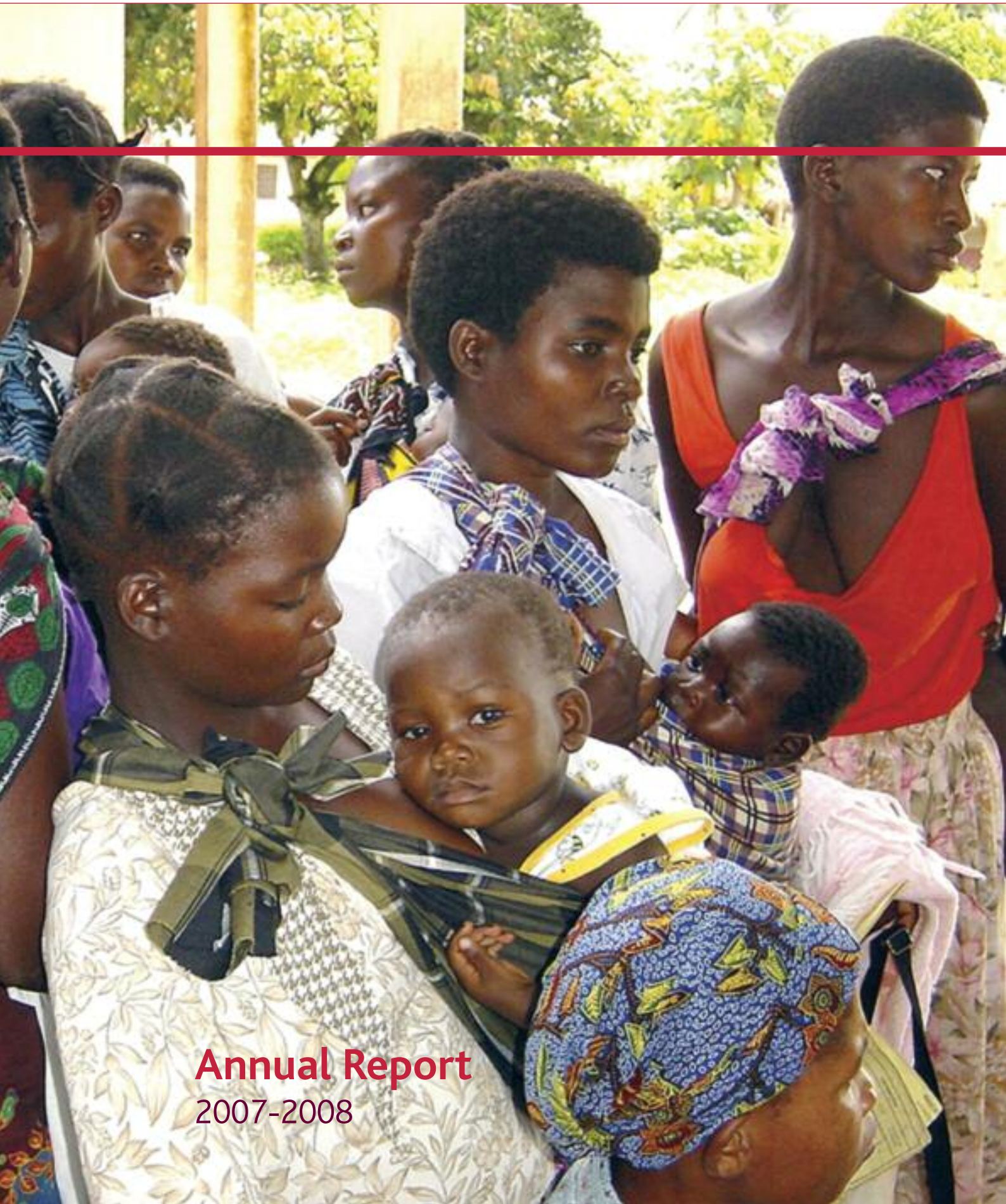
LSTM
LIVERPOOL SCHOOL
OF TROPICAL MEDICINE



