to my two sections. Does not arise.
3. Training in Japan Term Frequency Achievement	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	None. Needs revision of policy - Suggest sending specialists on short term visits to prestigious laboratories in Japan for minimum period of three months, on return they can train the medical officers and the technologists.

<p>4. MRI facility Building Others</p>	<p>5 ④ 3 2 1 5 4 3 ② 1</p>	<p>Maintenance, cleanliness of floor and walls of the laboratories. No record room has been supplied.</p>
<p>5. Donated Materials Equipment</p>	<p>5 4 3 ② 1 5 4 ③ 2 1</p>	<p>Very much delayed in supply, in some years article ordered were not supplied.</p>
<p>6. Project as a whole</p>	<p>5 4 3 ② 1</p>	<p>MRI involved in the smooth running of all health institutions in the island, hence help needed to upgrade the assistance to these institutions like biologicals and small equipment (prevention of hospital cross infections)</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>Policy should be changed regarding training of personnel, choice of personnel and the period of training, if future cooperation is granted.</p>
<p>8. Other comments</p>		<p>Selection of medical officers for training in Japan should be reviewed. They should have one year experience in the MRI before being sent them for training. It is extremely important to establish a unit for the preparation of diagnostic antigens and antisera.</p>

EVALUATION SHEET

Date : 11/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute. You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Dr P D M Gunathillake

Department : Anaerobic Bacteriology, Department of Bacteriology & Mycology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 3 2 1 5 4 3 2 1	Unable to comment as I am not directly involved in the project meetings and discussions.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 ② 1 5 4 3 ② 1 5 4 3 ② 1	For anaerobic bacteriology, there was only one short term expert for one week. Long term experts and frequent short term experts will be beneficial.
3. Training in Japan Term Frequency Achievement	5 ④ 3 2 1 5 4 3 2 1 5 ④ 3 2 1	Frequent short term training programmes are helpful to upgrade and to exchange of knowledge.

4. MRI facility Building Others	⑤ 4 3 2 1 5 ④ 3 2 1	---
5. Donated Materials Equipment	5 ④ 3 2 1 5 ④ 3 2 1	---
6. Project as a whole	5 ④ 3 2 1	---
7. Need for future Cooperation. If any, please describe in detail.	Yes	At present anaerobic bacteriology work is done at higher level. Exchange of experts and training in international laboratories are necessary for upgrading of knowledge and to maintain the high level of efficiency.
8. Other comments		---

EVALUATION SHEET

Date : 11/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.
 not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs K Karunaratne

Department : Department of Bacteriology & Mycology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 3 2 1 5 4 3 2 1	Difficult to comment due to unawareness of the details of management.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 ③ 2 1 5 4 3 ② 1 5 4 3 ② 1	Need long term experts who are engaged more in research work. More frequent short term experts would be more beneficial.
3. Training in Japan Term Frequency Achievement	⑤ 4 3 2 1 5 ④ 3 2 1 5 4 ③ 2 1	Instead of the whole training period being confined to a single institute it would be more beneficial to visit several, to gather various applicable methods.

4. MRI facility Building Others	⑤ 4 3 2 1 5 ④ 3 2 1	---
5. Donated Materials Equipment	5 ④ 3 2 1 5 ④ 3 2 1	---
6. Project as a whole	5 ④ 3 2 1	---
7. Need for future Cooperation. If any, please describe in detail.	Yes	Future cooperation is needed in research work and to upgrade and maintain the standard of the routine work.
8. Other comments		---

EVALUATION SHEET

Date : 11/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.
 not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs A de Tissera

