

Dr Enoka
Corea, Nadaraja
Saravanapavan,
Dr Rajanthi
Ramachandran and
Mark Mithulan
observing PCR
equipment in
operation at the
Teaching Hospital
Jaffna Laboratory.

Speed key to disease treatment success

A multi-district project is saving lives in Sri Lanka by providing rapid and reliable diagnosis of infectious disease.

*By Dr Enoka Corea MD PhD and PDG John Kevan
Rotary Club of Applecross, WA*

MANY infections responsible for significant illnesses and death in Sri Lanka have common symptoms, such as fever, loss of appetite and malaise – meaning they can be hard to tell apart.

Rapid laboratory diagnostic tests able to identify a specific infection are therefore essential to ensure accurate diagnosis and effective treatment in

time to make a difference. However, extended civil unrest has resulted in hospitals, particularly in the northern region of Sri Lanka, lacking the resources and expertise to do so.

Following extensive consultation, a project was developed within Western Australian District 9465 to provide pathology equipment and specialist

training to a number of hospital laboratories and technicians, to enable them to test for key infectious diseases and guide appropriate treatment.

This pioneering project was formalised by then District 9465 governor Melodie Kevan and then District 3220 governor George Jesuthasan. The Rotary Club of Applecross, WA, and the Rotary Club of Colombo South, Sri Lanka, subsequently received approval for a Global Grant of US\$206,740. Not-for-Profit Lab Without Walls, an organisation specialising in remote area disease detection, also came on board to lend their expertise.

“RAPID AND RELIABLE DIAGNOSIS OF INFECTIOUS DISEASE WILL NOW CONTRIBUTE TO REDUCING THE MORBIDITY AND MORTALITY OF THOUSANDS OF PATIENTS IN SRI LANKA, AS WELL AS HELP TRACK DISEASE TRENDS AND REDUCE THE SPREAD OF ANTIMICROBIAL RESISTANCE BY PREVENTING INAPPROPRIATE ANTIBIOTIC TREATMENT.”

Nadaraja Saravanapavan, of the Rotary Club of Colombo South, and PDG John Kevan, of the Rotary Club of Applecross, took on the role of project chairs, helping oversee the multi-faceted and logistically intensive project across two countries.

Perth pathologists, led by Rotarian Dr Tim Inglis, conducted a four-day intensive training workshop for 23 Sri Lankan hospital personnel at the Department of Microbiology at the University of Peradeniya. Four of the participants later formed a vocational training team, travelling to Western Australia to extend their skills in operating the rapid disease detection equipment.

The project supplied pathology equipment, training and reagents to the Teaching Hospital Jaffna and the District General Hospital Newera Eliya. The centrepiece of these is a real-time polymerase chain reaction (PCR) machine, with supporting equipment including a DNA extraction

machine, hot block, vortex mixer and micro-centrifuge.

Unfortunately, unavoidable construction delays in completing and upgrading new laboratory facilities by the government meant testing of patient specimens stalled, though this has since recommenced.

The Microbiology Department of the Teaching Hospital Jaffna is

now recognised as one of the four regional centres for infectious disease diagnostics in Sri Lanka. It will assist with diagnostics in bacteriology, virology, and in mycology.

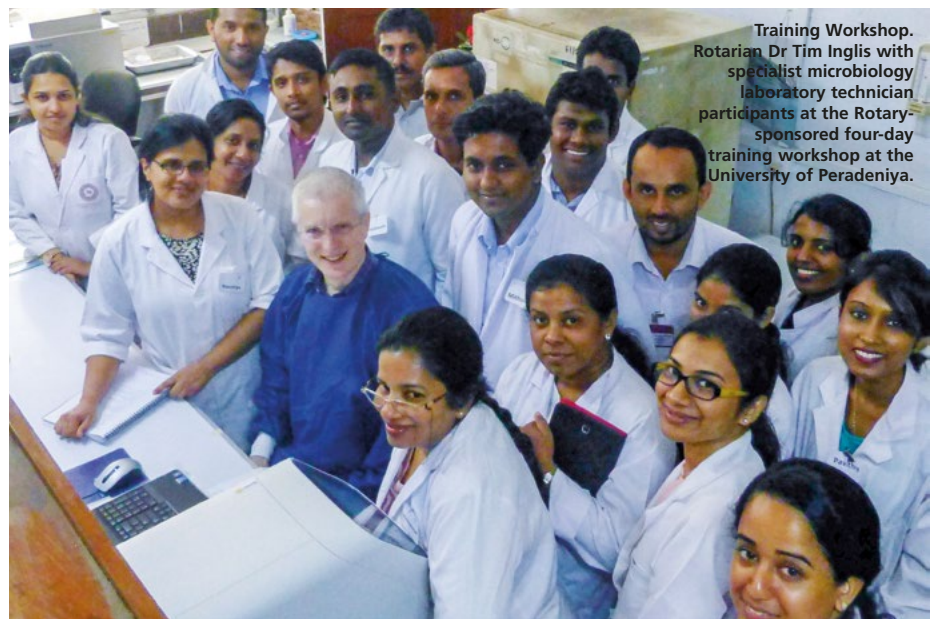
The department will further use molecular biology-based techniques, which detect the DNA or RNA of an infection directly from patient samples. This is an extremely sensitive and rapid method able to yield results within hours of receiving a patient's specimen.

The equipment is also being used to support the national diagnosis of dengue. It is planned to expand the testing to include scrub typhus and leptospirosis, important infections in the Jaffna peninsula where rapid diagnostics were previously not readily available.

Additionally, the laboratory will now be able to support surveillance and research into infectious diseases in outlying provinces, essential for regional area capacity building.

Rapid and reliable diagnosis of infectious disease will now contribute to reducing the morbidity and mortality of thousands of patients in Sri Lanka, as well as help track disease trends and reduce the spread of antimicrobial resistance by preventing inappropriate antibiotic treatment.

Rotary has again demonstrated a comprehensive ability to provide appropriate equipment and competent training to produce sustainable, life-saving outcomes. •



Training Workshop.
Rotarian Dr Tim Inglis with specialist microbiology laboratory technician participants at the Rotary-sponsored four-day training workshop at the University of Peradeniya.