Annual Report
2007-2008

LSTM
LIVERPOOL SCHOOL
OF TROPICAL MEDICINE

Affiliated to the University of Liverpool

LSTM
Mission Statement

As a centre of excellence, the Liverpool School of Tropical Medicine, through the creation of effective links with governments, organisations and institutions and by responding to the health needs of communities, aims to promote improved health, particularly for people of the less developed countries in the tropics and sub-tropics by:

- providing and promoting high quality education and training;
- conducting first-class research and disseminating the result of that research;
- developing systems and technologies for health care and assisting in their transfer and management;
- providing appropriate consultancy services.

in fulfilling this mission the Liverpool School of Tropical Medicine also provides a clinical service of acknowledged excellence.

Contents

Page 1	Contents
2	Chairman's Foreword
3	Director's Report
4	Treasurer's Report
5	Development
6-13	International Health
6-7	Cochrane Infectious Diseases Group
8-9	Gender and Health in Africa
10-11	Health Financing in China and Vietnam
12-13	Building capacity for planning and managing the health workforce
14	ABBA
15	Effective Health Care Research Programme Consortium
16	Global Alliance to Eliminate Lymphatic Filariasis (GAELF)
17	Improving Maternal Health
18	IVCC
19	A•WOL
20	Malaria in Pregnancy (MIP)
21	Human African Trypanosomiasis
22	AntiMal Project
23	Centre for Research on Equity and Systems in TB & HIV/AIDS (CRESTHA)
24-25	Liverpool Associates in Tropical Health (LATH)
26	Education and Training
27	Student Numbers
28-29	Research Grants and Contracts
30	Student Profiles
31	Staff Profiles
32	Officers 2007-2008
33	Academic & Academic-related Staff 2007-2008
34	Retirements
35-36	Highlights

Designed by **onefiveonecreative**.com - 0151 630 5633
Printed by **Printfine Limited** Liverpool - 0151 242 0000

Chairman's Foreword

Writing in the middle of the global financial crisis, it is hard not to contrast the developed world, caught in a spiral of greed and fear, with the challenges facing those who are exposed to tropical diseases and who lack the means of combating them. This only underscores the importance of the work of the Liverpool School of Tropical Medicine, which makes the bridge between world class research in superb new facilities on Merseyside and the application of the fruits of that research on the ground in the tropics. You will find in this report for the year 2007/08 an account of the work of the School in all its variety.

It is the story of the work of an outstanding group of people, led by the Director, Professor Janet Hemingway, who are dedicated to fulfilling LSTM's mission to promote improved health, particularly for people of the less developed countries in the tropics and sub-tropics. It is a measure of the success of its leadership that substantially increased funding, as well as a number of exceptional individuals who continue to be attracted to the work of the School. I would like to pay tribute to all who work at the School, and in its many partnership organisations, for what has been achieved.

I would also like to acknowledge, with great appreciation, the superb legacy of the late Mrs Shirley Dudley Wynn Wingrove. It is difficult to exaggerate the importance of such acts of real generosity. They complement and reinforce the flows of funding derived from our key funders from both sides of the Atlantic.

For an institution which has thrived for over a hundred years, the introduction of a new brand identity can be highly controversial and not guaranteed to succeed. However, the new brand has met with near universal approval, and gives the School a fresh image, which symbolises the optimism felt by all associated with LSTM for its future.

The opening of the spectacular new Centre for Tropical and Infectious Diseases by our Patron, HRH The Princess Royal in July this year, was a landmark event, underpinning the continuing growth of the research activities of the School. In parallel, the expanding teaching agenda of LSTM will enable the outcomes of that research to be translated into effective promotion of improved health in less developed countries

LSTM's consultancy and technical assistance arm, Liverpool Associates in Tropical Health (LATH) Ltd, has been through a period of significant adaptation to the changing market conditions for its services. Under new leadership, I am confident that LATH will continue to make a significant contribution to the work and reputation of the School, as well as to its finances. Closer to home, the Well Travelled Clinics are gathering momentum and will also make their contribution.

