PREFACE

I consider it a privilege to present this Annual Report for the year 2003-2004.

On the eve of elimination of leprosy Central Leprosy Teaching and Research Institute (CLTRI) has contributed significantly in various spheres of training, case management and research and supported the NLEP program to achieve goal of elimination by 2005.

MDT has brought down the case load drastically and there has been a significant drop in the deformity rate as reflected in the figures for RCS at our Institute.

In the context of integration with General Health Care services, CLTRI and its staff have played a significant role in training Medical and Para-medical personnel both in the Institute and also by rendering consultancy services in different States.

Training in monitoring and evaluation of program, management of reactions prevention and correction of

deformities has continued with vigor and in this context CLTRI will continue to play a pivotal role in the years to come.

With elimination proposed to be achieved by December 2005 on the request of Ministry of Health and Family Welfare, Government of India the undersigned was invited to present a detailed proposal for reorganization. Following in-depth discussions with all the staff a detailed Reorganisation Proposal to diversify into other diseases like tuberculosis, HIV/AIDS etc. was made on July 25th 2003, at Nirman Bhavan. However 40 percent of work will still be in the field of leprosy.

Bed occupancy has remained high with patients being referred to CLTRI for management of the complications of leprosy from all over the country. The staff of the various divisions in CLTRI has without hesitation put forth their best in providing the best of services in the Institute as also elsewhere when called for. My due appreciation to all

the staff for extending their wholehearted cooperation with sincerity and dedication.

Continued encouragement and support by the Ministry of Health and Family Welfare, Government of India, Director General of Health Services and especially Deputy Director General of Health Services (Leprosy) is gratefully acknowledged.

My special thanks to Dr.B.Sekar, Joint Director (Microbiology) for compiling this Annual Report and staff of Computer Sections of this Institute for assistance rendered in the printing and production of this report.

Dr.P.K.OOMMEN, M.S. (ORTHO)
DIRECTOR i/c

List of Officers in position during 2003-2004

Director in-charge : Dr.P.K.Oommen

CLINICAL DIVISION

1.Dr.P. Narasimha Murthy, MBBS, (transferred on 7/10/03)	:	CMO (NFSG)
2 Dr. C.H.D.Vinod Kumar,MBBS (transferred on 20/1/04)	:	CMO(NFSG)
3.Dr. V. Durai, MBBS, MS (Gen. Surg.)	:	CMO (NFSG)
4.Dr. P. Narayana Murthy ,MBBS.,MD (Oncology) (Joined on 20/1/03)	:	CMO(NFSG)
5.Dr. S. Thangiah, MBBS	:	CMO (NFSG)
6.Dr. B. Nirmal kumar, MBBS, MD(Gen. Med.)	:	Medical Officer

SURGICAL DIVISION

1. Dr.P.K.Oommen, M.B.B.S., D.Orth, M.S.(Ortho):		Consultant (Orthopaedics)
2.Dr.(Mrs.) P. Sandhya Murthy, MBBS (Joined on 20/1/03)	:	CMO (NFSG)
3. Dr.R.Nagesh, M.B.B.S.,	:	Senior Medical Officer
4. Dr.T.S.Geetha, M.B.B.S. (on Study leave from 22/07/03)	:	Senior Medical Officer
5. Dr.R.Veerakumaran, M.B.B.S., D.Ortho	:	Medical Officer

EPIDEMIOLOGY AND STATISICS DIVISION

1. Dr. M.K. Showkath Ali,M.B.B.S., DPH	:	Joint Director (Epidemiology)
2. Dr. Dhawal M. Thorat, M.B.B.S., M.D.,	:	Asst. Director (Epidemiology)

LABORATORY DIVISION

1. Dr.B. Sekar, MBBS, MD.,	:	Joint Director (Microbiology)
2. Mr.C.S.Suribabu, M.Sc.,	:	Asst. Director (Biochemistry)

ADMINISTRATIVE SECTION

1. Mr.R. Rajan, B.Com.,	:	Senior Personal Assistant

1. CLINICAL DIVISION

Clinical Division comprises of OPD, Nursing Section, Sanitary Section and Central Kitchen. About 275-300 patients in the sanatorium are under the care of Clinical Division. Total sanctioned bed strength of the Clinical Division is 124. These are distributed to five wards, namely, Investigation Ward, Surgical Ward, Main Hospital, sick Room and Women Hospital. The Investigation Ward has 24 beds and it is mainly used for specialized management of lepra-reaction, investigation for relapses / drug resistance and for other general medical conditions of acute and chronic nature.

Activities undertaken in the Clinical Division are :-

- Out patient care – General / MDT
- In-patient treatment – General / MDT
- Expert management of reactions, relapse / drug resistance etc.
- Teaching activities in leprosy
- Research studies in clinical leprosy
- Collaborative research projects with other divisions.

1.1) Routine performance for the year 2003-04:-

HOSPITAL STATISTICS AS PER MEDICAL RECORDS :- 1.4.2003 TO 31.3.2004

IN-PATIENTS (Wards):

1. Patients remaining as on 31-3-2004	:	105
2. Patients admitted in the Hospital (wards) during 2003-2004	:	865
3. Total No. of patients treated in the hospital(wards) during 2003-2004	:	970
4. Total No. of o patients Discharged during 2003-2004	:	831
5. Total No. of Deaths during 2003-2004	:	17
6. Total No. of patients admitted in G.L.C. Block during 2003-2004	:	242
7. Total No. of patients Discharged from G.L.C. during 2003-2004	:	181

OUT-PATIENT SERVICE (2003-2004):-

Particulars	New Cases	Old Cases	No. of patients Attended from GLC (Block cases)	Other Cases
Men Women Boys Girls	75 28 5 4	7269 2998 54 40	3236	3041
TOTAL	112	10,361	3236	3041

Overall patients attendance in the OPD:-

New	=	112
Old	=	10,361
GLC Block Cases	=	3,236
Other cases	=	3,041

Total No. of cases seen in OPD = 16,750

1.2) RESEARCH PROJECTS UNDERTAKEN BY DR. V. DURAI, CMO (NFSG)

- The effect of Steroid therapy in Leprosy patients – A 10 years retrospective study.
- Sensory loss elicitation in leprosy patients – A comparative study.
- Steroid treatment of neuritis in leprosy - A two regimen study.
- Relapses in MB leprosy cases after WHO – MDT – A comparative study.

2. SURGICAL DIVISION

The Surgical Division comprises of the Surgical Unit, Physiotherapy Section, Artificial Limbs and Footwear Section, X-ray Section and Micro-cellular Rubber Sheets manufacturing Unit.

Surgical Unit has a well-equipped Operation Theatre. There is a male surgical ward comprising 24 beds, where male patients undergoing elective surgical procedures like tendon transfers are admitted. Female patients undergoing elective surgical procedures and those with ulcers are admitted to the Women Hospital where 12 of the 18 beds are allotted to the Surgical Unit. Besides, the above male patients with ulcers are admitted to Main Hospital comprising 25 beds and Sick Room comprising 27 beds. Investigation Ward comprising 24 beds is also used for admitting surgical patients with neuritis and for elective surgical procedures. The bed occupancy rate for surgical care is approximately 105 per annum.

The functions of the Surgical Division can be grouped,viz.:

- Patient care activities.
- Teaching and Training Programs.
- Research.

2.1. PATIENT CARE ACTIVITIES:

The Surgical Division provides both Out-Patients and In-Patients services for leprosy patients who come from different parts of the country besides surrounding regions. Treatment in the areas of deformities and deformity prone conditions are extended. Both surgical and non-surgical methods are applied for treating patients so that permanent disabilities and handicaps are prevented. The surgical out-patient service is provided daily and on an average of 40 to 50 patients attend daily. During the period 1-4-2003 to 31-3-2004 there were 106 admissions to the Surgical Ward and 105 discharges, with no death occurring. The average period of stay per patient was 45 days.

During the period 1-4-2003 to 31-3-2004, 384 surgical procedures were carried out. The various surgical procedures performed are listed below:

I. RECONSTRUCTIVE SURGERY:

Claw finger correction	:	31
Claw thumb correction	:	10
Drop Foot Correction	:	13

II.SURGICAL DECOMPRESSION OF NERVES:

Ulnar Nerve	:	16
Median Nerve	:	3
Posterior Tibial Nerve	:	3

III.AMPUTATIONS:

Amputation B.K. Syme's Amputations	}	29

IV.ULCER SURGERY	:	137

V.MISCELLANEOUS:

Miscellaneous like ear lobe repair, Biopsy, SSG Knee disorganization, MTH resection, Calcaneal shaving etc.	:	142

2.2) PHYSIOTHERAPY SECTION:

The Physiotherapy Section has continued to play an active and very important role in providing Physiotherapy services to both Out-Patients and In-Patients. Besides patient care activities, the staff of this section has also been involved in the various research projects conducted by the Surgical Division by way of evaluation of deformities, assessment of motor and sensory status and

functional assessments. The staff of the section were also involved in the various teaching and training programs conducted by the institute particularly so for the nine months Leprosy Physiotherapy Technicians Course. The staff of Physiotherapy Section were also actively involved in counseling of patients by imparting health education in the care of insensitive hands and feet, an important and decisive factor in the prevention of deformities and disabilities in patients.

During the 12 months period of 1-4-2003 to 31-3-2004, 180 new patients were seen, examined and treated. On an average about 35 patients were attended to daily in Physiotherapy Section.

