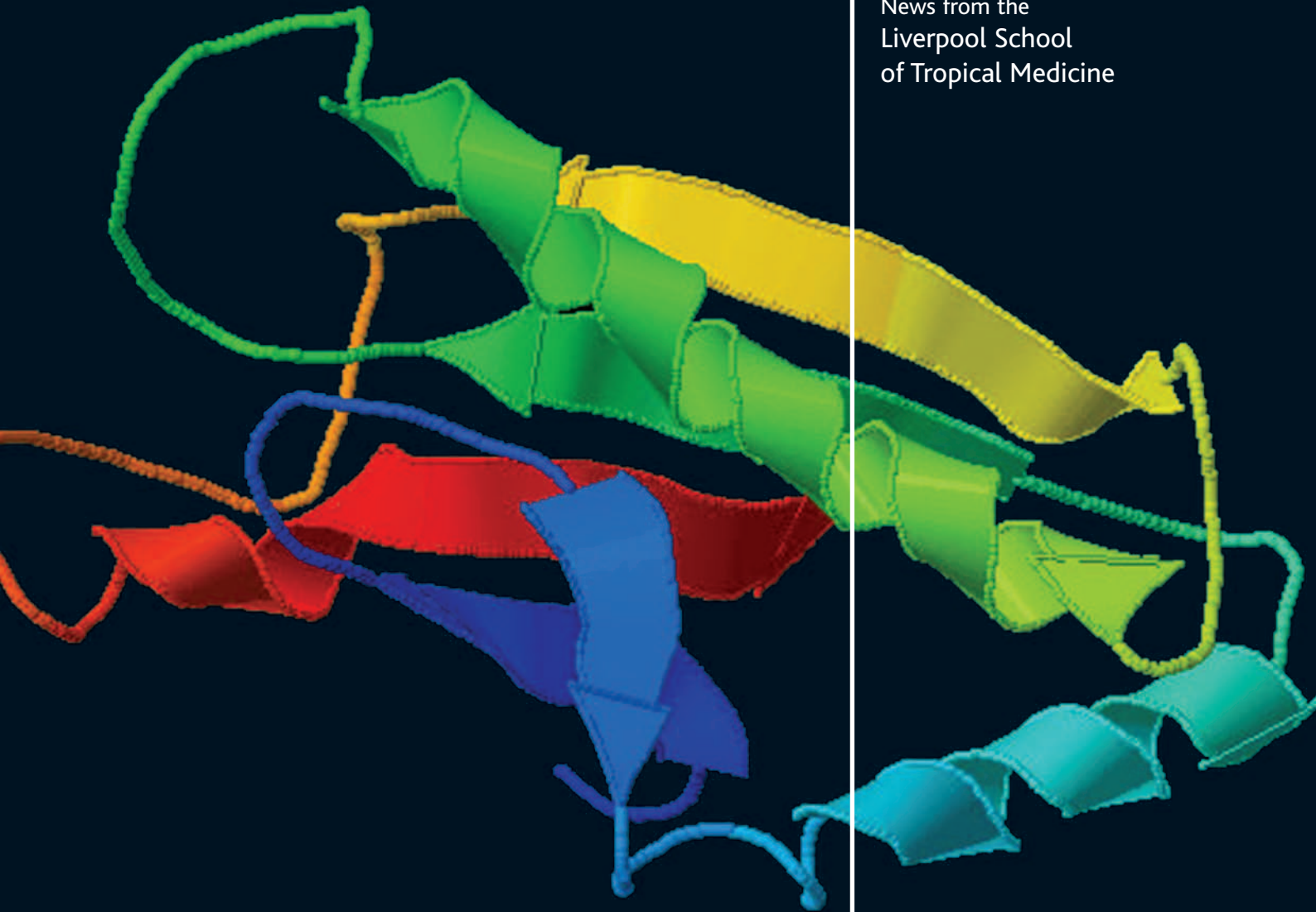


# *tropical*

News from the  
Liverpool School  
of Tropical Medicine



## Targeting an ancient disease

Anti-Wolbachia (A-WOL)  
consortium develops  
new methods to treat  
filariasis

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2007-2008 issue

# Director's Update

Professor Janet Hemingway



**This year has been an exciting one for the School. We are looking forward to implementing our new brand identity later this year. This retains our links with our maritime history, while reflecting the modern dynamic nature of the School.**

This year, major new projects have been instigated to improve the control of sleeping sickness in Africa and develop new drugs to treat filariasis. In collaboration with the Royal Liverpool and Broadgreen Hospital and the University of Liverpool, we were awarded the NHS Biomedical Research Centre programme in infectious diseases, which will allow us to develop novel inhaled

vaccine technology and new drugs for TB treatment.

The new building is almost complete and cannot come a moment too soon with projects already vying for space in this state of the art facility. It has provided a big improvement to the environment on the major arterial road in Liverpool where the School is situated.

The practical outputs of LSTM's work are also evident in the increased demand for technical assistance through LATH. Programmes are being supported in maternal and child health, neglected tropical diseases, health services and malaria control among others.

We were pleased to achieve Investors in People accreditation in June 2007.

This year we are also improving our service to the local community. The Travel Clinic will have extended opening hours and more staff with better facilities coming on line in 2008.

We hope that many of you will join us for the formal opening of our new building in mid-2008 and look forward to your continued support as we strive to improve the health and wellbeing of people in disease endemic countries.



CTID construction remains on track for completion by end 2007

# A new brand identity for LSTM

**An organisation's brand identity affects its reputation and performance as well as its external and internal perception. An organisation with a strong strategic vision needs a brand which speaks of distinction, quality and trust. The rapid growth and expansion of LSTM in recent years has created a leading institution which truly deserves the title 'centre of excellence' but was that status apparent in LSTM's brand identity? The sum total of current and future activities provided a strong strategic rationale to review LSTM's brand identity and to assess its continued suitability to represent the dynamic and responsive organisation that LSTM has become.**

Approval for a brand review was authorised and an external design agency was selected to assist with the process. A series of workshops was held with a cross section of employees and trustees to establish what the 'essence'

of LSTM was and to use that insight to develop a vision statement and brand values. The identities of peer organisations were reviewed and the value and appropriateness of the current identity was objectively assessed before a wide range of alternative visual identity options were tested.

The output from the first phase was reviewed and used to develop a second phase of research which sought the views of nearly 100 internal and external stakeholders on a brand descriptor, vision and values, the current identity and a shortlist of alternative identity options from the first phase.

Whilst there was some affinity towards the existing identity – mainly because of heritage and familiarity – there was also a consensus that it was not appropriate to support future growth and expansion and that although it had an important place in LSTM's heritage, it was time to move on.