This annual report is the place to celebrate the progress of the Liverpool School of Tropical Medicine during 2007/08. It also provides the opportunity to communicate with our stakeholders, and to thank them for the support that they have given to the School.

JAMES ROSS.

Director's Report

This year has been one of substantial change for the School. Our new building is now largely functional and the first three floors are occupied. This provides state of the art facilities in line with our internationally recognised activities, and was officially opened in July by HRH The Princess Royal. A major refurbishment has now started in our old building, which should, subject to the lease on this building being renewed, make our estate fit for purpose for the foreseeable future, so that we can concentrate on delivering the benefits to health in the tropics that are desperately needed.

Our research and teaching portfolios continue to grow, with the School's, and its subsidiary companies', combined turnover exceeding £40 million for the first time this year. During the year we established the School's longstanding travel service as a new company, bringing in Philippa Tubb to expand and manage this business. Once its new facilities are operational, this new entity will not only provide a better local service to travellers with extended opening hours, but will also support the School's activities by ploughing its profits back into LSTM's charitable activities.

During the year, we said goodbye to John McCullough, LATH's Managing Director, who has returned to Senegal to manage a health programme there, and welcomed Stewart Tyson as the new Managing Director. Stewart's extensive knowledge of the health sector in developing countries, through his former role as Senior Health Advisor to the Department for International Development (DFID), should allow him to successfully lead and grow LATH in an increasingly competitive environment.

Our core activities are now able to expand using the space in our new building and a number of new senior staff have joined LSTM to strengthen these. Sue Assinder joined us from Bangor University to take on the role of Director of Education. Joe Valadez, a Monitoring and Evaluation specialist from The World Bank joined our International Health Group. Moses Bockarie joined the Disease Control Strategy Group as the new Head of our Neglected Tropical Diseases programme and Gerry Killeen, based at Ifakara, Tanzania, joined the Vector Group. We are delighted to have these new senior staff at LSTM contributing to the shared ethos of improved health through sustainable long-term partnership with organisations and institutions in the tropics.

After 100 years of collaborative veterinary research and teaching with the University of Liverpool, LSTM was sad to see the Veterinary Parasitology Unit transfer to the University. We wish them well in their new home within the University of Liverpool's Veterinary Faculty. This and the HEFCE-funded consultation looking at the linkages between LSTM and the University signal a reassessment of the relationship between the two Institutions, as LSTM expands. We hope that 2009 will allow a tripartite funding agreement between the School, the University and HEFCE that is transparent and sustainable.

We would like to thank our numerous donors for their continued support and hope that they, like us, are delighted with the progress in health research, education and implementation, some of which is highlighted in this report.

JANET HEMINGWAY.

Treasurer's Report

I am delighted to present my first Annual Report since I took over the Treasurership from my predecessor Rob Macfarlane, who performed the role in an exemplary fashion for the previous 12 years.

It is pleasing to report that LSTM has achieved another good financial performance in a year of challenging business conditions. The financial prudence, which has been a central plank of the Institution's growth strategy, has enabled major investment in facilities and people to be made whilst retaining the strong balance sheet necessary for future growth plans.

The most obvious external evidence of the investment programme is the splendid new Centre for Tropical and Infectious Diseases (CTID). Strong monitoring disciplines put in place via a steering committee ensured that the building was completed on time and within budget, at a final cost of £23.149m. This leaves the fit-out of the third floor which is now underway and will cost an additional £3m. Financial support from the North West Development Agency and the European Regional Development Fund has been a major factor in the creation of this new facility.

In addition to the bricks and mortar, there has also been a significant investment in people with 3 new professorships being established to date with a further 1 planned in the coming year. These high level appointments will continue to raise the profile of the School and should, in the short to medium term, become self-funding as they place LSTM in a good position to win additional research grants.

As part of the investment strategy, and in accordance with LSTM's five year strategic plan, the teaching resources are being strengthened and a new Director of Education, Dr Sue Assinder, took up her post in July. In the last couple of years there has been a reduction in overseas student fees due to funding and visa problems and steps are being taken to reverse the decline.