The treatment modalities employed are hand and foot exercises, wax therapy, oil massage, short wave diathermy, ultra-sound therapy, transcutaneous nerve stimulation, infra-red treatment, interferential therapy and electrical stimulation of muscles and nerves. Various modalities of treatment given and number of sessions for each, are given below.

1	New Case Registration	:	180
2	Hand Exercise	:	3733
3	Foot Exercise	:	1068
4	Wax Therapy	:	3714
5	Electrical Stimulation	:	844
6	Short-wave Diathermy	:	535
7.	Infra Red Radiation(I.R.R.)	:	90
8.	Interferential Therapy(IFT)	:	12
9	Cylindrical /Lumbar Traction	:	63
10.	Cylinderical Splints	:	179
11	MCP Blocks	:	39
12	Thumb-Web Splint	:	17
13	Cock-up Splint	:	2
14	Functional Position Splint	:	3
15	Hand Slabs	:	39
16	Foot Slabs	:	17
17	Below Knee Plaster casts (B.K.P.)	:	52
18	Spiral Splint	:	106
19	Thumb /Eye/Facial Slings	:	39
20	Hand Assessment	:	763
21	Foot Assessment	:	712
22	General Cases	:	41

2.3 RADIOGRAPHY SECTION:

The X-ray Unit attached to the Surgical Section caters to the needs of all clinical units in the institute. A SIEMEN'S 500 m.A. X-ray machine with micro-processor controls, which can be used besides taking routine X-rays for tomography work, is functioning, in addition there is also a Portable X-ray Plant (Siemen's 30 m.A).

During the period 1-4-2003 to 31-3-2004, 845 X-rays were taken for 700 patients. They are as follows:-

Lower Extremities	:	477
Upper Extremities	:	105
Chest	:	99
Various spines	:	97
Skull	:	21
Pelvis	:	42
Abdomen and KUB area	:	4

2.4) MICRO-CELLULAR RUBBER MILL:

The Micro-Cellular Rubber Mill is a small production unit manufacturing micro-cellular rubber sheets of the quality needed for use in the manufacturing of footwear for leprosy patients. During the period 1-4-2003 to 31-3-2004, this unit has processed 890 nos. of black coloured Micro-

cellular rubber sheets to our specifications of 15º Shore hardness. Out of this 442 sheets were used in Footwear Unit of CLTRI and 515 sheets were supplied on demand to other organisations involved in leprosy work under NLEP. At the end of March,2003 there were a balance of 162 sheets and at the end of March,2004 there was a balance of 95 Sheets.

Balance on 31-3-2003	Total number of sheets produced 1-4-2003 to 31-3-2004	No. of sheets issued to FW section, CLTRI	No. of sheets issued to other organisations	Balance as on 31-3-2004
122	890	442	515	95

The demands from other organisations under NLEP for supply of MCR Sheets are increasing. However, since our production capacity was limited we were not able to meet all the demand.

The MCR mill machinery donated by British Council Department for International Development is yet to become operational due to paucity of funds for new electrical installation.

2.5) ARTIFICIAL LIMB AND FOOTWEAR CENTRE:

The Artificial Limb and Footwear Centre supplied 899 items of footwear and prosthesis. In addition about 10 to 15 minor repair works on footwear is attended to daily. Details of different types of footwear supplied to patients is listed below:-

Different types of Microcellular Rubber Sandals	:	750
Different types of Orthosis and Prosthesis	:	20
Arch support Metatarsal bars and other modifications	:	121
Major repairs of the Prosthesis and Orthosis	:	8
		1760

Since mid 1992, one of the Cobblers has been deputed to go with the field clinic teams to the villages. This is continuing with at least one visit every month ensuring that all the clinics in the field area are covered in one year. During these visits measurements for footwear for patients is taken and the footwear is supplied during the subsequent visit.

Due to staff shortage footwear and prosthesis are supplied late. On an average a patient has to wait for 3 weeks after measurements are taken before he receives regular footwear. For patients needing P.T.B. prosthesis the waiting period is nearly 1 year. It is hoped that posts requested for, will be filled up so as to reduce the waiting period for patients to collect their footwear and prosthesis.

All trainees attending different training programmes in the institute are assigned time in the footwear section where the orthotic-prosthetic technician demonstrates the use of different types of footwear and prosthesis and how to make them.

2.6) TEACHING AND TRAINING:

The staff of surgical division took an active part in the various teaching and training programs conducted by the institute. Major responsibility for conducting the 4 weeks Reconstructive Surgery Course for surgeons and the nine months Leprosy Physiotherapy Technicians Course was borne by the staff of surgical division.

2.7) ON-GOING RESEARCH PROJECTS:

Decompression of posterior tibial neuro vascular complex to prevent recurrent plantar ulceration.

Lateral popliteal nerve decompression and steroid therapy – a comparative study effect recovery of nerve paresis.

2.8) PROPOSED RESEARCH PROJECTS:

- Microsurgical transfer of free nerve grafts to aid recovery of sensation.

- Microsurgical, free sensory flap transfer for prevention of recurrent plantar ulcers.

- Use of Autogenus muscle grafts to aid sensory recovery.

- Use of Collo Dermis in the management of Stasis Ulcers in leprosy.

The proposed research projects are not carried out due to lack of budget allocation for procurement of micro-sutures for undertaking operation through microscope. Budget allocation, if made available, there is scope for research.

2.9) Central Scientific Library

During the year 2003-04, CLTRI added to its stock in the Central Scientific Library 108 books and 380 Bound Volumes of Periodicals. The Library subscribed to 45 foreign and 10 Indian Journals. In addition 4 foreign and Indian Journals were received on gratis.

The total collection of CLTRI Central Library is 2420 books and 4108 Bound volumes of periodicals, 154 Microfilm copies of articles and 420 Reprint of articles. The Library received 60 foreign, Indian periodicals and WHO Publications on subscription basis and 8 as gratis.

i) Library Utilization:

During the period under report 4211 books and 3803 periodicals have been issued to the readers and about 14 different topics of bibliographies on leprosy have been prepared and issued to Medical Officers/Zonal Officers and trainees.

ii) Inter-Library Loan System:

The Library has Inter-library Loan arrangement with all medical Institutions and British council Library, Chennai.

iii) **Literature References Facilities:**

As in previous year, the library continued to extend its facilities for reading and references to the scientific and research personnel working in various disciplines.

3. DIVISION OF EPIDEMIOLOGY AND STATISTICS

There are 3 sections functioning in this division. They are

a) Monitoring and Evaluation Unit
b) Rural Field Operation Area
c) Training

3.1) MONITORING AND EVALUATION

Monitoring and Evaluation section was established in the year 1986. Monitoring and Evaluation unit has done pioneering work in developing Computerised Management Information System in leprosy. After the introduction of simplified information system by DGHS (Leprosy Division) the computerized simplified information system(CSIS) was developed and implemented in CLTRI for evaluation of NLEP implementation in Tamil Nadu and Andhra Pradesh. It is proposed to implement the CSIS at all State Leprosy Office for decentralized monitoring and evaluation of NLEP and the proposal has been sent to DGHS for approval.

3.1.1) Routine Performance

a. Computerised Simplified Information System (CSIS) for Leprosy

After the introduction of Simplified Information System (SIS) by DGHS in 2002, it is felt to have a systematic data entry, processing and generation of reports using

computer. In this situation CLTRI has developed a software called Computerised Simplified Information System (CSIS) which provides complete automation of SIS at State and National level. The main objective of CSIS is user friendly data entry, generation of reports such as NLEP statistics, NLEP indicators and MDT drug stock position etc.

Using CSIS software, feedback of NLEP performance of all districts in Tamil Nadu and Andhra Pradesh states were generated in CLTRI during the year 2003-2004 and sent to concerned state and districts. The following salient points were observed.

8 Districts in Tamil Nadu and 1 District in Andhra Pradesh recorded P.R $\leq$1.

18 Districts in Tamil Nadu and 9 Districts in Andhra Pradesh recorded P.R. between 1 and 2.

None of the Districts reported more than 1 P/D ratio. It reveals the treatment compliance is good in all the districts.

15 Districts in Andhra Pradesh and 6 Districts in Tamil Nadu recorded the New Case Detection Rate (NCDR) distribution, greater than or equal to 3 per 10000.

No sufficient buffer stock is maintained in some of the districts.

b. The computerized database of patient care card data of CLTRI RFOA were updated up to March 2004 and used for all research work and report preparation.

c. Actively involved in preparation of various research reports and documents for presenting at the conference.

d. Data collection, data entry, processing and preparing reports of WHO's research projects that are being undertaken by this division.

e. Participated in training of Medical Officers, Non-Medical Supervisors and House Surgeons.

f. Provided technical assistance to other divisions including administration for computerization and database maintenance.

g. Extending expertise on computerization and statistical analysis of research work.

3.1.2.) Research Analysis Undertaken

CLTRI is maintaining an electronic databases on patients registered for treatment since 1986 in our RFOA and MPR of Andhra Pradesh and Tamil Nadu. The patient data and MPR are being fed into computer using computerized simplified information system.

The following study analysis were undertaken:

1) A study on trend and factors influencing relapse in leprosy

Showkath Ali M.K, Thorat D.M., Subramanian M.,Parthasarathy G., Uma Selvaraj.,Prabakar V.

