MESSAGE FROM THE DIRECTOR

Dear Readers,

One of the strategic priorities in the new country strategy is Organizational Development which focuses on the issue of developing a learning culture within TLM India. Learning comes from asking questions. Research is also about asking questions and gathering evidence so that the knowledge gained is applied for the benefit of the people we serve – those affected by leprosy.

The amount of experience, expertise and material that we possess within TLM India places us in a unique position to be a leader in leprosy research in this country. Unless we develop and sustain a research culture in the organization – a culture of asking questions, finding answers and applying them, we will lose the edge we have and eventually may not be as relevant as we should be.

It is each one’s responsibility to recognize the importance of making research a day to day activity. If we are to be effective and relevant, then we will need to adopt a culture of asking questions and gathering evidence to support what we do. I hope we will measure up to this challenge.

Suni Anand
March 2011

DR. JP MULIYIL’S MESSAGE

Dear Readers,

I am grateful to TLM India for giving this opportunity to greet you through this message. It may sound a bit strange to some, to realize that the Mission is sincerely trying to understand more about leprosy through well formulated research. Is it not true that leprosy is no more a problem in the country? As a matter of fact it still is. It is estimated that at least 500,000 new cases of leprosy occur in India annually and most of them go unreported. There is so much that we still do not know about leprosy. We still do not know as to how people acquire the infection. But we do know that an infectious case of leprosy a may go undetected for many years before he or she manifests the earliest clinical signs. Hence, one area for research would be to find ways of effecting early diagnosis of infectious individuals instead of merely labeling them “hidden cases”.

When a smear is taken from new case of lepromatous leprosy we see a large number of bacteria on the stained specimen. But despite the fact that the patient has never taken any treatment most of the acid fast bacilli are broken and dead. Since there is no host immunity operating what killed them?

There are many diseases where inappropriateness of our own immune response is the reason for illness rather than any toxic substance produced by the agent. Indeed during the 1918 epidemic of Spanish flu a large number of people died because of body’s exaggerated immune response is the form of cytokine storms. In simple terms, body has two main choices of response to infectious agents – Th 1 or Th 2 – each designed to fight different types of organisms. The mechanism through which our bodies make this choice is not well understood. However leprosy is one disease where the body can choose both the responses at different points of time and can also subsequently change the choice from one to the other back and forth.

It seems reasonable to suspect that better understanding of immunological transitions in leprosy will help us, not only to understand the pathogenesis related M. leprae infection but also to understand human immunology on the whole a lot better. The Leprosy Mission is an excellent platform which can bring together regions of the world with the disease burden and regions that have the technology to study these complex phenomena. I sincerely hope and pray that the mission will continue to serve humanity through all its endeavors.

Dr. Jayaprakash Muliyil
Professor of Community Health
Christian Medical College Vellore
Medical consultant to TLMI
Dear Friends,

We are happy to bring you the first issue of the Research Newsletter of the year 2011, in which we are privileged to have messages from Dr. JP Mulyil as well as our Director. Dr. Mulyil is no stranger to us. He is the professor of Community Health at CMC Vellore as well as Medical Consultant for TLMTI. He tells us that an estimated 500,000 new cases of leprosy occur in India annually and most of them go unreported. He reminds us of the still unanswered questions regarding the immunology of leprosy, that need to be explored to gain a better understanding of the disease and hopes that TLMTI will play an exemplary role in combating leprosy by bringing together the expertise and technological resources.

Dr. Sunil Anand, Director, reiterates the importance of research in TLM if we are to be effective and relevant and challenges us to develop a ‘Research Culture’ in TLM.

At present there are a number of multicentric studies going on in TLM, some clinical and others epidemiological. Dr. P.S.S. Sundar Rao, writes about Multicentric Studies, their importance and advantages.

Apart from this there is the RRC news and a report on one of the projects of the Stanley Browne Labs.

I hope you enjoy the issue in its new ‘avatar’ and are stimulated to try and answer some of the questions that arise in your work, by gathering evidence and then documenting it. The RRC team is always happy to be of assistance in any such endeavour.

Happy reading!

Annamma S. John
Medical Specialist, RRC
Editor

MULTICENTRIC RESEARCH PROJECTS

Of late, we find many publications based on “multicentric” research projects carried out in India and abroad. These are research carried out with a common protocol at several geographic locations. There are two major advantages for such studies:

(1) The size of the sample will definitely be larger and thus provide a more valid estimate or a more definite conclusion in testing a research hypothesis.

(2) By virtue of the same project being carried out in different locales, it has the potential to determine possible associations of the results with environmental and other factors. In classical textbooks, this is known as “spatial” epidemiology, and a very valuable tool in many aetiological inferences and in clinical trials. However, such studies require much effort to ensure that the study is carried out meticulously using the same protocol, starting with criteria for recruitment, criteria for assessments, methodology of sampling and handling of non-response, rules for withdrawals and other stopping rules etc. There is thus a greater need for strong commitment and cooperation of the investigators concerned. All these are of course possible and will lead to much benefit in terms of the outcomes of the study, and must be encouraged.