There was overwhelming support for one option which was conceived as a simple and sympathetic evolution of the existing identity, retaining some of LSTM's maritime heritage whilst creating a modern forward-looking image to support future aspirations.

Alan Hughes, Communications Manager, said: "It was very important to fully assess the value of such a historic identity with a wide range of stakeholders before committing to a change. The comprehensive process we employed confirmed that the time was right for a change and helped us to develop a winning identity which clearly signals our future direction and supports our plans for growth."

The new identity will be phased in during the rest of this year with a comprehensive set of guidelines for its usage.





## Awards and Honours



LSTM received an award and a donation of £20,000 on 28th September 2006 from Medicash for outstanding work by a Liverpool based charity.

LSTM Chair Rosemary Hawley and staff with award.



Professor Hemingway

Portrait of Professor Janet Hemingway by John Sutherst. Commissioned as part of the Spirit of Liverpool Greatest Merseysiders Competition, in which LSTM's Director won the Educators and Innovators section.



Professor David Molyneux

Professor David Molyneux has been elected as the new President of the Royal Society of Tropical Medicine & Hygiene. Professor Molyneux takes over from Professor Brian Greenwood in September 2007 coinciding with the RSTMH Centenary Conference.



Lord Rees of Ludlow (left) presenting the award to Dr Alex Nzila

photo credit ©MPP Image Creation

Dr Alex Nzila, an honorary lecturer at LSTM who has worked in the area of tropical pharmacology for over ten years, was presented on 10 October with the 2006 Royal Society Pfizer Award for his research into malaria folate biochemistry and its parallels in cancer.



Professor Herbert Gilles

LSTM Vice President Professor Herbert Gilles has been awarded The Manson Medal by the Royal Society of Tropical Medicine & Hygiene. The medal is awarded triennially and is the Society's highest mark of distinction to be awarded to the living person whose contribution to any branch of tropical medicine or hygiene is considered by Council to merit the honour most.

# Syria Centre for Strategic Health Studies



Delegates from CSHS enjoying a tour of Liverpool.

LSTM is leading a consortium that has established a new academic centre for the training of health professionals in Syria. The Syria Centre for Strategic Health Studies (CSHS) in Damascus is funded by a grant of €5 million from the European Community. Consortium partners including ARCADIS BMB and the London School of Hygiene and Tropical Medicine are working with the Syrian Ministry of Health and key advisors in developing the centre of excellence.

The aim of the centre is to modernise Syria's health sector through internationally recognised techniques and develop research, training and consultancy capacity across Syria.

CSHS assisted by LSTM staff will design and deliver a range of training programmes, including short courses (2-4 weeks), diploma courses, Masters courses and PhDs in specific areas: Health Economics, Health Management, Hospital Management, Population and

Demography (reproductive health) and Public Health.

LSTM Director Janet Hemingway, said: "This contract is a significant breakthrough for the School and marks the end of another very successful year for us as we move further towards our goal of becoming the world leader in tropical and international health services."

## QA Handbook is an International Hit

A handbook to help ensure that educational courses in developing countries meet international standards has been a surprise hit all around the world. The handbook was originally developed by The Liverpool School of Tropical Medicine and The University of Liverpool to help colleagues at a teaching hospital in Ghana, but after making it accessible over the Internet, the authors have been inundated with requests from countries as diverse as Colombia, Pakistan, India, Canada, Australia and the USA.

Dr Imelda Bates, Head of Disease Control Strategy at LSTM explained: "The aim of the handbook was to help tutors in developing countries design courses which met international standards. We reviewed the mandatory requirements for courses in different educational institutions across the UK and at national policy level and condensed the most important elements into the handbook.

"It provides a practical, simple and jargon-free outline of the principles and practice of educational quality assurance for anyone designing a course, from a one day workshop to a Masters degree. Tutors teaching existing courses can use it to evaluate and improve their courses and it will empower students to check that the courses they are taking meet quality standards.

"We are now piloting the use of the handbook as a tool for validating and enhancing the quality of courses to train tutors which are run by our partner institutions overseas. The handbook will be revised within two years in response to feedback from tutors and students."

[http://www.liv.ac.uk/lstm/learning\\_teaching/documents/education\\_handbook.pdf](http://www.liv.ac.uk/lstm/learning_teaching/documents/education_handbook.pdf)



Dr. Imelda Bates, Head of Research Group (Disease Control Strategy), LSTM



# New fight against the Tsetse fly

**The Bill and Melinda Gates Foundation has awarded \$4million to LSTM scientists to fund research into the blood-sucking tsetse fly. Led by molecular entomologist Professor Mike Lehane, researchers hope that their work will alleviate the suffering caused to the poorest of the poor in rural communities in sub-Saharan Africa.**

Relative newcomers to the LSTM insectories in recent years, tsetse flies transmit Human African Trypanosomiasis (HAT), more commonly known as "sleeping sickness". LSTM is one of the few laboratories in the world which houses tsetse flies because they are so hard to keep - the female tsetse fly produces only one offspring every nine days which lives for four to five months unlike the mosquito which produces hundreds of eggs in nine days.

Far away from Liverpool, in countries such as Uganda, Guinea, Cote d'Ivoire and Burkina Faso, the insects, which resemble horse flies, cause devastation, killing 60,000 people a year and making many more very ill. Victims become infected through the bite of a fly which has already sucked the blood of an infected person or animal and then deposits the Trypanosome parasite in its victim. Without treatment sufferers will die. In the final stages of the disease, the parasite enters the central nervous system, including the brain, and the person becomes comatose. The drugs available were developed many years ago and their toxicity and consequent human mortality, allied to the increasing resistance to drugs, are very serious concerns.

The disease brings additional hardship to rural villages by decimating their animal population on which they are so dependent for their very existence. The fly and the associated disease costs Africa's livestock industry the equivalent

of £5billion in lost revenue by killing highly productive animals which would have produced food, milk, leather etc. This also means that many of the rural poor have to till their own land, doing work that should be done by large, heavy animals.

With the Gates grant the LSTM team will work with an international consortium to foil the insect by identifying smells which attract it and those they find repellent. By focussing on the smells which the flies like and dislike, the team aims to develop better attractants for insect traps and possibly also better repellents to prevent flies biting humans. The attractants will ensure that traps used in large scale control operations to clear the fly are highly efficient.

As Professor Lehane, author of "The Biology of Bloodsucking in Insects" explained: "The team will first identify the scents which attract and repel the blood-sucking vector. The molecular make-up of these odours will then be tested to identify the molecules within them which stimulate the fly's antennae."