Department : Department of Pathology & Immunology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 ④ 3 2 1 5 4 ③ 2 1	When decisions regarding training, staff recruitment, staff allocation etc. are done frank and open discussions involving all departments should be held and the consensus opinions implemented. If a forward plan is drawn up the areas of training, staff recruitment, procurement of reagents, chemicals, equipment etc. could be incorporated into it and thereafter that plan could be followed up.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 ③ 2 1 5 ④ 3 2 1 5 ④ 3 2 1	Short term experts when arranged after due discussion and identification of the area, period, local counterpart etc. would contribute greatly. Specialised techniques, procedures etc. done here by a short term expert will have the benefit of more personnel being trained, that too under the local circumstances.
3. Training in Japan Term Frequency Achievement	5 ④ 3 2 1 5 ④ 3 2 1 5 ④ 3 2 1	After my training in Japan of 9 ½ months in Electron Microscopy I was able to on my return, start the unit and make it functional to MRI and outside. In addition one MO and one MLT was trained in basic techniques. Because of my stay in Japan I was able to promote the procurement of necessary additional equipment, reagents and gather knowledge about basic techniques to initiate a new EM unit at MRI.

<p>4. MRI facility Building Others</p>	<p>5 ④ 3 2 1 5 4 ③ 2 1</p>	<p>The new facility has incorporated modern design and new equipment. Some construction defects have however been found and rectified from time to time.</p>
<p>5. Donated Materials Equipment</p>	<p>5 ④ 3 2 1 5 ④ 3 2 1</p>	<p>The materials and equipment supplied has been adequate and helpful in continuing previous work as well as introducing new techniques.</p>
<p>6. Project as a whole</p>	<p>5 ④ 3 2 1</p>	<p>There has been much improvement after the project. However, for further progress adequate staff allocations and their proper distribution is necessary.</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>Short term experts to work in specific techniques with local counterparts will be useful.</p>
<p>8. Other comments</p>		<p>---</p>

EVALUATION SHEET

Date : 17/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.
 not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs Sepali Gunawardena

Department : Department of Pathology & Immunology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 ③ 2 1 5 4 ③ 2 1	Japanese side : Satisfactory, but too much of paper work is involved. Sri Lankan side : Limitation of staff is a big drawback.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 5 ④ 3 2 1 5 4 ③ 2 1	Long term experts - None. Short term experts - Good, but would have been better if the stay was longer. Frequency - Satisfactory.
3. Training in Japan Term Frequency Achievement	5 ④ 3 2 1 5 4 3 ② 1 5 4 ③ 2 1	Term : Good and appropriate. Language was a barrier to some extent. Frequency : In the future short term training should be proposed to other officers in this field.

4. MRI facility Building Others	5 4 ③ 2 1 5 4 ③ 2 1	Satisfactory.
5. Donated Materials Equipment	5 ④ 3 2 1 5 4 ③ 2 1	Material : Good and useful. Equipment : Some are very useful, where as some are not.
6. Project as a whole	5 4 ③ 2 1	Project as a whole is satisfactory because the knowledge gained is useful for routine and research activities.
7. Need for future Cooperation. If any, please describe in detail.	Yes	Futuer cooperation is most welcome to continue the work.
8. Other comments		1. Extend further cooperation. 2. Provide short term training for other officers. 3. Provide books and literature to improve knowledge in the respective field.

EVALUATION SHEET

Date : 18/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute. You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs P Premachandra

Department : Department of Biochemistry & Nutrition

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 ③ 2 1 5 4 ③ 2 1	On the whole the project management is satisfactory. However, with respect to the Department of Biochemistry and Radio Immuno Diagnostics, it needs further improvement.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	It is important to select experts on fields requested by the Sri Lankan side. No experts were sent to our department, although I have requested for experts on Quality Control and Advanced Techniques in Clinical Chemistry.
3. Training in Japan Term Frequency Achievement	5 ④ 3 2 1 5 ④ 3 2 1 5 ④ 3 2 1	One MLT from my department is under training in Japan. In my opinion, this one year training is very satisfactory. In future short term training should be provided for senior scientists, so that they can get the maximum benefit from the junior trainees. Number of fellowship should be increased. If training is not available in Japan, it should be arranged in another country.