A retrospective analysis of data belonging to rural field operation area, Central Leprosy Teaching and Research Institute, Chengalpattu was carried out to determine relapse after MDT and its significance with other variables. The study included 3248 leprosy patients successfully completed treatment during 1987-2003, of which 2892 were PB and 356 were MB cases. Total 58 cases of relapse were reported with a crude cumulative relapse rate of 1.78% and crude cumulative relapse rate of 1.9% and 0.84% respectively in PB and MB leprosy for 16-year period of follow-up. In PB cases 68% of relapses were reported in first 3 years of RFT. The person year relapse rate was highly significant with number of skin lesions ($p<0.0002$) and nerve involvement ($p<0.0002$). The person year relapse rate did not differ significantly between PB and MB leprosy, male and female and between child and adult cases. Cohort analysis revealed a decline in relapse rate with increase in duration after RFT. In conclusion, the risk of relapse was very low in both PB and MB leprosy, which emphasizes that proper counseling about signs and symptoms of relapse during RFT is adequate to combat the problem. Majority of relapses occurred in first three years after RFT and the number of skin lesions and involvement of nerve were the main risk factors for relapse.

2) Distribution of leprosy disease when prevalence declines

M.Subramanian, E.Sathish Kumar and M.K.Showkath Ali

The distribution of leprosy disease is considered to be heterogeneous. But the analysis of sample surveys carried out in recent years shows that the disease distribution was not clustered. A detailed study on the variation of distribution of leprosy would facilitate the programme for development of certificate / evaluation procedure for elimination. An attempt has been made to study the variation of Prevalence in a computer generated hypothetical population. A database containing one million population records was generated and disease was randomly introduced depends on the different prevalence rate. The population was divided into different clusters with size of 10000. The prevalence rate of 20, 15, 10, 5, 2 and 1 per 10000 population were considered for analysis.

It was found that the distribution of leprosy prevalence follows normal distribution except in 2 and 1 per 10000 population. There is no significant difference on variance of prevalence between 20 and 15 per 10000 population. But there is significant difference between the clusters with prevalence of 15 and 10, 10 and 5, 5 and 2 and 2 and 1 on variance. It implies that the variance is declining when prevalence is declining. In other words higher the prevalence, higher the variation in the distribution of disease.

This analysis results will facilitate the planning of NLEP activities in terms of evaluation of goal of elimination or monitoring the sustainability of elimination.

3) A Method for scoring the Performance Evaluation of NLEP in a District

M.Subramanian, M.Muthukumar, E.Sathish Kumar and M.K.Showkath Ali

The terminal phase of leprosy elimination programme is tough and challenging. Although the NLEP has made tremendous progress in MDT implementation resulting cleaning of almost all old leprosy cases, the task remains for achieving the elimination goal which needs concerted effort to ensure that there is no resurgence of disease. The dramatic fall in prevalence and other hard pressing health related issues is likely to develop complacency in leprosy services.

In this context, it is imperative to have a ranking measurement encompassing the performance of NLEP units. The score 100 (maximum) was divided for different NLEP indicators viz. Prevalence, NCDR, New MB, New Child, New deformity and New Male. The indicators PR/NCDR ratio, New MB, New Child, New deformity and New Male were given the score of 25,20,20,15 and 20 respectively based on epidemiological / operational factors.

The scoring method was tested in the Districts of Andhra Pradesh, and Tamil Nadu State. The score for the

year 2002-2003 is ranging from 81.7 to 99.7 in Tamil Nadu and 82.3 to 99.7 in Andhra Pradesh. The score of above 95 indicate the performance is progressing towards the elimination of leprosy and lower scores indicate the need for improvement in its performance.

4) Computerised Simplified Information System (CSIS) Using MPR of NLEP

E.Sathish Kumar, M.Subramanian, M.Muthu Kumar and M.K.Showkath Ali

The Monitoring and evaluation of NLEP is vital at Central / State level for achieving the elimination and sustaining the elimination of leprosy. Moreover the terminal phase of NLEP and integration of leprosy with PHC system requires a simple and effective management of Monthly Progress Reports (MPR) based monitoring system. DGHS and CLTRI developed a user-friendly computer software for monitoring the NLEP at District / State / National level with the following objectives.

- To Facilitate State / National level MPR Consolidation
- To Generate Automatic Feedback from State to Districts and National to States / Districts.
- To Generate Drug Stock Management Reports
- To Achieve Electronic Data Transfer of MPR from State to National level
- To Create a National Level Data Bank for NLEP

The monitoring of districts / states are more user friendly and facilitates quick decision-making. There is no time lag in receipt of MPR and processing. Further, the electronic data transfer provided in the CSIS will ensure no missing of data entry. This methodology eventually leads to ceasing of monthly hassle on feeding and generation of indicator at central office. The operation of procedure of CSIS will be presented in the conference.

5) Out come of ROM field trial in PB leprosy with 2-5 lesions in CLTRI.

C.Balakrishnan, Dr.M.K.Showkth Ali C.Ramadoss, V.Prabakar, M.Alikhan, S.Ramesh, and M.Subramanian

The ROM drug trial for PB leprosy with 2-5 lesions had been conducted in CLTRI from April -1997 to October 2003. A total of 250 cases (Adult-200, Child-50) have been included in the trial by double blind method. The initial Intake was completed within 6 months and subsequently 7 follow-up was completed at the interval of 6 month.

In the drug trial, one group was treated with ROM (Rifampicin, Ofloxacin and Minocycline) and the other group with regular MDT. The objective is to study the effectiveness of ROM compared with regular MDT

It is found that among Adult cases the disapperance of skin lesion were 78%, 82%, 92%, 97% and 99% for lesion1, lesion-2, lesion-3, lesion-4 and lesion-5 respectively in the final follow-up (42nd Month).

Similarly, for Child cases the disapperance of skin lesion were 82%, 85%, 93.5%, 97.8% and 97.8% respectively.

3.1.3) Proposals Made From Monitoring and Evaluation Unit

a) Monitoring & Evaluation of highly endemic districts in Tamil Nadu through micro level data.

b) Periodical LEM / Data Validation Exercise in Tamil Nadu, Andhra Pradesh, Andaman & Nicobar Islands through out the duration of 10th five year plan.

c) Implementation of CSIS in all State Leprosy Office.

d) Short-term training programme in HMIS for all State / UTs Programme Managers and Data Entry Operators.

e) Establishing database in Leprosy (National level) at CLTRI for providing all Statistical / Epidemiological information through out the Nation.

f) Short-term training programme for Leprosy Programme Managers / Statisticians of all State / UTs.

g) Development of Health Management Information System (HMIS) for other communicable diseases.

3.1.4) A short note on the line of approach and Methodology of leprosy elimination:

The PR has come down at National Level and some of the States, had already achieved the Elimination Level. But there is no standard method to quantify the progress towards the goal of Elimination of Leprosy at State level. WHO and its TAG has proposed MLQAS to validate elimination of leprosy in India as there is no standard method to assess low level of leprosy.

Modified Lot Quality Assurance Sampling (MLQAS) procedure would be Pilot studied in the Four States viz., Manipur, Rajasthan, Punjab and Gujarat (MRPG) as recommended by WHO and will be carried out by CLTRI.

3.2) RURAL FIELD OPERATIONAL AREA (R.F.O.A)

The RFOA covers a population of 1.5 Lakhs in and around 'KUNRATHR', located in the outskirts of Chennai, divided into 10 sectors, each sector covering around 15 thousands population. The CLTRI Field Office is functioning at KUNRATHUR, the Head Quarters of the RFOA with the following Team.

The field section has been carrying out routine field work (case detection activities like total population survey, school survey etc., and case holding activities like treatment through mobile clinics and follow-up of the cases), field trials and field training activities in the CTLRI

RFOA and also special activities like SAPEL, LEC, LEM, Medical / Skin camps in other areas under the directions of the Director, CLTRI and / or the DGHS, New Delhi.

The DGHS (Leprosy Division), New Delhi, vide their letter No.Z.16025/6/2002-Lep. Dt. 18.03.2003, conveyed their decision that the CLTRI would continue to use field operation area (ie. RFOA around KUNRATHUR) for various training and research activities. Accepting the decision, the Head of the Division of Epidemiology and Statistics decided that the control activities (case detections and holding) would be continued till 31.03.2004 (i.e till the completion of the on going current Epidemiological Survey) in the RFOA in addition to the training and research activities.

3.2.1.) Routine Activities (in RFOA)

Population Enumerated	:	1,56,640
Population Examined	:	44,810

		PB	MB	Total
New cases detected and registered under treatment	:	33	12	45
Old cases under treatment	:	17	11	28
Cases deleted under RFT	:	53	17	70
Cases deleted under Others	:	1	2	3

3.2.2) POD Activities

Ulcer care services : 67
MCR Footwear supply : 4

Our team (1 Field Supervisor, 1 Field Staff & 1 Physiotherapist) attended the POD camps in the following PHCs

Name of the PHC	District
THRUPUKUZHI	(Kancheepuram District)
EGUVARPALAYAM	(Tiruvallur District)
SADRAS	(Kancheepuram District)
MINJUR	(Tiruvallur District)
PAVANJUR	(Kancheepuram District)
BUDUR	(Tiruvallur District)
ZAMIN ENDATHUR	(Kancheepuram District)
NARVARI KUPPAM	(Tiruvallur District)
MANAMPATHY	(Kancheepuram District)
BEERAKUPPAM	(Tiruvallur District)
KANCHEEPURAM HQ	(Kancheepuram District)

3.2.3) Field Training

Two batches of NMS Trainees (One batch – 17 from Tamil Nadu and another batch – 3 from Nagaland, 3 from Karnataka & 1 from Tamil Nadu), 3 batches of DLO Trainees (2 from Karnataka, 7 from Maharashtra and again 4 from Maharashtra). One WHO fellow from

Bangaladesh and 8 students of M.Sc., (Bio Chemistry) were imparted field training in our RFOA.