Commercial sources of the odours could then be sourced and used in either insect traps or personal protection products.

Suitable low technology release systems could then be developed for use in African control campaigns. Initial tests are already being carried out by field workers in Kenya and Burkina Faso where odour traps have been set up to test the fly's reaction to different scents.



Tsetse control currently relies on insecticides which are usually delivered by aerial or ground spraying which is costly, raises environmental concerns and is inefficient. Use of insecticide treated traps and targets in control operations limits environmental concerns and is a highly efficient control technique when the targets are baited with an attractive odour.



**Tsetse fly**  
Image courtesy of Wellcome Images

**Top: Recently blood fed tsetse fly**  
Image courtesy of Ray Wilson

# Life, Health and Social Issues - an oral history



The Bridge over the River  
Kwai, featuring FEPOW's.



Dr Geoff Gill

**Continuing LSTM's commitment to former Far Eastern Prisoners of War (FEPOW), the latest research project has been undertaken by research assistant Meg Parkes, working with Professor Geoff Gill. The purpose of this project is to investigate the long-term effects of captivity on a group of ex-FEPOW who became Japanese prisoners of war in 1941-42.**

These men, now in their late 80s, can reflect on experiences endured over 60 years ago. The study aims to highlight the medical, psychological, psychiatric

and social effects encountered both as a POW and in later life, continuing the clinical work undertaken by the LSTM, both immediately post-war and from the late-1960s to date.

In the interviews recorded to date extraordinary stories (some told for the first time) and detailed medical case notes not previously scrutinised are emerging.

## Vice-Presidents Meeting

**This year's Vice-President's Meeting and Dinner was held in London on 29 May 2007 and hosted at Anglo American plc by LSTM's President, Sir Mark Moody-Stuart.**

The dinner was attended by LSTM Chairman, Rosemary Hawley, Trustees and senior staff. Director Janet Hemingway spoke of the achievements in the previous year and outlined plans for the future.

Professor Mark Taylor, Head of the Filariasis Research Group in Molecular and Biochemical Parasitology gave a presentation entitled "Elephantiasis - a step closer to extinction?"

The Vice-Presidents were enthusiastic in their support and impressed by what had been achieved in the last five years.



# RCOG International Office Update



Mother and child in traditional homestead in Swaziland 2007

**The Royal College of Obstetricians & Gynaecologists (RCOG) decided to base one of their international offices at LSTM in November 2005. Since then partners LSTM, RCOG & LATH have increased awareness of maternal and neonatal health issues and strengthened health systems through training and policy. The overall aim of the office is to contribute towards the work of reducing maternal morbidity in the developing world.**

2007 continues to be a busy year for the office, with new areas of work undertaken. Team members continue to travel to Malawi to work for the Health Foundation, to Nigeria to offer technical assistance to Partnership for Transforming Health Systems (PATHS) and Nairobi, to maintain links with Essential Health Services Kenya through collaboration with LATH.

The Life Savings Skills Emergency Obstetric Care course was run in Hargeisa, Somaliland in February 2007 with a faculty of 10 consultants. Funding has been gained to run further courses in Somaliland which is an exciting development. Two courses have also been run in Swaziland with health care

professionals attending from all over the country. Some of the first course delegates were chosen to be trained to act as trainers on the second course which went very well. After each course the equipment is left behind to be used for further training.

Two events have been held at the RCOG in London. In January 2007 a day was held for those interested in working as technical assistants. In March 2007 Africa Day was held at RCOG in London. This event was over subscribed and enthusiastically received by those who attended. Presenters spoke from personal experience of working in Africa and ranged from a VSO volunteer to an eminent professor who had spent his life working in South Africa. The theme permeated throughout the day from the food served to the musicians playing.

The RCOG International Office continues to be busy and to look towards further opportunities for working towards its main aim of contributing towards the work of reducing maternal morbidity in the developing world.



Swaziland children



# Centre for Tropical and Infectious Diseases



LSTM's new Centre for Tropical and Infectious Diseases (CTID) is nearing the end of construction and is on schedule for completion by the end of this year, with staff scheduled to begin moving in during spring 2008. The new facility will

bring together under one roof a multidisciplinary team of scientists with the capability of taking a scientific idea from the molecule to a final product capable of improving health.

Above right: link bridge joining CTID to main LSTM buildings.

Above left: rear and side views of CTID

## CTID Tops Out

An important milestone in the completion of the Centre was reached in March when Lord Sainsbury of Turville performed the topping out ceremony, which traditionally follows the placing of the last beam. Salt, corn seed, wine, yew tree branch and oil were combined by guests and sealed in concrete. The block will then become part of the building and the commemorative plaque will be displayed.

Lord Sainsbury commented: "This is scientifically a very exciting project, which has the potential not only to help improve the health of millions of people in the developing world but also to give a boost to the biotechnology cluster in the North West. It will also mean that the Liverpool School of Tropical Medicine is able to maintain its position as one of the leading research institutes in tropical medicine in the world."



Lord Sainsbury leading the topping-out at CTID

# Liverpool Associates in Tropical Health News

## – LATH opens Offices in Nigeria and Kenya

**The International Consultancy market is a very dynamic place and in recent years donors have started moving away from setting up their own projects and contracting agencies such as LATH to manage them. Instead donors are now looking to giving their funds directly to recipient governments. In an attempt to get closer to Ministries of Health and to be aware of opportunities only advertised locally, LATH has now established offices in both Kenya and Nigeria. Each office is staffed by a country manager whose main role is to promote LATH's expertise, win new work within the country and region and to be actively involved with stakeholders and partners on ongoing and potential programmes both nationally and regionally.**

We encourage LSTM staff who are working in both Kenya and/or Nigeria or in the region to make contact with our Country Managers and to brief them on LSTM activities and explore opportunities for mutual promotion and networking. Please visit our web site for their contact details at [www.lath.com](http://www.lath.com)

### LATH Nigeria Office

Our Nigeria Office is strategically very important to LATH, since from 2008 it is expected that donor funding will double in Nigeria. The LATH Nigeria Office was opened in May of this year and is based in Abuja, within the premises of Zankli Medical Centre. Dr Lovett Lawson, Director of Zankli Medical Centre is a Board Member of LATH Nigeria and in fact recently graduated with a PhD from LSTM. Our Country Manager, Dr Gafar Alawode, also a recent Masters graduate from LSTM has worked in various capacities and at different levels of the Nigerian health care system, ranging from primary health care to a specialist hospital. Prior to joining LATH, he was the PHC Coordinator for a DFID funded Integrated Primary and Secondary Health Care Project in Maryland County, Liberia. Gafar is currently providing in-country support to the development of the LATH-LSTM led bid for the multi-million pound DFID funded contract "Support to the National Malaria Programme, Nigeria".