<p>4. MRI facility Building Others</p>	<p>5 4 ③ 2 1 5 4 ③ 2 1</p>	<p>The MRI new building complex has been completed to fulfil the needs of the institute. However, the maintenance of the building and equipment are not satisfactory. Maintenance of equipment is a problem at the MRI.</p>
<p>5. Donated Materials Equipment</p>	<p>5 4 3 ② 1 5 4 3 ② 1</p>	<p>The department has been supplied with certain amount of equipment. I think the department should be equipped to carry out special investigations. Particularly the RIA reagents were not supplied.</p>
<p>6. Project as a whole</p>	<p>5 ④ 3 2 1</p>	<p>Project as a whole is very satisfactory. It has upgraded the standard in most of the departments and it is very essential to continue the JICA assistance to reach the best results from the project.</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>It is necessary to upgrade all the departments by considering the needs of all the departments in the institute. Provision of training experts and material.</p>
<p>8. Other comments</p>		<p>Facilities to the RIA laboratory should be provided for smooth functioning of the RIA laboratory.</p>

EVALUATION SHEET

Date : 18/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Dr D G R Gunawardena

Department : Department of Biochemistry & Nutrition

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 ④ 3 2 1 5 4 ③ 2 1	The major MRI/JICA Lipid Profile Project has gone on smoothly. A valuable contribution would be help in computer analysis.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	The Department of Nutrition has not had any Japanese experts. The availability of short term experts in the following fields would be ideal - 1. Use of HPLC. 2. RIA. 3. Animal experiments to determine protein quantity.
3. Training in Japan Term Frequency Achievement	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	No one from our department has been sent for training in Japan. We would be glad to have the following training courses. 1. Short term (1-3 months) for senior medical officers 2. Long term (1 year) for junior staff e.g. MLTT

<p>4. MRI facility Building Others</p>	<p>⑤ 4 3 2 1 5 4 ③ 2 1</p>	<p>The laboratory facilities are satisfactory. However, extension of the laboratory to accommodate an iodine laboratory is needed.</p>
<p>5. Donated Materials Equipment</p>	<p>5 ④ 3 2 1 5 ④ 3 2 1</p>	<p>Material and laboratory equipment donated are satisfactory. However, we should have reagent kits to conduct RIA tests for T_s, T₄, and TSH.</p>
<p>6. Project as a whole</p>	<p>5 ④ 3 2 1</p>	<p>Satisfactory.</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>At least a 3 year extension of future collaboration is urgently needed in order to consolidate our research.</p>
<p>8. Other comments</p>		<p>Facilities for consultancy with Japanese experts and others in various fields would be greatly appreciated.</p>

EVALUATION SHEET

Date : 21/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Dr E M K Wijeratne

Department : Department of Natural Products & Pharmacology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 ④ 3 2 1 5 4 3 2 1	There are two main lines of research. 1. Bioactivity directed studies of endemic Sri Lankan medicinal plants; Annonaceae, Rutaceae, Compositae, Rubiaceae, Labiatae, Launaceae. 2. Antibiotics from Sri Lankan microorganism.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 5 ④ 3 2 1 5 4 3 2 1	Professor Katayama has introduced methods for the synthesis of anti-cancer derivatives of 4H-pyrazole-5-a-indole.
3. Training in Japan Term Frequency Achievement	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	It is good if the senior research staff can work for short periods up to 6 months in Bioactive Natural Products, at a University in Japan. e.g. Tokyo, Kyoto, Toyama Medical and Pharmaceutical University, Niigata. The isolation could be done here, and structural work could be completed in Japan.

<p>4. MRI facility Building Others</p>	<p>⑤ 4 3 2 1 5 ④ 3 2 1</p>	<p>The building has been well planned and solidly constructed. The working benches and furniture are good. Only defect is that some of the cupboard hinges are giving way and they cannot be purchased locally.</p>
<p>5. Donated Materials Equipment</p>	<p>5 ④ 3 2 1 5 ④ 3 2 1</p>	<p>Since we are working on fungi for the isolation of new antibiotics, we need laminar flow cabinet and chromatochrome for separation.</p>
<p>6. Project as a whole</p>	<p>⑤ 4 3 2 1</p>	<p>Our working conditions have improved immensely, there is no shortage of apparatus and chemicals.</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>In our antibiotic research we would appreciate close collaboration with a Japanese Institute/University in evaluation of the potential of violated products.</p>
<p>8. Other comments</p>		

EVALUATION SHEET

Date : 11/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.
 not involved.