FI, NMS and JFI were involved as faculty for various training programs conducted in CLTRI.

3.2.4 On-going Research Project

The 42nd month follow up of the multi centric field trial "ROM" therapy for PB leprosy with 2 – 5 lesions was undertaken and the interim report was submitted. At the end, the final report was also submitted on 12.12.2003 to the NIE, Chennai.

3.2.5.) Other Activities

IEC activities and K.A.P study were conducted in 40 villages of our RFOA, with the help of the NMS trainees.

Monitoring of drug compliance (Tablets count and urine spot test) was done among 45 patients of our RFOA, during the NMS trainees' field visits.

Our field team conducted 'Exhibition on Leprosy" – Interactive stall as a part of the Southern Railway Health Camp in Tambaram Railway Junction.

3.2.6.) Mobile Clinic

Mobile Clinic is a part of field activities, formed to deliver the MDT and other treatment services in the RFOA to the Leprosy cases and the community in their vicinity.

The RFOA was divided into 3 circuits for conducting mobile clinics; each circuit having an average of 4 drug delivery points (DDPs) and each DDP covered by the mobile team once in 28 days. Generally, the patients need not move more than 2-3 Kms to get the services of the mobile team.

The mobile team consists of Medical Officer, Field Supervisory Staff, Para Medical Workers, Health Visitor, Lab. Technician, Cobbler, Attender and Driver.

The functions of the Mobile clinic are :

a) Examination and diagnosis of all cases
b) Treatment and RFT of all confirmed cases
c) Surveillance of all RFT cases
d) Health Education, IEC, in clinical points
e) Prevention of Deformity
f) Self care advice
g) Ulcer management
h) Reaction management
i) MCR footwear supply
j) Referral to CLTRI for surgical correction and other complications

3.2.7) Proposals & Reports

Assisted in the preparation and submission of the following:

a) Final report on the "Validation of Elimination of Leprosy in Himachal Pradesh and Meghalaya State, using the LQAS method"

b) Proposal for "SAPEL in Kavaratti, Agatti, Kadmat, Kiltan, Chetlet & Minicoy Islands of Lakshadweep U.T".

c) Proposal for SAPEL in solon district of Himachal Pradesh

d) Proposal for "LEM exercise in the Southern States & U.Ts"

e) Proposal for the "Assessment of POD care services through the GHC system"

f) Proposal for the "Assessment of IEC for leprosy through the GHC system

g) Proposal for CLTRI as one of the centers for the "Multi-centric field Trial for the uniform MDT Regimen for the leprosy patients"

h) Report on Technical support from CLTRI to Lakshadweep Island [comprehensive report on CLTRI activities in Lakshadweep since 1989, incorporating Epidemiological analysis, highlighting reasons for high PR and suggestions for reaching elimination goal in the U.T early]

3.3) TRAINING SECTION

Training activities undertaken During April 2003 to March 2004

S No.	Category of service	Number of participants attended the training
1.	District Leprosy Officer Training course	1). 2 DLOs from Govt. of Karnataka underwent 5 days training during 18-08-03 to 22-08-03 2) 7 DLOs from Govt. of Maharastra underwent 5 days training from13-10-03 to 17-10-03. 3) 4 DLOs from Govt. of Maharastra underwent 5 days training during 15-12-03 to 19-12-03
2.	Medical officer training course	Nil

S No.	Category of service	Number of participants attended the training
3.	Non Medical Health Supervisor's training course	1). 15 candidates from Govt. of Tamil Nadu and 2 candidates from Gremaltes, Chennai underwent training from 01-05-03 to 30-06-03. 2). 3 candidates from Nagaland, 3 candidates from Karnataka and one candidate from Gremaltes, Chennai underwent training from 01-08-03 to 30-09-03.
4.	Health workers training course	Nil
5.	Laboratory Technician training course	1). 14 Candidates who have completed their LT training were relieved on 30-06-04 2). 13 New Candidates Joined for LT Training during July 03.
6.	Physiotherapy Technician training course	2 candidates from Andhra Pradesh underwent training from 01-07-03 to 31-03 -04
7.	Reconstructive surgery training course	Nil

3.3.1) HOUSE SURGEON INTERNSHIP POSTINGS From Chenglapattu Medical College, Chengalpattu DURING 03-04

50 House surgeons completed 5 days internship posting at different period of times.

3.3.2) ONE DAY VISIT OF MEDICAL AND NON-MEDICAL STUDENTS DURING 2003-2004.

1) 23 DMLT Students from Dr.Raj Paramedical Institute, Chrompet, Chennai visited 0n 03-04-03.

2) 26 DMLT Students from Deepam College, Tambaram visited 0n 10-04-03.

3) 27 B.Sc. Nursing Students from Indira Gandhi Open University visited 0n 23-05-03.

4) 18 DMLT Students from Chennai Institute of Education, Chennai visited 0n 19-06-03.

5) 42 B.Sc. Nursing Students from Adhiparasakthi college of Nursing, Melmaruvathurvisited 0n 07-08-03.

6) 20 Diploma in Nursing Students from Lakshmi Ammal College of Nursing, Chenglpattu visited 0n 09-10-03.

7) 30 Multipurpose Health Worker Trainees from Govt. Head Quarters Hospital, Kancheepuram visited 0n 15-10-03.

8) 20 Diploma in Nursing Students from Anbarasu Institute of Para Medical Sciences, Chennai visited 0n 16-10-03

9) 26 BPT Students from Aalim Mohamed Salegh College of Physiotherapy visited 0n 30-10-03.

10) 50 Pre Final MBBS students from Chengalpattu Medical College Underwent 2 days orientation training on 22-10-03 and 23-10-03.

11) 4 Diploma in Physiotherapy students from SLR & TC, Karigiri visited During Feb. 04.

12) 30 DMLT Students from Christian College, Tambaram visited on 08-03-04.

13) 25 PG DMLT Students from Christian College, Tambaram visited on 09-03-04.

14) 22 DMLT Students from Tambaram Institute Of Paramedical Sciences, Tambaram visited on 18.03.04.

3.3.3) WHO FELLOWSHIP VISIT DURING 03-04

One Doctor from Bangladesh underwent 5 days training in Lab. Aspects of Leprosy during the month of November 03

3.3.4) SPECIAL TRAINING

3 days POD training was conducted during 24 – 26, June 2003 for Medical Officers from 10 districts of Tamil Nadu.

4. LABORATORY DIVISION

Laboratory division is basically involved in the investigations of cases from out / inpatient departments and field operation area of CLTRI for leprosy related and other routine investigations and also involved in the basic and applied research activities in leprosy. This division has sections like Microbiology, Mycobacteriology, Serology, Clinical pathology, Skin Smear, Histopathology, Molecular-biology Haematology, Biochemistry, Immunology and Animal House.

The Molecular Biology section of the Division has been upgraded with the basic facilities for the isolation of DNA, PCR amplification and Gel documentation. These facilities are being utilized for various institutional projects and also in the collaborative and Post Graduate Course projects.

The Lab. Division is well equipped. Facilities for different kinds of microscopic studies like Light, Dark-field, Phase contrast, Fluorescent microscopies are available. Facilities for different immunological studies involving immno-flourescence tests, different types of electrophoresis, etc. are available. Sophisticated instruments like HPLC, Atomic absorption Unit, Ultra centrifuge, Phast gel system etc. are available. Facilities for isolation, characterization and drug sensitivity tests for cultivable Mycobacteria also exist.

A separate Animal House with different kinds of animal colonies with provisions for animal experimental investigations including Mouse Foot Pad inoculation for the viability and drug susceptibility tests for M.leprae is also available. This section carried out WHO sponsored multi centric drug trials involving Mouse Foot Pad inoculation.

The Lab. Division has a separate, isolated and furnished Radio-active room with facilities for radioisotopic studies. Facility for frozen sectioning of biopsy material also exists, in addition to routine histo-pathological service.

In the reporting year, the new research projects proposed from Lab. Division and got approved by the Scientific Committee, have been continued. Further Collaborative Projects and Post Graduate Course Projects have been carried out with the due permission of Director, CLT&RI

4.1) ROUTINE PERFORMANCE 1-4-2003 TO 31-3-2004

Sl. no.	Departments / sections	Total no. of investigations
A	CLINICAL PATHOLOGY	1663
B	SKIN SMEAR	451
C	HAEMATOLOGY & SEROLOGY	4130
D	MICROBIOLOGY	150
E	HISTOPATHOLOGY	64
F	MOLECULARBIOLOGY	1161

4.2) RESEARCH PROJECTS

4.2.1) ON-GOING RESEARCH PROJECTS

i) STUDY ON SURVEILLANCE OF RIFAMPICIN RESISTANCE, AMONG SMEAR POSITIVE MULTI-BACILLARY LEPROSY CASES OF RELAPSE AND OTHER HIGH-RISK GROUPS.

This project was proposed and presented in the Scientific Advisory Committee meeting.

AIM AND OBJECTIVE

General objective:

To examine the magnitude of rifampicin resistance among the reported cases of MB relapse/ treatment failure/ non-responders/ MB cases with high initial B.I.

Specific Objective:

To study rifampicin resistance, using the PCR based rapid molecular-biological techniques.