Dr Lovett Lawson (left) & Dr Gafar Alawode in the LATH Nigeria Offices

### LATH Kenya Office

The Kenya Office was opened in July 2007 and is based in Nairobi, within the premises of Liverpool VCT, Care and Treatment, a Kenyan NGO which has a long established relationship of working with both LSTM and LATH and is a key partner with LATH on the DFID funded Essential Health Services Programme. Our Country manager for Kenya, Sheila Waruhiu, joined LATH in mid July 2007. Previously Sheila was a consultant in food security and health related matters and spent the last seven years carrying out assignments in countries experiencing disasters in Africa, the Middle-East and Asia. Her experience ranges from working at field level to managing and building the consulting business. Since joining LATH, Sheila has been setting up the LATH office and has also travelled to Juba, South Sudan to represent LATH at a bid opening. Sheila commented,

*"That was a great trip especially because LATH scored highly on the bid though we are yet to hear final word on the winner. I am looking forward to beginning the real task at hand-growing LATH business in Kenya"*



LATH Kenya Country Manager – Sheila Waruhiu



# Developing new drugs with AntiMal

**More people are dying globally from malaria than they did twenty years ago because of increasing resistance to existing drugs. That is why the work of a consortium of 34 research groups throughout Europe and Africa has been established to develop new drugs within five years is so vital.**

The Euro AntiMal project was set up with 17 million euros from the European Union. It is headed by Professor Steve Ward, LSTM's Deputy Director and is co-ordinated by the LSTM. Its aim is to establish a portfolio of new antimalarial drugs suitable for first "into man" studies.

During the first 18 months of AntiMal, projects have progressed well. Enthusiasm for their quest was evident when consortium members attended an initial meeting in Liverpool in May 2006 and when they met again in November 2006 for an annual review to present and discuss their progress. AntiMal members also took part in a joint international conference in Heidelberg in April with BioMalPar, another EU funded network of excellence in malaria research. This led to a collaborative application for further EU funds to expand the European Malaria Graduate School - a PhD programme set up between AntiMal, BioMalPar and the European Molecular Biology Laboratory (EMBL).

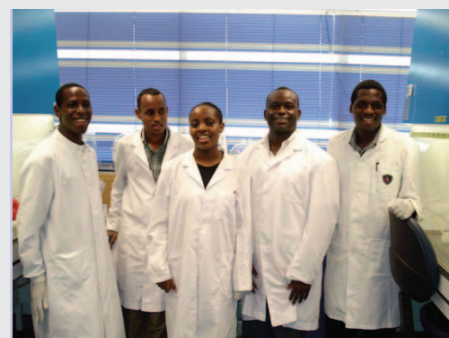
As a result, one million euros has been allocated for this programme in the hope of attracting more young scientists to the field of malaria research. Eleven AntiMal students have enrolled in this Virtual European Malaria graduate school.

Funded by a further 250,000 euros from the EU, three new African groups will join the consortium soon, adding different and exciting approaches to the development of new antimalarial drugs. The AntiMal programme has also set aside 1million euros for a long-term research capacity building initiative in African institutions.

The next important milestone takes place this autumn when a major review of the AntiMal portfolio will be conducted by an External Scientific Advisory Committee (ESAC) of ten experts in the field of malaria drug development. The aim is to selectively fund and 'fast track' those projects now considered most likely to achieve the AntiMal programme's ambitious goals over the remaining three years of the project. All involved look forward to the delivery of vitally needed new drugs for the treatment of malaria.



CSIR team with Dr Chris Parkinson, back row, last on right



KEMRI team with Dr Alexis Nzila, second from right



IPR team with Dr Ngotho, second left

# Targeting an ancient disease with A-WOL



Participants in doxycycline trial on river blindness in Cameroon

**Human filariasis is a disease that causes immense suffering. Affecting over 150 million of the world's population, it can lead to river blindness (onchocerciasis) and gross disfigurement through lymphatic filariasis, better known as elephantiasis.**

LSTM is at the centre of an international effort to better control and treat these debilitating diseases with a \$23 million grant from the Bill and Melinda Gates Foundation awarded to Professor Mark Taylor to establish the Anti-Wolbachia (A-WOL) Consortium.

Professor Taylor and his team will work with an international consortium of six academic and industrial partners to develop and screen thousands of new combinations of potential filariasis drugs using state of the art technology.

River blindness is caused by a nematode worm which causes skin disease, eye inflammation and eventual blindness.



Above: An example of the effect of filariasis.

One of Professor Taylor's most significant scientific achievements was to identify the *Wolbachia* bacteria inside the filariasis worm as a cause of inflammatory disease and to establish that the adult worm actually relied on this bacteria for its development, fertility and survival. "That was the most important milestone in my career and in our research to date," said Professor Taylor.

By developing drugs which target this bacteria, this research has the potential to offer an entirely new method to control and treat river blindness and elephantiasis.

The Gates award could not be more timely. It comes as evidence is emerging that the parasitic worm that causes river blindness may be developing resistance to ivermectin, the only drug available for mass treatment.

Stressing the urgency of the situation, Professor Taylor said: "We don't need new drugs in ten years - we need them now. Drug resistance is making current





Travelling to the field site through the rainforests of Cameroon

programmes less effective in areas where the disease had virtually disappeared. Ivermectin is a fantastic drug but as with any control approach, it is dangerous to rely on a single tool. Unless we come up with a new treatment, it could mean that the major source of blindness in Africa will become untreatable. This resistance could also spread into populations which are currently responding normally.”

He added that unpublished data from a recent trial using the antibiotic doxycycline showed that it does kill the adult worm. This would appear to be the most suitable option currently available for treatment in populations with evidence of ivermectin resistance. But it needs to be given every day for 4-6 weeks which is not practical in mass control programmes.

Said Professor Taylor: “Our aim is to obtain a safe and easily administered anti-symbiotic drug combination to kill the bacteria in a shorter period. This would speed up the elimination of adult worms

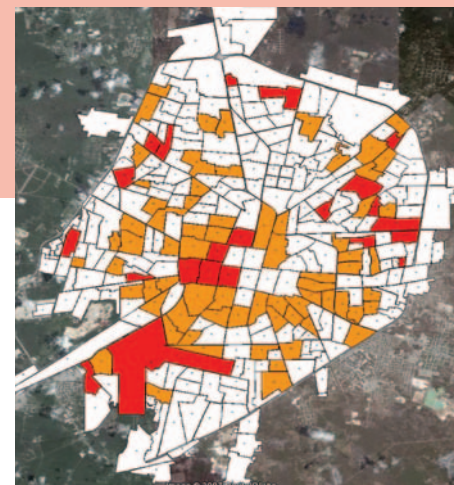
from an endemic area and give us another weapon against these diseases. It is a good example of how basic biomedical research can deliver new treatments which are both effective and affordable - with this grant we can now address the challenge of translating them into tools for public health.”