Your profession Doctor Technician Others

Your name : Dr T M J Munasinghe - Head, Dept. of Pharmacology

Department : Department of Natural Products and Pharmacology

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 ③ 2 1 5 4 3 ② 1	As far as the department of Pharmacology is concerned overall project management needs further improvement.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 ① ⑤ 4 3 2 1 5 4 3 ② 1	There has been no long term experts attached to this department from the commencement of the project. The contribution from the short term expert has been very satisfactory. Frequency of visits by short term experts is not sufficient. Many more visits by short term experts are necessary in the future for development of the department and carrying out of new projects.
3. Training in Japan Term Frequency Achievement	⑤ 4 3 2 1 5 ④ 3 2 1 ⑤ 4 3 2 1	The training in Japan was excellent. The term of the training period was very satisfactory and adequate for a long term fellowship. The achievement during this training period was very good. There is a need for further short term training in selected areas in the future. This training can be either in Japan or in any other country where such training is available.

<p>4. MRI facility Building Others</p>	<p>⑤ 4 3 2 1 5 4 3 2 1</p>	<p>The MRI building and other infrastructure facilities are excellent and are very conducive to carrying out research. However maintenance of the building and equipment are not satisfactory in many aspects and needs to be improved.</p>
<p>5. Donated Materials Equipment</p>	<p>5 4 3 ② 1 5 4 3 2 ①</p>	<p>As far as the Department of Pharmacology is concerned the donated materials and equipment are greatly insufficient and inadequate. There is an urgent need for further materials and equipment to be supplied under additional grant aid or technical cooperation.</p>
<p>6. Project as a whole</p>	<p>5 ④ 3 2 1</p>	<p>The project as a whole seems to be functioning smoothly and continuing technical cooperation would be essential at this stage for best results to be obtained from the MRI development project.</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>The development of a research institute like the MRI cannot be achieved overnight. Now there is a well developed infrastructure in the form of a modern well equipped building. At present the major constraint for research is the lack trained research staff and financial constraints. Training of research staff is progressing satisfactorily here and abroad, but further training of new and additional staff may become necessary in the future. Financial constraints are a major drawback for research even in development countries. Continuing technical cooperation we hope, may help at least in part to overcome these restraints now facing the MRI.</p>
<p>8. Other comments</p>		<p>None.</p>

EVALUATION SHEET

Date : 18/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute. You are involved to the Project. not involved.

Your profession Doctor Technician Others

Your name : Dr A Sathasivam

Department : Department of Biological Production (Production Unit)

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 3 2 1 5 4 3 2 1	No project at present.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Null.
3. Training in Japan Term Frequency Achievement	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	One officer Dr Wimalaratne was sent for training and returned in October 1992. She was trained in the Production of Tissue Culture Rabies Vaccine. However, due to her career commitments, she will not be able commence this work until 1995.

<p>4. MRI facility Building Others</p>	<p>5 4 3 2 1 5 4 3 2 1</p>	<p>Building needs more attention specially the air conditioners that give trouble from time to time.</p>
<p>5. Donated Materials Equipment</p>	<p>5 4 3 2 1 5 4 3 2 1</p>	<p>Materials have not been donated for production work. However, apparatus for the production of pyrogen free distilled water has been donated and is being made use of.</p>
<p>6. Project as a whole</p>	<p>5 4 3 ② 1</p>	
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>Yes. If tissue culture vaccine production is undertaken, the pilot study would take one - two years from 1995.</p>
<p>8. Other comments</p>		

EVALUATION SHEET

Date : 18/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs Omala V Wimalaratne