Work carried out

Standardization of PCR for M. leprae rpoB gene was carried out using Brpo22 and rpo 32 primers, with skin biopsy samples. Initially, Seven skin biopsy samples were

processed from suspected cases of relapse. M. leprae DNA from the samples were extracted by enzymatic procedure.. PCR for rpoB gene was carried out. The PCR products of 390 bp were run on agarose gel with ethidium bromide along with the molecular weight marker and visualized using UV transilluminatior. Four samples yielded PCR products. Single Stranded Confirmation Polymorphism (SSCP) a screening test for rifampicin resistance was standardized. 3 samples were processed for SSCP. After this we further processed 3 more skin biopsy samples from suspected cases of relapse. Out of which one sample yielded rpoB product.

Future plan

We plan to continue the project by applying M. leprae rpoB PCR among high risk MB case of leprosy for the detection of rifampicin resistance.

(Investigator: Dr. B. Sekar, Co-investigators: Dr. V. Durai, Mr. K. Arunagiri, Mr. D. Anandan)

ii) APPLICATION OF POLYMERASE CHAIN REACTION (PCR) BASED MOLECULAR BIOLOGICAL TECHNIQUES IN THE DIAGNOSIS OF LEPROSY.

This project was proposed and presented in the Scientific Advisory Committee meeting.

General Objective:

To establish the PCR based molecular biological techniques in detection of M.leprae specific DNA in the clinical samples of different types of leprosy cases.

Specific Objective:

To study the significance of PCR based molecular biological laboratory technique in supplementing the clinical diagnosis .

Work carried out

Standardization of PCR for M. leprae specific repetitive sequence was carried out using skin biopsy samples. Initially we processed 8 skin biopsy samples, M.leprae DNA from the samples were extracted by enzymatic procedure and from some samples by Freeze-boil method also. A 372 bp PCR product of M. leprae-specific repetitive sequence was amplified using ML1 (forward) and ML2 (reverse) primers. The PCR products were run on agarose gel with ethidium bromide along with the molecular weight marker and visualized using UV transilluminatior. All of them yielded PCR products for M. leprae-specific repetitive sequence. After this we further processed four-skin biopsy sample, of which 3 of them were skin smear positive. All the skin smear positive samples yielded PCR product.

Future plan

We plan to continue the project by applying M. leprae specific PCR in other clinical samples and also among PB leprosy and doubtful cases.

(Investigator: Dr. B. Sekar, Co-investigators: Dr. V. Durai, Mr. K. Arunagiri, Mr. D. Anandan)

4.2.2) COMPLETED PROJECTS

i) COMPARATIVE ANALYSIS OF THE ROLE OF POLYMERSE CHAIN REACTION AND FINE NEEDLE ASPIRATION CYOTOLOGY IN THE LABORATORY DIAGNOSIS OF EXTRA-PULMONARY TUBERCULOSIS

This study was taken up as a collaborative project with the Department of Pathology, Medical College, Chengalpattu, Tamil Nadu, with the due permission of Director, CLT& RI.

Objective: To evaluate the role of PCR in the laboratory diagnosis of Extra Pulmonary Tuberculosis comparing with Fine Needle Aspiration Cytology (FNAC).

Work carried out:

Standardization of PCR for M.tb specific IS 6110 sequence of M.tb complex using culture isolates was carried out. A total of 33 Fine Needle Aspirates were processed for PCR and FNAC. PCR was performed to

amplify IS 6110 element, specific for M.tuberculosis complex using T4- (Forward Primer) and T5- (Reverse Primer). The amplified product of 123 bp was run by electrophoresis and documented. FNAC was performed using standard procedure.

Results:

Out of 33 samples 21 (64%) were positive for TB both by PCR and FNAC and 4 (12%) samples were negative by both the methods. However, 5(15%) samples were positive by PCR but negative by FNAC and 3 (9%) sample showed evidence of TB by FNAC but negative by PCR. There was a moderate agreement between the results of PCR and FNAC (kappa = 0.45; $p < 0.004$). On comparison with clinical diagnosis the agreement was observed to be more significant with PCR (kappa=0.34; p=0.022) than with FNAC (kappa=0.13; p=0.22).

Conclusion:

PCR for mycobacterium tuberculosis complex, a rapid and sensitive technique can be employed in the lab diagnosis of extra pulmonary tuberculosis.

(Investigators : Dr. B. Sekar, Dr. S. Ravi, Mr. K. Arunagiri, Mr. D. Anandan)

ii) DETECTION OF SALMONELLA SPP. IN FAECAL SAMPLES BY SHORT CULTIVATION – POLYMERASE CHAIN REACTION PROCEDURE

This study was undertaken as a University of Madras Postgraduate course project, with the due permission of Director, CLT& RI.

Objective: To standardize a PCR based rapid procedure to detect Salmonella Species in faecal samples.

Work carried out:

We carried out a combined short cultivation and PCR procedure using prepared faecal sample seeded with known number of 10^5 to 10^2 organism per ml of Salmonella typhimurium. Pre enrichment was done in Selenite F broth (selective) and Buffered Peptone water (non-selective). After 0.2,4,6 and 24 hrs of incubation, subculture onto Bile salt agar and PCR were done from both the selective and non selective enrichment media. PCR was also done directly from prepared faecal samples. DNA for PCR was extracted by rapid boiling method. Amplification of Salmonella specific DNA for Salmonella invA and invE genes was performed. The amplified product of 457 bp was run by electrophoresis on 1% agarose gel with 0.1% ethidium bromide and documented.

Results: Subculture from both the enrichment media showed growth from 4 hrs of incubation. PCR products were found from 2 hrs onwards from all samples sub-cultured from Buffer Peptone Water. However, no PCR products were found in direct analysis of prepared faecal samples and in samples sub-cultured from Selenite F borth till 4 hrs of incubation (except in 10^5 org/ml). Thus, selective enrichment and direct prepared faecal samples were found to have inhibitory substances for PCR.

Conclusion:

The combined short cultivation and PCR in non-selective medium could be applicable in the rapid identification of Salmonella spp. from faecal samples.

(Investigators : Dr. B. Sekar, Mr. K. Arunagiri, Mr. D. Anandan, Ms. S. Kirupa Devi)

4.3) EQUIPMENT ACQUIRED:

GEL DOCUMENTATION SYSTEM INSTALLED IN THE MOLECULAR BIOLOGICAL SECTION DURING FEBRUARY 2004.

4.4) Teaching and Training

Laboratory Division is also involved in teaching activities. One year Medical Laboratory Technician training course and short-term orientation training course in skin smear technique are offered. In addition to that the

teaching / training in laboratory aspects of leprosy is conducted for Medical Officers, Non Medical Supervisors, District Leprosy Officers, CRRI trainees, etc.

4.5) BIOCHEMISTRY

4.5.1) ROUTINE PERFORMANCE FROM 1-4-2003 TO 31-3-2004

Sl. No.	DEPARTMENTS / SECTIONS	TOTAL NO. OF INVESTIGA-TIONS
A	BIOCHEMISTRY	1821
B	IMMUNOLOGY	9
C	**ANIMAL HOUSE**	
	1. No. of animal bred:	
	(a) Swiss Albino Mice	495
	(b) BALB/C Inbred	543
	2. No. of mice inoculated	169
	3. No. of biopsy materials inoculated	3 batches
	4. No. of batches at mice harvested (Mouse foot pad harvest)	3 batches

5) Workshops / Conference / Meetings/Seminars/CME Attended by Officers / Staff During the Year 2003-2004

DR.P.K.OOMMEN, CONSULTANT(ORTHO) & DIRECTOR I/C, C.L.T.R.I.

May 2nd 2003

Attended Kancheepuram District Leprosy Society meeting Chaired by the Collector of Kancheepuram.

May 13th 2003

Attended meeting of Directors' of C.L.T.R.I. and 3 R.L.T.R.Is held in DDG(Leprosy) Chamber in DGHS. Research proposals, problems related to C.L.T.R.I. and future plans were discussed.

July 7th 2003

Invited to be Chairman of the Institutional Ethics Committee of Chengalpattu Medical College Hospital and chaired the session.

July 25th 2003

Invited for meeting on Reorganization of C.L.T.R.I. and 3 R.L.T.R.Is held at Nirman Bhavan, New Delhi. Made a detailed OHP presentation with regards to proposals for Reorganizing C.L.T.R.I., Chengalpattu.

September 22nd to 24th 2003

Conducted 2nd NLEP Workshop to develop and redesign training modules and program in leprosy for General Health Care staff held at C.L.T.R.I., Chengalpattu.

October 7th 2003

At C.L.T.R.I. Chengalpattu conducted 2nd Scientific Advisory Committee meeting to discuss and plan Research proposals of C.L.T.R.I. & 3 R.L.T.R.I.s.

October 18th – 20th 2003

Attended IAL National Workshop in Agra on "Management and Diagnosis of Leprosy". Delivered a lecture on "Issues Related to the Medical and Surgical Management of Leprosy"

November 15th & 16th 2003

As one of the members of the SAC Committee of CJIL – JALMA attended SAC meeting in Agra.

December 12th 2003

Conducted at CLT&RI – Review Leprosy Training material, contents, curriculum etc., for M.B.,B.S., students, Nursing Personnel Health Workers, Physio-technicians, Pharmacist and Multi-Purpose Health Workers.

January 5th 2004

Invited to attend meeting on 'Validation of Diagnosis' at National Institute of Epidemiology, Chennai.