Partners in the consortium include the Institute for Medical Microbiology, Immunology and Parasitology, University Clinic Bonn, Germany/KCCR, Ghana (Hoerauf/Adjei labs); The Tropical Parasitic Diseases Unit, Northwick Park, Institute for Medical Research, UK (Townson lab); TRS LABS (McCall lab); Paratek Pharmaceuticals; CombinatoRx; and New England Biolabs (Slatko, Carlow, Kumar labs), USA.

For further information please visit A-WOL's website at [www.a-wol.net](http://www.a-wol.net)



# The Innovative Vector Control Consortium (IVCC)



Above: Example visual output from a decision support system

Left: Collecting mosquito larvae samples for analysis

**The IVCC, a consortium of five leading institutions in the field of insect vector control is now in its second year and fully operational with a range of projects across its Information Systems and Public Health Products portfolios. Led by LSTM and formed with an award from the Bill and Melinda Gates Foundation, its strategy is to identify opportunities to develop new products and tools for the more effective control of disease carrying insects.**

Progress on the Information Systems (IS) projects – the tools – has been good with all projects retained following review by the External Scientific Advisory Committee. These projects aim to improve the quality and quantity of information available to public health control managers in disease endemic countries.

Two projects are developing an integrated range of databases on aspects of malaria and dengue-carrying insects which will be built into comprehensive decision support systems (DSS) holding information on insect populations, resistance, control interventions and disease outbreaks. Some field sites have already been established and are beginning to supply new data and others are being selected.

Another project is developing control analytical and simulation models to establish estimates of control thresholds required to reduce or eliminate disease transmission. These models will in turn guide the development of the other information tools.

A further IS project will develop a simple, DNA based 'kit' which can rapidly identify species, infection and resistance and can be used on samples collected using standard methods. The present alternatives use expensive and complex processes which cannot be deployed on a significant scale. Very good progress has already been made with material from sites in Africa, Central and South America used to develop two prototype kits which have been successfully tested in Malawi.

The final IS project is developing a kit which will allow the level of pyrethroid insecticide on a material to be accurately and quickly measured, thus determining the optimal respraying period for bednets and indoor spraying. The kit will be easy and quick to use, give almost immediate results, be much cheaper than existing methods and will allow in-country health managers to better control the quality of bednets.

The first tranche of funded projects to develop new public health pesticides – the products – has also been launched.

The three projects, with partners Bayer CropScience and Syngenta, are the first to be taken forward from a number of proposals. The Syngenta project, in association with the London School of Hygiene and Tropical Medicine (LSHTM) will seek to develop a new long lasting Indoor Residual Spray (IRS) formulation.

The first Bayer CropScience project, in partnership with the Medical Research Council, South Africa, the Liverpool School of Tropical Medicine (LSTM) and LSHTM, is also aimed at developing a long lasting IRS formulation. The second project partners with LSTM and the University of Liverpool to develop new active ingredients to overcome pesticide resistance.

The consortium has also redesigned its website at [www.ivcc.com](http://www.ivcc.com) and launched a distinctive brand identity.



The IVCC's brand identity



# Global Programme to Eliminate Lymphatic Filariasis – seven years on

The Global Programme to Eliminate Lymphatic Filariasis (GPELF) was launched in 2000 and has quickly become one of the fastest growing public health programmes worldwide. In 2000, three million treatments were given in 20 countries and by 2006 this had increased to 90 million in 44 countries. Lymphatic filariasis is one of the world's most distressing and debilitating illnesses. It is caused by a worm infection transmitted by mosquitoes and is often known as elephantiasis due to the grossly enlarged limbs of sufferers.

LSTM's Lymphatic Filariasis Support Centre has been a key partner in this achievement. Core funded by the Department for International Development (DFID) and GlaxoSmithKline (GSK), the Centre is in the third year of its second five-year contract. Since 2000, country funding provided by DFID via the Centre has been used to assist programmes in 28 endemic countries throughout the six GPELF regions. In addition support has been provided to assist the World Health Organisation, support UK-based dermatology initiatives and US-based related activities. A more focused funding approach has been in place since 2005 when Bangladesh, Burkina Faso, Ghana and Tanzania became the main recipients of support for mass drug administration with some additional support available for operational research, evaluation and monitoring.

Reflecting on the Centre's contribution to the GPELF as a partner in the Global Alliance to Eliminate Lymphatic Filariasis, David Molyneux, Director, said: "From the outset I strongly believed that the goal of elimination was achievable. The figures now available support that belief. However, although a number of countries have reached the target of a prevalence rate of less than 1% there are countries which still have to launch a national



programme. Funding is the main stumbling block but the initiative of addressing lymphatic filariasis within a package of 'neglected tropical diseases' is proving to be a more interesting opportunity for donors and I am hopeful that the funding gap is closing."

Above: A community health education session that is critical to the elimination of the disease.

Photo credit: Carter Center



Left: Shehu Lliya, a Nigerian man with elephantiasis - the most extreme form of lymphatic filariasis.

Photo credit: Carter Center

# Liverpool Biomedical Research Centre Launched

**A new, national research centre set-up to tackle infections was launched in Liverpool on 23 August 2007. The Centre is being run jointly by the Liverpool School of Tropical Medicine (LSTM), Royal Liverpool University Hospital and the University of Liverpool. It is now the UK's leading specialist research centre for microbial diseases.**

The Centre is funded by the National Institute for Health Research and will ensure that the city becomes a pioneer in the development of new drugs and diagnostic tools for a range of conditions such as *Clostridium difficile*, HIV, tuberculosis (TB), cystic fibrosis and drug safety.

During the next five years, the Centre will deliver 13 groundbreaking projects. They are focused on four areas – pulmonary infections, sexual health, hospital and community acquired infections and the safety of antimicrobials.

Professor Peter Winstanley, executive director of the Liverpool Biomedical Research Centre, explained: "Our aim is to take research from the 'laboratory bench' and translate it into real patient benefit. We have 13 exceptional projects that will, in some cases, help us develop new ways to test for specific conditions to improve treatment or reduce the impact of some major infectious diseases."