Department : Production Unit

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 4 3 ② 1 5 4 3 ② 1	Japanese side : There is a delay of equipment and reagents. Too much JICA paper work. Sri Lankan side : Limitation of staff and cooperation. Better organisation is required in the future.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	No experts long or short term have arrived so far regarding my project. I strongly recommend both long term and short term experts to help in the future, preferably people who were responsible for my training in Japan. Several visits of short term experts would be better.
3. Training in Japan Term Frequency Achievement	5 ④ 3 2 1 5 4 3 ② 1 5 4 3 2 1	Term : Appropriate. Language was a barrier to a certain extent. Frequency : I propose that another staff officer should have a short term training in the same field of study. If necessary, to have short term training, in areas where more knowledge and experience is required to suit Sri Lankan facilities for the same trainee.

<p>4. MRI facility Building Others</p>	<p>5 4 ③ 2 1 5 4 3 ② 1</p>	<p>Building : Limited space and several changes will have to be done before commencing on the project. Eg. partitioning of lab and fitting air filters. Not appropriate for a vaccine production unit, as maintaining sterility in the present set up will be a problem.</p>
<p>5. Donated Materials Equipment</p>	<p>5 4 3 ② 1 5 4 3 ② 1</p>	<p>Materials : Delay in supply of materials and equipment. Some of the items already supplied by JICA are not appropriate for my project.</p>
<p>6. Project as a whole</p>	<p>5 4 ③ 2 1</p>	<p>Not given me a chance to achieve what I learnt during my training, since I returned.</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>Definitely yes. I would not make use of my training experience and knowledge so far. Help from experts will be greatly appreciated.</p>
<p>8. Other comments</p>		<p>JICA should extend the technical cooperation to set up the tissue culture rabies vaccine unit in the MRI. More short term fellowships in vaccines should be awarded to gain knowledge and experience in research. Donation of books and literature about modern vaccines and arranging visits by Japanese consultants for advice in solving our problems. A Japanese language course in Sri Lanka before training, so that language will not be a barrier.</p>

EVALUATION SHEET

Date : 11/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Dr Mrs S Jayasekera

Department : Animal Centre

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	5 ④ 3 2 1 5 4 ③ 2 1	Has helped to establish and maintain Animal Centre and Feed Production Section.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 ④ 3 2 1 5 4 ③ 2 1 5 4 ③ 2 1	Has been very beneficial in establishing management methods, recording etc. in the lab animal section. Some of the short term experts were sent too early. Therefore, maximum benefit from their visit could not be obtained. Expert on feed was only able to give expertise on machinery. Therefore, the selection of the correct expert will have a better advantage.
3. Training in Japan Term Frequency Achievement	5 4 ③ 2 1 5 4 3 2 1 5 4 ③ 2 1	The training given in Japan has helped in the establishment and management of the animal centre and feed section. Could have achieved more if the time spent there was better organised. (e.g. A training on animal experimentation techniques).

<p>4. MRI facility Building Others</p>	<p>5 ④ 3 2 1 5 4 ③ 2 1</p>	<p>A very sophisticated animal centre has been established. Therefore, it is now possible to produce better quality lab animals. The facilities available for researchers to work in the animal centre are good. But there are a few problems as certain conditions which exist in the tropics and in a developing country have not been thought of when initially designed.</p>
<p>5. Donated Materials Equipment</p>	<p>5 ④ 3 2 1 5 4 ③ 2 1</p>	<p>Most equipment and material useful and good. But some have a few problems.</p>
<p>6. Project as a whole</p>	<p>5 ④ 3 2 1</p>	<p>---</p>
<p>7. Need for future Cooperation. If any, please describe in detail.</p>		<p>To hold a work shop on animal experimentation techniques.</p>
<p>8. Other comments</p>		<p>---</p>

EVALUATION SHEET

Date : 16/06/93

Please check the following items and give us your comment on the Project for Medical Research Institute.
 You are involved to the Project.

not involved.