LSTM is funded according to the level of activity that it generates each year. In 2007/08, 114 FTE postgraduate HEFCE funded EU students and 104 postgraduate overseas students attended the postgraduate taught courses.

The School continues to build on its excellent reputation for producing high quality research work and this has resulted in an increase of 55% in the value of the research grants awarded to LSTM. As at 31st July 2008 the portfolio of research grants totalled £133.6m, with a further £10m of applications pending. Four major grantors are funding approximately 90% of the total but there are many underlying projects within these total grants to spread the School's risk. The main funders are the Bill and Melinda Gates Foundation, Wellcome Trust, DFID and EU with the remainder spread across a wide range of grantors.

The Gates Foundation accounts for approximately £57m of the total spread across 4 research projects, and the relationship with Gates remains strong. A new subsidiary, the Innovative Vector Control Consortium (IVCC), is in the process of incorporation as it is felt that it would be beneficial to route the Gates projects through a separate legal entity, which will be wholly owned by LSTM.

The School is eligible for a Higher Education Funding Council Grant (HEFCE) via its affiliation with the University of Liverpool. Discussions are ongoing in respect of the current year grant allocation.

Liverpool Associates in Tropical Health Ltd (LATH), a subsidiary of LSTM, was incorporated over ten years ago, it has contributed all of its profits to LSTM in the form of Gift Aid annual covenants. This has benefited the School to the extent of some £4.5m, but has meant that LATH is operating on a low capital base which can at times prove to be problematic. LSTM has agreed, therefore, to make available a short-term loan facility of £750k to LATH, in case of need.

A number of lucrative contracts have recently ended or are nearing their end but LATH is now achieving a good measure of success in replacing these contracts, albeit at lower margins as competition grows.

Another investment decision which has been implemented is the expansion of the Travel Clinic business, via a newly formed subsidiary company, Well Travelled Clinics (WTC). This investment has allowed the existing clinic to be significantly upgraded, which gives it the ability to tender for private contracts.

Turning to LSTM's balance sheet, it is fair to say that the School has not been immune from the effects of the turbulence in world financial markets. The value of the investment portfolio has reduced as share prices have fallen but the cash position remains strong and the "credit crunch" has not, therefore, had an impact on the business. The balance sheet remains strong with total net assets of £38m.

IAN JONES

Development

During 2007 LSTM's fundraising and communications offices joined together to form a central Development Office. Offering an expanded range of services to support the overall development of LSTM as an organisation. The consolidation of fundraising activity is resulting in more funding being attracted for priority projects, including capital development and student funding. Communicating LSTM's work to stakeholders and the general public has been scaled-up to meet a rapidly increasing demand for information on how LSTM is researching and educating to save lives.

Donations totalling £1,750,529 were received during the 2007/2008 financial period. Providing essential funding for infrastructure development, social research and student hardship. A significant legacy was received in early 2008, which was the result of increased campaigning by LSTM's trustees. A full list of donors during this period can be found in the LSTM's Financial Statements publication.

The Development Office continues to support the capital development of LSTM, working with senior staff to secure funding for the physical improvement and expansion of current facilities. In September 2008 a £2m capital bid to the Wellcome Trust was successful. Providing funding to complete the third floor of CTID and undertake much needed refurbishment work throughout LSTM's research facilities.

The need for funding to introduce new scholarships and support students experiencing financial hardship remains a priority. Particularly donations to support the introduction of an LSTM Wilberforce Memorial Scholarship for refugee students from East Africa, as a fitting tribute to the anti-slavery movement. Support from the Oglesby Charitable Trust, the World Friendship Charity, The Methodist Church and several anonymous donors has contributed to the training of exceptional medical professionals working in some of the worlds poorest countries.

The representation of LSTM's visual identity through the production of press releases, stakeholder literature, promotional material, website content, and marketing is coordinated by the development office. Presenting an organisation that is rapidly becoming Europe's leading institution in the field of tropical medicine. Communications Manager Alan Hughes has coincided a new communications strategy with a new branding roll-out, reflecting a fresh corporate image.