One of the projects that BRC will deliver is a new vaccine for pneumonia – caused by bacterial infection, it is a major cause of death in children and adults worldwide. Particularly at risk are young people, people with damaged lungs due to tobacco smoking and people with HIV infection.



Professor Janet Hemingway, Director of LSTM; Professor Peter Winstanley, Executive Director of LBRC; Talib Yaseen, Acting Chief Executive of Royal Liverpool and Broadgreen University Hospitals NHS Trust and Professor John Caldwell, Dean of the University of Liverpool's Faculty of Medicine.



Professor Steve Ward, Project Leader on two projects to improve TB treatment



# Accelerated TB Diagnosis



Patients waiting for smear microscopy results in a TB centre in Yemen

**Tuberculosis, a disease closely associated with poverty, is still the most frequent infectious cause of adult death in the world.**

Despite its importance, the diagnosis still relies on the repeated microscopic examination of sputum (smear microscopy). This procedure is essentially unchanged since its development more than a century ago and requires patients paying multiple visits to health facilities with many abandoning the process. The development of diagnostic approaches that are more responsive to the needs of poor individuals is thus fundamental to increase access to anti-TB treatment and was declared a priority by the World Health Organisation (WHO).

The LSTM has over the years conducted studies to optimise smear microscopy focusing on the development of approaches that allow health services reaching a diagnosis of TB in one day. These accelerated schemes could play a central role in improving the performance of National TB Control Programmes and the WHO has decided that these approaches should be rapidly explored. Dr Luis Cuevas and Dr Mohammed Yassin are currently coordinating a WHO-funded multi-centre study in Brazil, Ethiopia, Nepal, Nigeria and Yemen to validate the schemes. The results of this study are expected to make a major contribution to revising global policy recommendations on the diagnosis of TB.

# Promoting contraceptive use among young female migrant workers in Shanghai

**A collaborative project led by a team from Liverpool School of Tropical Medicine (LSTM) working with the Fudan University School of Public Health, Shanghai, China, has investigated attitudes towards pregnancy and contraception in single women in China.**

The pilot project involved a workplace-based intervention to promote contraceptive use in unmarried female migrants working in privately owned factories. Increasing in urban areas, particularly among migrants, abortion appears common and women may be using it as a method of contraception. A systematic review of surveys from five provinces in China showed over 54% of urban women interviewed prior to marriage had experienced sexual intercourse; 12%-32% had been pregnant, and almost all of these had an induced abortion.

Methods of temporary contraception are widely available in urban China, but the current national family planning policy targets married couples and access to contraceptive services for young, unmarried migrant workers in urban China is limited. In state owned factories, doctors provide contraceptive services with education, counselling and contraceptive provision. However, in privately owned factories, doctors are employed to provide basic first aid rather than health promotion activities, so contraceptive services are more limited.

Yet it is precisely in these private factories where the need is likely to be highest: changes towards a market oriented economic policy means there are far more privately owned factories, and they often employ the migrant or 'floating' population which comprises young women who are highly mobile, hard to reach, and are isolated from comprehensive family planning services. It is in these populations that research

indicates that the younger age groups lack knowledge and awareness of effective contraception methods and perceive induced abortion as a method of contraception.

By developing and piloting a workplace-based intervention to promote contraceptive use in unmarried female migrants working in privately owned factories, we were able to offer lectures, information booklets and a free contraceptive service led by the factory's doctors who received extra training.

The family planning information booklets proved popular, but very few women (5%) used the free factory-based service. Women voiced concerns about using a service where privacy was compromised, and using a service without paying for it. Attitudes indicated a need for contraceptive use; 90% of women thought contraceptive use was necessary in premarital sex. Privacy, anonymity and appropriate services for young migrant workers may be important in determining use of contraceptives in this population.

Xu Qian, Helen Smith, Wenyan Huang, Jie Zhang, Ying Huang, Paul Garner. Promoting contraceptive use among unmarried migrant workers in one factory in Shanghai: a pilot workplace intervention. BMC Health Services Research 2007, 7:77. Available to download at: <http://www.biomedcentral.com/1472-6963/7/77>

Below: Excerpt from the information booklet disseminated as part of the intervention.





# Liverpool Academic supporting China's health system reform



Shenglan Tang, Senior Lecturer in International Health, LSTM

**Advising top policy makers is a great way to help make a difference, and when it's in China, the impacts could be massive. That's just what Shenglan Tang is doing in Beijing. Shenglan, Reader in International Health from LSTM, has been seconded to World Health Organisation China Office since January 2006, to work for the DFID-funded Health Policy Support Project (HPSP), as Health and Poverty Advisor. Over the past year and half, he has worked extensively with top Chinese policy makers from the Ministry of Health, Ministry of Labour and Social Security and the National Development and Reform Commission to develop health policies towards universal coverage of essential health care for all Chinese citizens.**

In July 2006 Shenglan, together with two senior Chinese academics, were invited by the Select Committee of the Chinese National People's Congress (a national legislative body) to provide technical support in drafting Primary Health Care Law for China.

It didn't stop here. In February 2007, the State Council of the Government of China asked WHO to submit together a proposal for the overall reform of China's health system. Shenglan worked with his team in WHO China Office to put a proposal with support from WHO Head Quarters and LSTM including Tim Martineau on human resource issues. The proposal for reforming the health system to ensure universal coverage of essential health care for all in China was put forward at the international conference held in Beijing this May which was attended by many leading Chinese policy-makers, including two cabinet ministers and international experts. The ministerial coordination working group under the auspice of the State Council is now using this as a basis for the policy document being finalised this year.

Most recently, Shenglan, working with the State Food and Drug Administration (SFDA) and Ministry of Health, and supported by senior colleagues from WHO HQ, organised a national workshop on developing essential medicine policies in China where accessibility, availability and rational use of essential medicines has been problematic.

While he has been very busy working at the WHO China Office, Shenglan has also very much committed himself to a number of health research projects which the health system development team of LSTM has been leading or involved in. Many Chinese partners see him as WHO health advisor during the working hours, and as Liverpool academic during the evening and at weekends.

## Honouring LSTM's People



Rosemary Hawley MBE

**LSTM's Chairperson Mrs Rosemary Hawley JP DL, received the MBE for her services to healthcare in Merseyside in the Queen's New Year's Honours. The honour is in recognition of her work as Chair of Knowsley Primary Care Trust.**

Malcolm Molyneux, Professor of Clinical Tropical Medicine at LSTM, was also recognised in the New Year's Honours List receiving an OBE in recognition of his work in the field of childhood malaria in Malawi. Professor Molyneux is also Director of the Malawi-Liverpool-Wellcome Trust Research Programme based in the College of Medicine in Blantyre, Malawi. His wife, Professor Elizabeth Molyneux, formerly of Alder Hey Children's Hospital, has also received the OBE in recognition of her work as Head of the Paediatric Department in the same College of Medicine.