January 24th 2004

Invited by Director S.L.R.T.C., Karigiri to discuss strategic plans for S.L.R.T.C. for the next few decades.

January 27th – 30th 2004

Attended National Conference on Elimination of Leprosy held at Hotel Babylon, Raipur. Chaired Session on 'MDT delivery in the field'

February 9th 2004

As Chairman Chaired the Institutional Ethical Committee meeting of Chengalpattu Medical College and Hospital.

February 27th – 29th 2004

Attended 23rd Biennial Conference of IAL at Haldia Port, West Bengal.Was Chairman of Session on 'Deformities and Disabilities in Leprosy' Also elected as member of IAL Committee.

March 12th & 13th 2004

Attended State Leprosy Officers Conference at R.L.T.R.I., Raipur.

DR.B. SEKAR, JOINT DIRECTOR (MICROBIOLOGY)

22nd to24th September 2003.

Attended the workshop on "Redesigning Training Programme in Leprosy" as Facilitator, held at CLTRI

7th October-2003

Attended Institutional " Scientific Advisory Committee" and Presented 4 research proposals.

7TH – 9TH NOVEMBER 2003.

Attended the XXVII National Conference of Indian Association for Medical Microbiologists at Mumbai and presented a scientific paper

12th December 2003

Attended at C.L.T.R.I., Chengalpattu – Review of Leprosy Training materials, contents, curriculum etc. for M.B.B.S. students, Nursing Personnel, Health Workers, Physio Technicians, Pharmacist and Multipurpose Health Workers.

DR. V.DURAI,CMO (NFSG):

14th July – 3rd August 2003.

Participated as a Validator for the LEM –2003 – Leprosy Diagnosis Validation conducted by the Government of India, WHO, ILEP and NIHFW, NEW DELHI.

7th October-2003

Attended Institutional " Scientific Advisory Committee" and Presented 4 research proposals.

12th December 2003

Attended at C.L.T.R.I., Chengalpattu – Review of Leprosy Training materials, contents, curriculum etc. for M.B.B.S. students, Nursing Personnel, Health Workers, Physio Technicians, Pharmacist and Multipurpose Health Workers.

DR.D.M.THORAT, ASSISTANT DIRECTOR (EPID.)

1) 19th May – 12th June 2003

Participated as a Validator for LEM in Tamil Nadu state conducted by NIHFW, New Delhi.

2) 16th Feb. – 28th Feb. 2004

Participated in second NLEP operation researcher in GHC staff functioning, conducted by Govt. of India.

3) 17th Oct. 2003

Participated in 2nd Scientific Advisory Committee meeting at CLTRI and presented Research proposals.

4) 2nd May 2003

Attended Kancheepuram District Leprosy Society meeting chaired by the Collector.

DR(MRS)P.SANDHYA MURTHY, C.M.O.(NFSG))

7th October 2003

Participated in the 2nd Scientific Advisory Committee meeting at C.L.T.R.I.

SHRI. C.S. SURI BABU, ASSISTANT DIRECTOR (BIOCHEMISTRY))

1. 7TH NOVEMBER 2003

Attended the Ethical Committee Meeting of VCRC, Pondicherry as CPCSEA nominee

2. 5TH DECEMBER 2003

Attended a workshop on "Alternatives to use of animals in Veterinary, Medical and Life Science Education" as Nominee, conducted by CPCSEA at Madras

3. IN MARCH 2004

Attended and presented ongoing projects and projects proposed to be undertaken in Biochemistry Lab. In the reorganization committee, CLT&RI

DR.R.NAGESH,C.M.O.

12th July to 2nd August,2003.

Participated NLEP Validation Program in Jharkhand State .

7th October 2003

Participated in the 2nd Scientific Advisory Committee meeting at C.L.T.R.I and Presented Research Proposal.

DR.R.VEERAKUMARAN, S.M.O.

12th July to 2nd August,2003

Participated NLEP Validation Program in BiharState from

7th October 2003

Participated in the 2nd Scientific Advisory Committee meeting at C.L.T.R.I. and Presented Research Proposal.

6) Training Course / Workshop Attended

a) NLEP Management Training Programme for CMO and Health Officers, NiHFW, New Delhi from 7 – 9 April, 2003. - Dr.Showkath Ali and Dr.D.M.Thorat attended this training programme.

b) Basic Course in Statistics organized by National Institute of Epidemiology (NIE), Chennai from 8-12 December, 2003 – Dr.D.M.Thorat attended.

c) Training course in controlled clinical trials organized by NIE, Chennai from 15-19 December, 2003 – Dr.D.M.Thorat attended.

d) Attended Training in Computer on 'Windows and Office Productivity Tools' at NIC, Rajaji Bhavan, Chennai-90 from 27-31 October 2003 attended by Dr.Veerakumaran, Senior Medical Officer.

e) Training programme on Networking, E-mail and Internet organized by NIC, Chennai from 30-31st July 2003 attended by Shri.M.Subramanian, Stat.Asst., Shri.E.Sathish Kumar and Shri.G.Parthasarathy DEOs.

f) XI workshop on Research Methodology & Bio-statistics conducted by the Department of Epidemiology, Dr.MGR Medical University, Chennai from 09-13th June 2003 – attended by Shri.M.Alikhan, JFI.

Conference attended:

i) The following officer and staff attended the XXVII National Conference of Indian Association of Medical Microbiologists at Mumbai from 7 – 9th November 2003 and presented a scientific paper.

a) Dr.B.Sekar, Joint Director
b) Shri.K.Arunagiri, Technical Assistant

ii) The following officers and staff attended the National conference on Elimination of Leprosy held in Raipur (Chattisgarh) from 27.1.04 to 30.1.04.

a) Dr. P.K. Oommen, Director I/c.
b) Dr.D.M.Thorat, Assistant Director
c) Shri.V.Prabakar, NMS
d) Shri.M.Alikhan, JFI
e) Shri.I.Prabakaran, JFI
f) Shri.P.Dayalan, PMW
g) Shri.S.Ramesh, PMW

iii) The following officers and staff attended the 23rd IAL conference from 27-29 February 2004 held at Haldia, West Bengal.

1. Dr.P.K.Oommen, Director I/C & Consultant (Orthopaedics)
2. Dr.M.K.Showkath Ali, Joint Director (Epidemiology)
3. Shri.M.Rajenderan, Sr.Tech.Assistant
4. Shri.S.Senthil Kumar, Sr.Tech.Assistant
5. Shri.M.Subramanian, Statistical Assistant
6. Shri.M.Muthukumar, DEO Gr'B'
7. Shri.C.Balakrishnan, DEO Gr'B'
8. Shri.G.Parthasarathy, DEO Gr 'A'
9. Shri.A.Mani, Technical Assistant
10. Shri.P.Ravi, Technical Assistant
11. Shri.V.Prabakar, NMS
12. Shri.M.Alikhan, JFI
13. Shri. P.Dayalan, PMW
14. Shri. S.Ramesh PMW
15. Shri.R.Vijaya Raghavan, Lab.Technician
16. Shri.G.Munuswami, Lab.Technician
17. Shri.Nityanandam, Lab.Technician
18. Shri.M.Murugesan, Lab.Assistant
19. Shri.S.Sivaraman, Lab.Assistant
20. Shri.G.Yusuff, Lab.Attendant
21. Shri.K.Kuberan, Lab.Attendant
22. Shri.M.Kalaivanan, Lab.Attendant
23. Shri.N.Jothimani, Animal Attendant

7) SCIENTIFIC PAPERS PRESENTED

7.1) Papers presented in the XXVII National Conference of Indian Association of Medical Microbiologists at Mumbai held from 7th – 9th November 2003.

i) Comparative Analysis of the Role of Polymerse Chain Reaction and Fine Needle Aspiration Cyotology in the Laboratory Diagnosis of Extra-Pulmonary Tuberculosis
Dr.B.Sekar; Dr.S. Ravi, Mr.K. Arunagiri & Mr.D. Anandhan.

ii) Detection of Salmonella spp. in faecal samples by Short Cultivation – Polymerase Chain Reaction procedure
Shri.K.Arunagiri; Dr.B. Sekar,D. Anandhan, S.Kirupadevi &K.Menaga**.**

7.2) **Papers presented in the National Conference on Leprosy Elimination, Raipur 27-30 January, 2004**

Poster Presentation :

Steroid dependency : An Experience in Field Area

Dr.D.M.Thorat

7.3) **Scientific papers presented in the 23rd Biennial conference of IAL in Haldia, from 27-29 February, 2004**

a) **Oral papers:**

1. Trend of Relapse in CLTRI Rural Field Operation Area
M.K.Showkath Ali, M.Subramanian, G.Parthasarathy, Uma Selvaraj, V.Govindaswamy, V.Prabakar and D.M.Thorat.

2. Distibution of leprosy disease when prevalence declines
M.Subramanian, E.Sathish Kumar and M.K.Showkath Ali

3. Outcome of ROM Field Trial in PB leprosy with 2-5 lesions in CLTRI
C.Balakrishnan, M.K.Showkath Ali, C.Ramadoss, V.Prabakar, M.Alikhan, S.Ramesh and M.Subramanian

4 Oxidative stress mediated lipid peroxidation, protein carbonylation, DNA damage in leprosy patients: Protection by Vitamin E

VIJAYARAGHAVAN, R., SURIBABU, C.S., OOMMEN, P.K., PANNEERSELVAM, C.