Communications is supporting the needs of specific research projects in addition to the more generic requirements of the organisation. With a remit to raise awareness of LSTM's research, teaching and technical assistance, develop, promote and sustain a reputation as a centre of excellence with key stakeholders and the public through the widest variety of media to achieve maximum value and impact. Recent months have seen the development of relationships with correspondents, editorial teams and broadcast media.

Involvement in activities to celebrate Liverpool being European Capital of Culture 2008 has allowed LSTM to present some of its work and history to a wider audience. In turn this has resulted in increased media attention.
If you would like more information on how to support LSTM please contact: Billy Dean, Development Officer, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool, L3 5QA. Or alternatively you can email: william.dean@liv.ac.uk or phone +44 (0)151 705 3272. For any media enquiries please CONTACT Alan Hughes, Communications Manager, by phone +44 (0) 151 705 3308, or by email a.p.hughes@liv.ac.uk

Thank you to all of our donors, your support is improving the health of those most in need.

Project Leader Paul Garner (Co-ordinating Editor)
Contact persons Reive Robb (Review Group Co-ordinator) and Harriet MacLehose (Deputy Co-ordinating Editor)

Collaborators
245 authors and 11 Editors worldwide; part of The Cochrane Collaboration

Duration 1994 onwards

Cochrane Infectious Diseases Group

"Malaria illness in children is halved by taking antimalarial drugs regularly, an analysis of 21 trials involving 19,394 children has shown". This type of result – derived from a systematic review of all relevant reliable research – is central to translating research to policy and practice, and has been the business of the Cochrane Infectious Diseases Group (CIDG) since 1994. The CIDG supports authors from across the globe to select key questions about interventions to prevent or treat a healthcare problem, search the global literature for all the clinical trials that have addressed the questions, and analyse the data to prepare a global estimate of the benefits and harms of the intervention.

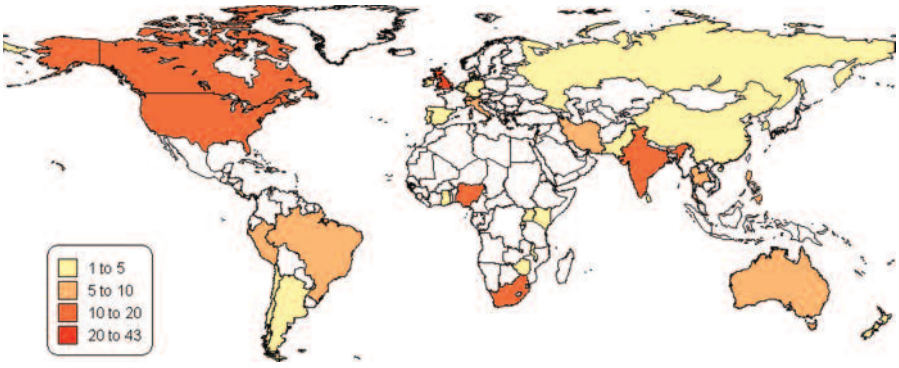
When the CIDG started, systematic reviews were in their infancy and not recognised in mainstream tropical medicine. Now – partly because the CIDG has demonstrated their value in tropical medicine, but also due to a worldwide move towards evidence-informed decision making – they have become core to the decision making process. For example, in 2006, the World Health Organization (WHO) published its revised Malaria Treatment Guidelines. Previous guidelines were prepared by a panel of experts, drawing on their personal interpretation of current research. The 2006 meeting was the first time these guidelines had been prepared using the results of Cochrane Reviews. These new evidence-based guidelines, like systematic reviews, need to be updated regularly to incorporate new research. This year the guidelines are being updated, and Cochrane authors based at the School, in collaboration with the WHO and colleagues in Uganda and South Africa, are preparing a large review to help this process. In addition, the team is preparing GRADE profiles (Grading of Recommendations Assessment, Development, and Evaluation), a new technique that summarizes the results from systematic reviews in a simple way, taking into account the size of the effect and the quality of the evidence. Previous reviews from the CIDG have been influential in the WHO reinstating amodiaquine on the essential drugs list, and adopting artemisinin-based combination treatments as a global policy for malaria treatment.