## Ray Rogers Rides Out

**Following nineteen years dedicated service, it was with great sadness and raucous laughter that the legendary Ray Rogers retired from active service as a trusted and well liked LSTM Porter. Ray's leaving party was packed out with admirers who were treated to a few stories from days gone by.**

Staff working late in the building have reported hearing calls of *snowy*..... echoing through the main corridors.

## Professor Sir Ian McGregor CBE FRS

**Ian McGregor was one of the last remaining scientists to have complete mastery of malariology, past and present, made a hugely successful contribution to maintaining British tropical medicine at the forefront of global efforts to understand the pathogenesis of malaria and to improve its control.**

McGregor's first scientific paper, in 1952, "A Health, Nutrition and Parasitological Survey in a Rural Village (Keneba) in West Kiang, Gambia", addressed

malaria, malnutrition and parasitism – themes that would continue to engage his time, intellectual efforts and research for the next 45 years and establish him as a leading British scientist in tropical medicine.

Many colleagues have paid tribute to Sir Ian and continue to remember his unique character and legacy with affection.

Sir Ian McGregor was born on August 26th 1922 and died on February 1st 2007.



Sir Ian McGregor (right)



# Alumni Interview

## From District Medical Officer in Burkina Faso to Atlanta via Liverpool

**Dominique Kyelem graduated in July with a PhD after studying with the Lymphatic Filariasis Support Centre (LFSC) as a part-time student since 2001. During this time he continued his role as the Programme Manager of the Burkina Faso National Programme to Eliminate Lymphatic Filariasis (NPELF). He was recently appointed Programme Manager of a Gates Foundation-funded project based in Atlanta addressing critical issues regarding Lymphatic Filariasis (LF). He responds here to questions about his career.**

**How did you, as a District Medical Officer, become involved with the NPELF?**

In 1993 I was a GP in the north of Burkina Faso becoming, in 1994, the sole medical officer in the region dealing with hydrocele among other surgical conditions. This broad district management led to a Masters in Public Health at the University of Heidelberg, following which I joined the Ministry of Health as the national programme manager for schistosomiasis control and LF elimination.

**How did your association with the LFSC begin?**

By meeting Professor David Molyneux at a mapping workshop held in Ouagadougou in 2000. It was this introduction which, along with support from the Gates Foundation, led to my registration for a PhD with the University of Liverpool with the LFSC providing critical support both in Liverpool and Burkina Faso. Moreover, with financial support for the programme from the Ministry of Health, DFID (via Liverpool), Gates Foundation, GSK and other partners I found I was able to study and continue to manage the national LF elimination programme, essential to the success of both.

**Programmatically, did you believe that you would be able to treat the total target population?**

Yes, as I believed that the necessary funds would be secured through the momentum of the global programme. Initially I commenced activities in the onchocerciasis control programme area treating half a million people in 2001 reaching the total at risk population of 10.6 million in 2006.

**How did you incorporate your PhD studies and Programme Manager responsibilities?**

With good management skills! After the first year of working 100% with the programme I organised a team which enabled me to focus my responsibilities and allowed me time to study.

**Looking back what do you believe you have gained from your PhD studies?**

Improved research, communication and management skills equipping me with the ability to build a strong team and oversee the programme. Last but not least, I am now bi-lingual which is useful for building a career.

**What are you doing now and what does the future hold for you?**

I am Project Manager responsible for developing and coordinating various research activities under a Gates Foundation grant for the research-orientated Atlanta LFSC. This is really a continuation of my PhD activities and provides me with potential for further academic and research opportunities.

I am very grateful to all who have contributed to my career path particularly Professor Molyneux and his team, DFID and the Gates Foundation.



Dominique Kyelem at his graduation

# Education & Training Programmes 2006-2007

## Masters Programmes

### **Masters in Tropical Medicine**

6 students are attending this programme which began in September 2006. Students come from 4 countries: Libya (3); Kuwait (1); Nigeria (1); UK (1).

### **Masters in Tropical Paediatrics**

11 students are attending this programme which began in September 2006. Students come from 8 countries: Kuwait (1); Uganda (1); Malawi (2); Libya (3); Nigeria (1); Sudan (1); Ghana (1); Italy (1).

### **MSc Medical Microbiology**

8 students are attending this programme which began in September 2006. Students come from 6 countries: UK (3); UK-Spanish (1); Belgium (1); Nepal (1); Malawi (1); Japan (1).

### **MSc Biology & Control of Parasites & Disease Vectors**

2 students are attending this programme which began in September 2006. Students come from 2 countries: UK (1); Sri Lanka (1).

### **Masters in Humanitarian Studies**

16 students are attending this programme which began in September 2006. Students come from 4 countries: UK (12); Malaysia (2); Bahrain (1); Canada (1).

### **MSc in Veterinary Parasitology**

5 students are attending this programme which began in September 2006. Students come from 1 country: UK (5).

### **Masters in Community Health**

9 students are attending this programme which began in September 2006. Students come from 5 countries: Germany (2); Gambia (2); Nigeria (3); Sudan (1); Kenya (1).

### **Masters in Humanitarian Programme Management**

13 students are attending this programme which began in September 2006. Students come from 8 countries: France (5); Ireland (1); Lebanon (1); Mozambique (1); Spain (1); Switzerland (2); Tanzania (1); UK (1).

## Diploma Courses

### **Diploma in Tropical Medicine & Hygiene**

81 Students are currently attending this course which began in September 2006. Students come from 20 countries: Afghanistan (1), Brazil (1), Canada (1), China (1), Cyprus (1), Germany (3), India (3), Iraq (1), Italy (2), Japan (2), Malaysia (1), Myanmar (1), Netherlands (1), Nigeria (4), Norway (1), Pakistan (1), Singapore (1), Spain (3), UK (50) and USA (2).

### **Diploma in Tropical Medicine & Hygiene**

85 students are currently attending this programme which began in February 2007 from 20 countries: Australia (4), Bangladesh (2), Canada (3), China (3), Denmark (1), Germany (3), India (5), Ireland (4), Italy (7), Libya (2), Malaysia (1), Myan (Burma) (3), Nigeria (2), Norway (5), Portugal (1), South Africa (1), Sri Lanka (1), Sudan (2), UK (32) and USA (3).