5. Computerised Simplified Information System
G.Parthasarathy E.Sathish Kumar, M.Subramanian, M.Muthukumar, and M.K.Showkath Ali

b) **Poster presentation:**

1.Retrospective analysis of Renal functions in Leprosy: results from 1993-2002 by Shri.M.Rajendran
M.RAJENDRAN, C.S.SURIBABU, P.RAVI, C.KALAIVANI,K.KUBERAN, P.K.OOMMEN, R.VIJAYARAGAVAN, S.SENTHILKUMAR.

2.Application of Cross reactive mono-clonal antibodies to detect 65kda mycobacterial antigen in Leprosy
SENTHIL KUMAR , S., SURI BABU, C.S., ELANGESWARAN , N.,MENAKA , K., VANAJA , G.

3.A method for scoring the performance evaluation of NLEP in the districts of Andhra Pradesh and Tamil Nadu
Shri.M.Muthukuamr , M.Subramanian, M.Muthukumar, E.Sathish Kumar and M.K.Showkath Ali

4.A study on incidence of Diabetes in leprosy
Shri.P.Ravi. Suribabu. C.S., Rajendran, M., Ravi, P., Durai, V., & Oommen, P.K**.**

5.CK, CPK, CK-MB, LDH and ICDH in Leprosy
KUBERAN, K SURIBABU, C.S., RAJENDRAN.M, THANGIAH, S., NIRMAL KUMAR,B.

8. Publications

8.1) EVALUATION OF THE MODIFIED LEPROSY ELIMINATION CAMPAIGN IN A HIGH LEPROSY ENDEMIC DISTRICT OF JHARKHAND
Indian Journal of Leprosy Vol.75 (3) 2003 pp- 233-242 –

Dr.B.Sekar; Mr.G.Kothandapani*, Dr.T.Prabhakar Rao*, Dr.P.Krishnamurthy*
*- Damien Foundation India Trust, Chennai

An evaluation of the third Modified Leprosy Eradication Campaign (MLEC) was carried out in Potka block in the high endemic district of East Singhbhum, Jharkhand State, India, by our external evaluation team, from 29th October to 8th November 2001. The searchers in this block detected 389 suspects during the MLEC; of these, 181 (46%) were examined, and 69 (38%) of them were confirmed as cases by the Programme staff. The evaluators examined 189 (48.5%) of the total 389 suspects detected by the searchers, including 31 of the 69 cases confirmed by the Programme staff. Concordance of diagnosis of leprosy cases by the Programme staff and the evaluators was found to be high (90%). However, concordance of the type of leprosy was found to be variable (PB 38%, MB72%, SSL 100%). Specificity and

sensitivity of diagnosis by the Programme staff (as against those by the evaluators) were found to be 85.7% and 79.2% respectively. There was no case of re-registration.

The evaluators examined 108 of the suspects detected by the Search Team, but not screened by the Programme staff, and diagnosed 47 cases (44%; PB 20 MB 9, SSL 18) from among them. The evaluators also diagnosed additional 30 new cases (PB 18, MB 5, SSL 7), during their visit. An assessment of knowledge about the disease and treatment among confirmed cases revealed that most of the patients did not know correctly about their disease. All the cases were referred by the searchers. About 45% of cases were aware of the duration for which they needed to take the treatment, 97% of cases showed the blister calendar packs and had taken the supervised dose. Availability of MDT to the patients and drug compliance were found to be adequate. Assessment of the impact of IEC activities on the awareness of leprosy among the community showed that about 50% of those interviewed were aware of the campaign. Most of them had information about the availability of leprosy drugs and knew that treatment was free. A majority of those aware of the disease said that they would refer suspects, if they come across any, to PHC centers for treatment.

8.2) LEPROSY SITUATION IN ENDEMIC STATES OF INDIA AND PROSPECTS OF ELIMINATION OF THE DISEASE

Indian Journal of Leprosy Vol.75(4) 2003 page 29.
M.Subramanian, M.K.Showkath Ali, D.M.Thorat, M.Muthukumar, E.Sathish Kumar, C.Ramadoss, & M.Ali Khan

In India there is a dramatic fall in the prevalence rate (PR) of leprosy, but the new case-detection rate (NCDR) has not been reduced concomitantly. It is the operational efficiency of the National Leprosy Eradication Programme (NLEP) that has led to a significant reduction in the NCDR in Andhra Pradesh and Tamil Nadu. The ratio of PR to NCDR has been declining in these two states and it reveals that elimination could be reached even with the high NCDR level 3 to 4 per 10000 population, particularly if single skin lesion (SSL) cases are discharged through single dose treatment of rifampicin, ofloxacin and minocycline (ROM). On the other hand, the significant number of cases detected in Bihar and Orissa during modified leprosy elimination campaigns (MLECs) reveals that there are lacunae in operational activities in new case-detection resulting in a large number of undetected cases in the community. Only not adequate to motivate the patients to report voluntarily and complete their treatment, thus underscoring the need for relying on active case detection so that the transmission can be broken and elimination of leprosy achieved. In addition, the influence

of socio-economic factors on continued occurrence of leprosy cannot be ruled out. The establishment of sentinel surveillance system along with a computerized simplified information system to gain in-depth knowledge on the functioning of the NLEP will ensure operational efficiency. In view of this situation, the NLEP should adopt a more realistic approach towards reaching the elimination goal.

9.) OTHER PERFORMANCES (CONSULTATION SERVICES)

DR.P.K.OOMMEN, CONSULTANT(ORTHO) & DIRECTOR I/C, C.L.T.R.I.

1.April 28th & 29th 2003

Visited Andaman & Nicobar Islands to conduct MLEC IV. Visited the urban and rural VRC Centres.

2. June 3rd and 4th 2003

Invited to attend Govt. of India – World Bank joint Workshop held at Bangalore to discuss action plans for State I.E.C.with regards to N.L.E.P. & R.N.T.C.P. Delivered inaugural address in the absence of DDG(Leprosy).

3. June 24 – 26th 2003

Conducted POD training as core trainer for 21 district trainers of Tamil Nadu at C.L.T.R.I., Chengalpattu.

4. July 2nd to 4th 2003

As core trainer conducted POD training for 22 doctors at T.L.M. Hospital, Dayapuram, Manamadurai, Tamil Nadu.

5. July 9th –11th 2003

Invited as Core trainer for POD held at H.F.H. Sanatorium, Trichy which was attended by 33 doctors.

6. August 4th and 5th 2003

Invited as facilitator for Training of Trainers with reference to POD for faculty of Medical Colleges mainly from Department of Social and Preventive Medicine. Held at Health Manpower Development Institute, Salem. 15 Medical College staff attended.

7.September 18th – 20th 2003

Visited Trivandrum to train State and District level trainers in POD – NLEP Program

8.October 9th & 10th 2003

Invited to conduct R.C.S. Camp at T.L.M. Hospital, Dayapuram, Manamadurai, Tamil Nadu. Operated on 5 patients.

9.October 30th &31st and November 3rd 2003

Invited by G.L.R.A. – SAIL program to take POID lectures for Medical Officers and Para medical staff at Filaria Institute, Chengalpattu

Dr. B. Sekar, Joint Director (Microbiology)

1) 7th - 10TH APRIL, 2003

As Examiner of University of Madras conducted practical examinations for M.Sc., (Applied Microbiology) at Mohamed Sathak College, Chennai.

2) 12TH – 16TH MAY 2003

Attended as Examiner for Central Valuation of M.Sc.,Microbiology Theory Examination of University of Madras.

3) 28th August 2003

As Examiner carried out Practical Examination of Endowment Prize Exam on leprosy jointly conducted by Dr.M.G.R. Medical University, Tamil Nadu and Damien Foundation India Trust, Chennai.

4) 22th – 24th September 2003.

As a facilitator attended the workshop on "Redesigning Training Programme in Leprosy" at CLT&RI

5) IN DECEMBER 2003

Appointed as External Examiner of Annamalai University, Tamil Nadu for Part-I Methodology Examination of Ph.D Degree and conducted the examination

6) 20th January 2004

Visited Tuberculosis Research Centre, Chetpet, Chennai to discuss with Director, TRC on the Guidelines for the exchange of human biological material for biomedical research purposes.

7) 15th – 20 th March 2004

As Examiner of Madras University conducted M.Sc., (Applied Microbiology) practical examinations at Vel's College of Science, Chennai.

8) 22nd – 23 rd March 2004.

As Examiner of Madras University conducted M.Sc., (Apllied Microbiology) practical examinations at Prince Venkateshwara College of Arts and Science, Chennai.

10) Institutional Scientific Advisory Committee meeting:

2nd SAC Meeting held on 7.10.2003 at CLTRI, Chengalpattu

The participants of the meeting are

1)	Dr.S.K.Noordeen,	Chairman
2)	Dr.H.Srinivasan,	Member
3)	Dr.K.V.Desikan,	Member
4)	Prof.Gurumohan Singh,	Member
5)	Dr.Ashok Kumar, DDG(L), DGHS, New Delhi	Member
6)	Dr.P.Krishnamoorthy,	Member
7)	Dr.V.M.Katoch,	Member
8)	Dr.Selvakumaran,	Member
9)	Dr.Gift Norman	Member
9)	Dr.P.K.Oommen, Director i/c, CLTRI	Member-Secretary
10)	Dr.M.Jamaluddin, Director, RLTRI, Raipur	
11)	Dr.Poricha, Director i/c, RLTRI, Aska	

The Research proposals presented in the meeting are:

Dr.M.K.Showkath Ali, Joint Director and Head of Epidemiology and Statistics Division, CLTRI presented the following research proposals.