Dr. P. S. S. Sundar Rao
Head, RRC

Murphy’s Law of Research: Enough research will tend to support your theory.

Maier’s Law: If the facts do not conform to the theory, they must be disposed of.
FIELD ACTIVITIES OF STANLEY BROWNE RESEARCH LABORATORY

As a part of the ongoing leprosy research activities at Stanley Browne Laboratory, epidemiological studies to investigate the factors influencing leprosy transmission have been initiated, with the objectives that include detection of viable M. leprae from environmental samples from the area where active leprosy cases reside, so as to determine the possible sources of transmission and spread of disease. This will also help in understanding the seasonal variations in nasal exposure to M. leprae among the general population residing in one of the Leprosy endemic villages of Purulia District in West Bengal.

The details of all the subjects taking part in the studies were collected through intensive household surveys conducted by the research field technician. Then environmental samples such as soil and water samples were collected from around the houses of the leprosy patients with positive bacteriological index, spread across the district of Purulia. Biological samples such as nasal swabs, saliva and hand washings for the seasonal study have been collected from general population residing in Baligara – an endemic village in Purulia.

In a view to carry the research activities in the lab to the field and address the questions from the field, these projects have been explained to the elders of the village in detail and there was an excellent cooperative response from the villagers. They even stood in queues to render the samples.

These studies will help in establishing the possible extra-human M. leprae reservoir, if any exists. Such knowledge will have tremendous impact on understanding the causes for the continuing transmission of the disease. If the results indicate the presence of M.leprae in the soil, then more extensive work such as correlation studies with leprosy patients & carriers of M.leprae and prevalence of leprosy will need to be undertaken.

These studies also help in understanding the nasal carriage of M. leprae, role of immunity in the exposed individuals and the seasonal variation. They also shed some light on the changes that may take place in the immunological responses in the subjects with an evidence of exposure to M. leprae. The outcome of these studies will be of great relevance in planning strategies for the control of transmission of the leprosy in the future.

The Superintendent and staff of The Leprosy Mission Hospital Purulia are a great source of help and inspiration to carryout the field activities smoothly. We believe that this work will lead to some significant contribution to our goal of ‘A world without leprosy’.

Pictures: Research Staff collecting samples in Baligara Village

Report prepared by: Mr. Sundeep Chaitanya – Research Fellow, Stanley Browne Lab

STAFF CHANGES

We welcome Mr. Victor Seraphim, who joined RRC as Secretary to Dr. Sundar Rao.

Research is to see what everybody has seen, and to think what nobody else has thought.  
- Albert Szent - Gyorgy 1937 Nobel Prize for medicine
ON GOING ACTIVITIES

Early Nerve Impairment Project – 2nd March.

An Orientation Workshop was held at TLM Naini for this new project to standardise the protocol and ensure uniformity in the examination of patients for the study. Physiotherapists from 7 centres participated and tested the Proforma on patients attending the hospital. There was lively discussion and fine-tuning of the study was facilitated. Dr. Loretta Das inaugurated the Workshop and Satheesh Paul, POD Coordinator, Dr. Annamma John, Dr. Sundar Rao and Dr. Premal Das were facilitators. The study is now in progress.

From the next issue we are hoping to have a column for readers contributions. Please share your ideas with us; the articles can be a case study, an interesting article you may have read etc. It should be within 500 words.

Research follow-up Session at TLM Naini – 28th February to 2nd March.

The RRC team spent 3 days at TLM Naini following up and facilitating various studies and different stages and planning new projects. Dr. Premal Das, Superintendent, Medical Officers, Physio-therapists, Occupational therapists, Counsellors and nurses all took part.

Urban Leprosy Project (ICMR) meeting at TLM Shahadara – 24th March

This is the first meeting of the ICMR Urban Leprosy Study and the teams from Delhi and Kolkata, will be meeting to share experiences, learn and plan for the execution of the study.

EVER Study (ICMR) meeting at Faizabad – 3rd to 5th March

The 3rd combined meeting of Ever study was held in Faizabad from 3rd to 5th March. It was attended by all the EVER project staff along with Dr. Sundar Rao and Dr. Annamma John from the RRC.

Analysis of the secondary data was done in relation to G 2 disability with MB/PB cases, adults/children, male/female and the trends noted between PHC’s and TLM hospitals. It was decided that information about the distance a patient has to cover to reach the nearest health care giver should be studied to find out whether this has implications in delay to report early.

The Ultimate Principle: By definition when you are investigating the unknown you do not know what you will find.

William and Holland’s Law: If enough data is collected, anything may be proven by statistical methods.

READERS COLUMN

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Research serves to make building stones out of stumbling blocks. - Arthur D. Little

There is nothing like looking, if you want to find something. You certainly usually find something, if you look, but it is not quite the something you were after. - JRR Tolkien