### **Diploma in Humanitarian Assistance**

23 students are attending this course which started in May 2007. Students come from 11 different countries: Argentina (1), Cameroon (1), France (1), Germany (1), India (2), Kenya (1), Nigeria (2), Pakistan (2), South Africa (3), Sweden (1), UK (8).

### **Diploma in Reproductive Health**

19 students are attending this programme which began in April 2007 from 10 countries: Sudan (1); India (1); Bangladesh (2); Pakistan (1); Ghana (5); UK (1); Nigeria (4); Tanzania (2); Japan (1); Gambia (1).

### **Diploma in Community Health**

1 student attended this programme from January to July 2007. Afghanistan (1).

### **Certificate in Community Health**

1 student attended this programme from January to April 2007. Nigeria (1).

### **Certificate in Tropical Community Medicine & Health**

10 students attended this programme from September 2006 to December 2006. Students came from 8 countries: China (1), Germany (1), Ghana (1), Japan (1), Nigeria (2), Poland (1), Sudan (2) and UK (1).

### **Certificate in Tropical Community Medicine & Health**

11 students attended this programme from February to May 2007, from 6 different countries: USA (1), Canada (1), Spain (1), Switzerland (2), Thailand (1) and UK (5).

## Research students:

101 students from 30 countries were registered as research students in May 2007: Belgium (1); Burkina Faso (1); Canada (1); China (2); Egypt (1); Ghana (2); Iran (1); Ireland (2); Kenya (4); Libya (1); Malawi (12); Malaysia (1); Maldives (1); Mexico (2); Netherlands (1); Nigeria (3); Pakistan (1); Palestine (1); Peru (1); Portugal (2); South Korea (1); Saudi Arabia (4); Sri Lanka (2); Syria (2); Tanzania (2); Thailand (5); Uganda (1); United Kingdom (32); Venezuela (1); Yemen (10).

## Medals and Prizes

### **Diploma in Tropical Medicine & Hygiene**

**Milne Medal in Tropical Medicine**  
Benjamin James Stone (UK) December 2006  
Jane Davies – (UK) May 07

**Blacklock Medal in Parasitology and Medical Entomology**  
Smathi Kuoh K'yet Chong (Malaysia) December 2006  
Helena Ellam (UK) May 2007

### **Warrington Yorke Medal in International Community Health**

Charlotte Frances McAuley (UK) December 2006  
Patrick Lillie (UK) May 2007

### **MSc in Applied Parasitology**

**Jervis Prize**  
Douglas Paton (UK) July 2007

**Andrew Campbell Memorial Prize**  
Aishah Hani Azil (Bahrain) July 2007  
Vanessa Kissoon-Singh (Canada) July 2007

### **Master in Tropical Paediatrics**

**John Hey Prize and Matthew Lukwiya Prize** both awarded to:  
Roberta Petrucci (Italy) July 2007

### **Master of Tropical Medicine**

**Glyn Williams Prize**  
Yaser Belkhir (Libya) July 2007



# Fundraising Appeals

As a registered charity the Liverpool School of Tropical Medicine relies heavily upon private donations of all sizes in order to undertake existing work and to react to new developments.

## Centre for Tropical & Infectious Diseases

A state-of-the-art facility for the research and development of new drugs and vaccines to fight diseases that are devastating the developing world. Funding for vital laboratory equipment is still required. Further information regarding CTID can be found at [www.liv.ac.uk/lstm/](http://www.liv.ac.uk/lstm/)



## LSTM Refurbishment

Following the construction of the state-of-the-art CTID, attention will turn to the refurbishment of the main LSTM building. Laboratories and teaching spaces require major refurbishment to meet the growing need of a cutting edge organisation.



## Lymphatic Filariasis (Elephantiasis) Support Centre

The LF support centre works towards the elimination of Elephantiasis. one billion people are at risk from the disease and 120 million people are infected across 80 of the poorest countries. The cure for this disease already exists, however urgent funds are needed to deliver those treatments.

[www.filariasis.org.uk](http://www.filariasis.org.uk)



## Far Eastern Prisoners of War (FEPOW)

LSTM is undertaking research on the health effects of imprisonment under the Japanese in the Far East during World War II, in particular infections with the worm *Stongyloides Stercoralis*. Donations are required to continue this research.



## Support for scholarships

Although the quality of students wanting to come to LSTM is always exceptional, their resources can often be far scarcer. LSTM's Scholarship Fund endeavours to bridge that gap. By supporting the scholarship fund you can help to develop a career that will be dedicated to preventing disease and suffering.



## Foreign Currency Appeal

Please have a look at home and in work for any foreign currency that you have lying around from your last trip abroad. Even if the currency is no longer in circulation please send it to LSTM at the address on the back cover.

Details of how to make a donation and information on other ways of supporting LSTM can be found on the back page of this publication.



If you did not receive this publication directly and would like to be added to our database for future mailings please make contact via the details on the back page, indicating whether you would prefer to receive tropical by email or post.

# How to Support LSTM

You can support the work of LSTM in the following ways:

A **general donation**, simply write a cheque payable to: Liverpool School of Tropical Medicine. Post to Billy Dean, Fundraising Office, LSTM, Pembroke Place, Liverpool, L3 5QA. If you are a UK tax payer you can print off a Gift Aid form to increase the value of your donation.

[www.liv.ac.uk/lstm/about/documents/GiftAidDeclarationForm.doc](http://www.liv.ac.uk/lstm/about/documents/GiftAidDeclarationForm.doc)

Leaving a **legacy** to Liverpool School of Tropical Medicine by remembering the charity in your will, is becoming an increasingly common method of support. Please contact the Fundraising Office for further details.

If you would like to make regular donations to LSTM you can fill in an online **standing order** form at our website

[www.liv.ac.uk/lstm/about/FundraisingOffice.htm](http://www.liv.ac.uk/lstm/about/FundraisingOffice.htm)

Taking part in a sponsored event or organising an activity:

- A sponsored a run
- A global adventure challenge
- A car-boot sale
- Organise a quiz or a raffle

## Corporate Support

Businesses can support the school in one or more of the following ways:

- A general donation
- Make us your charity of the year. With the support of your employees, you can donate the proceeds of your fundraising activities
- Gifts-in-kind
- If you are a medical company you may consider placing an advert in this publication. Or perhaps sponsoring its production.

Please contact the Fundraising Office for further details of supporting LSTM.

## Contact:

**Billy Dean, Fundraising Office, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool, L3 5QA.**  
**Telephone: 0151 705 3272**  
**Email: [william.dean@liv.ac.uk](mailto:william.dean@liv.ac.uk)**