1. Trend Analysis of Relapse in the period of Pre and Post Integration of NLEP with PHC in a district of Tamil nadu and Andhra Pradesh

2. Prevalence of visible deformity due to leprosy and its characteristics

Dr.D.M.Thorat, Asst.Director of Epidemiology and Statistics Division presented two projects viz.

1. Influence of operational factors on NCDR

2. Impact and cost effectiveness of IEC activities in leprosy case detection.

Dr.V.Durai, CMO presented 4 projects viz.

1. The effect of Steroid Therapy in leprosy Patients – a 10 year retrospective study – 1991-2000

2. Sensory Loss Elicitation in leprosy patients – A Comparative Study

3. Steroid Treatment in Leprosy Neuritis – A Comparative Study

4. Relapses in M.B. Leprosy after MDT study – A comparative study.

Dr.R.Veerakumaran presented 3 projects viz.

1. Prevention of Plantar ulcers by correction of claw toes

2. Post-operative Assessment of Lasso Procedure 5 Years and 10 years

3. Prevention of Recurrent Plantar ulcers by Posterior Tibial Nerve Decompression.

   The Chairman invited the comments.

Dr.B.Sekar, Joint Director and Head of Microbiology Division presented 4 projects viz

1. Study of Surveillance of Rifampicin Resistance among smear positive MB Leprosy cases of Relapse and other high risk groups

2. Application of Polymerase chain Reaction based molecular biological techniques in the diagnosis of single skin lesion cases of leprosy

3. Application of Polymerase chain reaction technique for the detection of M.leprae in Nasal Carriers

4. Application of PCR technique for the detection of M.leprae in daily use water sample.

Shri.C.Suribabu, Asst Director (Biochemistry) presented 4 projects viz.

1. Molecular characterization of M. leprae from Plasma DNA and other tissue specimens

2. Study of Auto Immune Diabetes in the leprosy patients – Th.1 vs Th 2 medical disease

3. Diagnostic Kit development for M. Tuberculosis by FISH Technique, FISH – Fluroscein in situ hybridization technique

4. A study of tissue engineering and Nerve regeneration in leprosy.

Dr.Thangiah, CMO presented 3 projects viz

1. Snail Extract inhibits the growth of M. leprae in mouse foot-pad

2. Electro-phoresis study on snail extract proteins.

3. GYMNEMA Capsule an alternate drug to steroid therapy in treating Lepra Reactions.

11. Workshop on Redesigning of Training Programme in Leprosy was held at CLTRI from 22 to 24 September 2003 and recommended the revised time schedule for in service candidates.

Participants

S. No	Name	Organisation
1	Dr. Inder Parkash	DADG.(Lep) DGHS, New Delhi
2	Dr. P.K. Oommen	Director, CLTRI Chengalpattu
3	Dr. M. Jamaluddin	Director, RLTRI Raipur
4	Dr. R.N. Rai	Director, RLTRI, Gauripur
5	Dr. D. Porichha	Director, RLTRI, Aska

S. No	Name	Organisation
6	Dr. B. Sekar,	J D (Micro), CLTRI, Chengalpattu
7	Dr. M.K. Showkath Ali	J.D. (Epid), CLTRI Chengalpattu
8	Dr. P. Narasimha Moorthy	C.M.O. (NFSG), CLTRI Chengalpattu
9	Mr. C.S. Suribabu	A.D. (Bio-Chem), CLTRI Chengalpattu
10	Dr. G.N. Malaviya	D.D, CJIL, Agra
11	Dr. D.K. Raman	SLO, Bihar, Patna
12	Dr. P.N. Bhandarkar	ADHS(Trg), Maharastra, Nagpur

S. No	Name	Organisation
13	Dr.S. Meera lakshmi	SLO, Tamil Nadu, Chennai
14	Dr. V.K. Ramesh	DD(L), Chennai Dist. Chennai
15	Dr. S.K.Noordeen	Coordinator LEA, Chennai
16	Dr. P.Krishna moorthy	Secretary, DFIT Chennai
17	Dr. B.D. Gandhi	LEPRA, Orissa Bhuvaneswar
18	Dr. S.N. Pati	LEPRA, Orissa Bhuvaneswar
19	Dr. M. Mathews	Coordinator, GLRA Chennai
20	Dr. S. Thirunavukkarasu	CMO, GLRA Chennai
21	Dr. Gift Norman	HOD (Comm. Heal) SLRTC, Karigiri
22	Dr. Samuel Johnson	HOD (Trg), SLRTC Karigiri
23	Dr. B.P. Ravikumar	Trg. Coord., TLM India Salur, AP.

Recommendations

Sl. No.	Name of the Training Programme	Duration in Days
1	Health Workers	5 days
2	District Leprosy Officers	5 days
3	Medical Officers	5 days
4	Health Supervisors	5 days
5	Reconstructive Surgery	5 days
6	Physiotherapy	5 days
7	Lab Technician	5 days

12) National Workshop on Review of Leprosy Teaching and Learning Curriculum in the Medical and Para Medical courses held on 12-12-2003 at CLTRI

The following officers participated and Curriculum for different categories were finalized after deliberations.

Name, Designation and Institute

1) Dr. P.K.Oommen, Director, CLTRI
   Chengalpattu – 603 001

2) Dr. D.Poricha, Director RLTRI Aska- 761010

3) Dr. Samuel Solomn, SLRTC Karigiri

4) Dr. Prabhavathy, HOD (Dermatology),
   Medical college, Chengalpattu, T.N

5) Dr. B. Sekar, Joint Director (Micro.) CLTRI,
   Chengalpattu – 603 001

6) Dr. M. K. Showkat ali, Joint Director (Epid.) CLTRI
   Chengalpattu – 603 001

7) Dr. V.Durai, CMO, Officer I/c (Clinical Division)
   CLTRI Chengalpattu – 603 001

8) Dr. Anil Kumar, HOD (Epidemiology), JALMA, Agra.

9) Dr.H.Rathore, CMO, RLTRI, Raipur

13) VISITORS

i) Dr. Varalakshmi from Colorado State University, USA visited our Institute on 8-12-2003 and gave a talk on "Molecular typing of M.leprae"

ii) Prof.M.V. Reddy, Prof. and Head of Department, Department of Biochemistry, MGIMS, Sevagram, Wardha visited the Biochemistry Division on 21st December 2004.

14) AWARDS RECEIVED

1. Shri.M.Subramanian, Statistical Assistant was awarded for the presentation of "Distribution of leprosy disease when prevalence declines" in the Epidemiology session of Indian Association of Leprologists Conference held in Haldia Port City, West Bengal from 27 – 29 February 2004.

2. Shri.C.Balakrishnan, D.E.O 'B' was awarded for the presentation of "Outcome of ROM Field Trial in PB leprosy with 2-5 lesions in CLTRI" in the Epidemiology session of Indian Association of Leprologists Conference held in Haldia Port City, West Bengal from 27 – 29 February 2004.

3. Shri.R. Vijayaraghavan, Lab. Technician was awarded for the Presentation of the paper titled "Oxidative stress mediated lipid peroxidation, protein carbonylation, DNA damage in leprosy patients:

Protection by Vitamin E in the Biochemistry Session of Indian Association of Leprologists Conference held in Haldia Port City, West Bengal from 27 – 29 February 2004.

15) Higher Qualification Acquired

Shri. R. Vijayaraghavan, Lab. Technician successfully completed and awarded Doctorate degree in Zoology-Biochemistry (interdisciplinary) from the Department of Medical Biochemistry, University of Madras in September 2004 for his work.

16) Manpower and Vacancy Position

STAFF STRENGTH AS ON 31-03-2004

Group	Sanctioned Strength	Staff in Position	Vacancies
A	29	14	15
B Gazetted	5	3	2
B Non-Gazetted	19	12	7
C	129	100	29
D	105	81	24
TOTAL	**287**	**211**	**77**

DETAILS OF VACANT POSTS

Group 'A'	No.	Group 'B'	No.	Group 'C'	No.	Group 'D'	No.
Director	1	Stores Officer	1	Technical Assistant	1	Lab.Attdt.	3
Additional Director	1	ANS	1	Statistical Assistant	1	Dresser	1
Asstt.Director (Micro.)	2	JAO	1	DEO Gr.B	1	Autopsy Attdt.	1
Asstt.Director (Clinical)	2	Steno Gr.I	1	Stores Assistant	1	Animal Attdt.	1
Asstt.Director (Ortho.)	2	Sr.Stat.Asst.	1	Staff Nurse	3	Cobbler Gr.II	1
Asstt.Director (Path.)	1	Nursing Sister	4	Health Visitor	1	Nursing Attdt.	8
Asstt.Director (M&E)	1			Lab. Technician	2	Watchman	2
CMO (NFSG)	2			Artist	1	Cook	1
Administrative Officer	1			NMS	1	Lascar	2
Statistical Officer	1			Sr.Ortho Technician	1	Sanitary Worker	4
Dy,Director (Path)	1			UDC	2		
				PMW	4		
				LDC	8		
				Driver (Ordinary)	1		
				Sr.Animal Attendant	1		
	15		**9**		**29**		**24**

Other Activities

1. Dr.Shivlal, Additional Director General & Director, NICD visited C.L.T & R.I. on 22.08.2003, to inspect the facilities available for reorganization of C.L.T & R.I.

2. Dr.A.S.Rathore, Joint Director, NACO visited C.L.T & R.I. on 18.10.2003 for the same purpose.