• Above: Dave Sinclair (LSTM) and Piero Olliaro (WHO) working on a review of artemisinin-based combination therapy for treating uncomplicated malaria

Oral rehydration salt solution has revolutionised treating diarrhoea in children, saving millions of lives. Our reviews have helped in finessing the formula: a few years ago, our meta-analysis helped the United Nations Childrens' Fund, in collaboration with the WHO, change the formula of the sachets to one with less salt. The packages were 18% less in weight, so not only was the formula better but it cost less too! We have made advances with reviews of relatively simple interventions to prevent diarrhoea, such as promoting hand washing, and interventions to improve water quality in the home and to improve methods for excreta disposal. Also, there have been important reviews in the use of zinc, antibiotics, or probiotics, as well as treatments for giardiasis, salmonellosis, cholera, and shigella. Diarrhoea is an example where reviews can address a variety of approaches used for prevention, management, and treatment. This rounded approach is important to provide clinicians and decision makers with evidence around the various options to allow them to consider the best use of available resources.

The CIDG publishes Cochrane Reviews in a special electronic journal, called the Cochrane Database of Systematic Reviews (part of The

• Below: Location of CIDG authors



> The CIDG is always looking to the future to build on its international profile for excellence and innovation in research synthesis for tropical health

Cochrane Library), and is one of 51 similar review groups that make up The Cochrane Collaboration. Some reviews are commissioned by global bodies (such as WHO), and others are identified by healthcare workers or researchers as being important questions for clinical care. Each review is authored by two or more people – often international collaborations – and is closely supported by the CIDG's editorial team. CIDG authors often review questions that are important in the region they live in, and the international mix of CIDG authors provides a wealth of expertise across all topic areas. Cochrane authors have the opportunity to meet, share their experiences, and learn about developments in systematic review methods and software at various Cochrane meetings, including the annual Cochrane Colloquium, workshops, and online. In June 2007, the first African Cochrane Contributors' Meeting took place and was hosted in Cape Town by the South African Cochrane Centre. Over 73 Cochrane authors from 13 countries across the continent, including many CIDG authors, attended this inspirational meeting during which the need for systematic reviews to inform policy and practice was emphasized by all.

The CIDG works with partners, such as the South African Centre, to help build capacity in people with research synthesis skills. One example is the Reviews for Africa Programme, which is a systematic review course run by the Centre specifically for people living in Africa.

CIDG authors are supported by the editorial team, based in the School's International Health Group, from the inception of their review topic through to publication. An editorial board consisting of 10 Editors, who are located around the world, provide essential support to the CIDG's editorial team through their topic, methods, and statistical expertise. The UK's Department for International Development provides funding for the CIDG through the Effective Health Care Research Programme Consortium.

The CIDG is always looking to the future to build on its international profile for excellence and innovation in research synthesis for tropical health. We are planning a number of Cochrane Reviews of diagnostic tests, which is a new area for systematic reviews, and we are also planning a number of large reviews addressing key healthcare questions. We look forward to strengthening our links with existing authors and engaging with new authors, and to working with our editorial board, Cochrane partners, and global healthcare organizations.

• Pictures: Reviews for Africa Programme (RAP): Authors and staff during the course held in Cape Town, South Africa

Sally Theobald in collaboration with Miriam Taegtmeyer, Rachel Tolhurst, Bertie Squire, Rachael Thomson and Angela Obasi (LSTM), Nduku Kilonzo and Lucy Mun'gala (LIV VCT) and Bertha Nhlema-Simwaka, Ireen Makwiza, Lot Nyirenda and Grace Bongololo (REACH Trust).

Duration Ongoing.

Building partnerships and transforming lives: Gender and Health in Africa

Liverpool School of Tropical Medicine's very own Superlambanana the Super'kalaazar'banana celebrated the institution's leading work in gender and health. The female Venus figurine emblazoned on the front of Super'kalaazar'banana symbolises the promotion of the health and well being of women, girls, men and boys in resource poor contexts through building research partnerships to transform lives.