Your profession Doctor Technician Others

Your name : Mr M M Dassanayake, Principal

Department : School of Medical Laboratory Technology, MRI

Achievement : 5-very good, 4-good, 3-fare, 2-not enough 1-poor

	Achievement	COMMENT
1. Project management Japanese side Sri Lankan side	⑤ 4 3 2 1 5 4 ③ 2 1	The Project plan were discussed at high level staff meetings, where the middle level staff were not represented. At no stage they were allowed to express their views on what wee being planned. The MLTI who actually carry the bulk in Laboratory Technology were not given their due place in projects.
2. Japanese experts Contribution of long-term experts Contribution of short-term experts Frequency of short-term experts	5 ④ 3 2 1 5 4 3 2 ① 5 4 3 2 ①	In future short term experts are needed at the School of MLT. They should be able to conduct lectures and practice in English Language.
3. Training in Japan Term Frequency Achievement	5 ④ 3 2 1 5 4 3 2 ① ⑤ 4 3 2 1	The Training in Japan should be given to the teaching staff to uplift their knowledge. The training programme should be very specific to the requirements of a developing country like Sri Lanka.

4. MRI facility Building Others	5 ④ 3 2 1 5 4 ③ 2 1	1. A reading room / library facility should be set up at the School of MLT. 2. The vacated building space remaining closed in the first floor of the Old MRI building should be converted to the School of MRI. 3. Work at the School is handicapped due to poor water supply. This could be remedied easily.
5. Donated Materials Equipment	⑤ 4 3 2 1 ⑤ 4 3 2 1	Much material and equipment were donated to us by JICA. They were put into use and are being used satisfactorily. Few equipment are necessary in future.
6. Project as a whole	5 4 ③ 2 1	At the beginning a prominent place was proposed for the School of MLT. But when the project was implemented the school component was neglected. Certain benefits were given and objectives achieved at the last lap only.
7. Need for future Cooperation. If any, please describe in detail.		CONTRIBUTION BY JICA IS ABSOLUTELY NECESSARY FOR FURTHER DEVELOPMENT OF MEDICAL LABORATORY TECHNOLOGY EDUCATION AND MANAGEMENT.
8. Other comments		We propose a 5 year programme from 1994-1999 along with the College of Bio Medical Technology of Niigata University, Japan. Any discussion at the top level regarding the improvement of School of MLT - Colombo in future should be done with the presence of Principal.

MEDICAL RESEARCH INSTITUTE

Details of Object Classes	1988		1989		Allocation
	Allocation	Expenditure	Allocation	Expenditure	
Personal Emoluments	6,556,000/-	8,281,210/-	11,653,000/-	9,963,185/-	12,544,000/-
Travelling Expenses	130,000/-	205,200/-	190,000/-	167,420/-	310,000/-
Supplies and Requisitions	384,500/-	978,675/-	6,145,000/-	3,351,800/-	6,385,000/-
Repairs and Maintenance	229,900/-	1,180,555/-	1,315,000/-	1,180,760/-	2,380,000/-
Capital Assets					
Total	7,300,400/-	10,645,640/-	19,303,000/-	14,663,165/-	21,519,000/-

1990	1991		1992		1993	
Expenditure	Allocation	Expenditure	Allocation	Expenditure	Allocation	Expenditure (upto April)
11,169,045/-	20,481,000/-	11,056,087/-	14,504,000/-	12,313,815/-	13,004,000/-	5,242,511/-
244,975/-	310,000/-	292,229/-	435,000/-	434,864/-	410,000/-	266,874/-
6,351,155/-	7,710,000/-	4,955,613/-	8,685,000/-	6,752,705/-	7,880,000/-	267,576/-
3,742,595/-	4,690,000/-	5,212,225/-	5,880,000/-	6,028,550/-	6,415,000/-	2,108,630/-
21,507,770/-	33,191,000/-	21,516,154/-	29,504,000/-	25,529,934/-	27,709,000/-	7,885,591/-

JICA