Transforming the lives of people infected by and affected by HIV and AIDS and building partnerships is central to the work of Liverpool VCT and Care in Kenya. Liverpool VCT and Care grew out of a research project on the feasibility of voluntary counselling and testing for HIV in Kenya led by LSTM. Wind on 10 years and this Kenyan registered NGO is the largest provider of quality assured voluntary counselling and testing in Kenya providing HIV testing in standalone sites, integrated sites and mobile clinics, in home and community settings with special programmes for the deaf and men who have sex with men. Testing can be done as a couple or individually. Barack and Michelle Obama recently took up couple counselling at Liverpool VCT and Care on their Kenyan tour.

The new Director of Liverpool VCT, Care and Treatment (LVCT), Dr. Nduku Kilonzo, was awarded her PhD from University of Liverpool in 2008. Nduku's PhD, supervised by Drs. Sally Theobald and Angela Obasi at LSTM, involved operational research on the practicalities of designing and delivering post rape care services in 3 districts, and the development of a model for developing gender sensitive post rape care services for women, men, girls and boys which is now being scaled up. Prior to taking up the directorship, Nduku led the research arm of LVCT, which has an exciting portfolio and a commitment to research findings informing policy and practice. Collaborative research to date has included using both quantitative and qualitative approaches to integrating gender in monitoring and evaluation of service provision to try to ensure services meet the needs and priorities of all groups. Action research with counsellors, trained in client centred approaches, revealed that this cadre has the potential to champion female condoms and promote the right to a healthy and safe sex life.

This active organisation has kept the name Liverpool in its title in recognition of the ongoing relationship with LSTM. This relationship has changed through time beginning with direct project management. Founder director Dr. Miriam Taegtmeyer, Senior Lecturer in Clinical Research at LSTM directed LVCT from 2001 – 2004 and spearheaded the consolidation of the organisation and the scale up of quality assured counselling and testing services in Kenya. Under the new leadership of Dr. Kilonzo, LSTM's relationship with LVCT is one of partnership and research collaboration.

There are parallels with another active growing African research organisation - REACH Trust in Malawi. Research for Equity and Community Health (REACH Trust) is an independent Malawian research trust that grew out of a research collaboration between LSTM, the Malawian National TB Control Programme and the Department of Sociology, University of Malawi. REACH Trust aims to promote equitable, pro-poor, gender sensitive health provision, through conducting quality policy relevant research in diseases of public

• Opposite right: A group of women doing ranking of service providers in a community supported jointly by REACH Trust and LSTM.

• Opposite left: Barack Obama at the LVCT.

health and poverty importance, including TB, HIV and malaria. Through the collaborative research projects with Liverpool School of Tropical Medicine on gender, tuberculosis, malaria and HIV/AIDS, REACH Trust researchers have built capacity in research skills, gender and equity analysis and research advocacy to maximise the opportunities for research findings to influence policy. REACH Trust social scientists and their Liverpool counterparts have also endeavoured to build capacity at the community level through the use of participatory research methods to prioritise and develop interventions that support poor women and men's access to quality health services. Other work has highlighted the importance of health work community members carry out on a daily basis. Qualitative work funded by OXFAM Malawi explored the experience of - largely female - volunteers in supporting people living with HIV and AIDS in the home and in the community through home based care. This work was presented to the Malawi Parliamentary Committee for Health who responded positively to the need to advocate for basic medical supplies for these carers.

Dr. Bertha Nhlema-Simwaka became the director of REACH Trust in 2007 after being awarded her PhD from the University of Liverpool in the same year, with Drs. Sally Theobald and Bertie Squire as supervisors from LSTM. Bertha's PhD evaluated strategies to extend malaria and tuberculosis services to poor and vulnerable communities in Lilongwe, and included a gender and poverty analysis.

LVCT, REACH Trust and Liverpool School of Tropical Medicine share a commitment to conducting high quality, gender sensitive research that transforms the lives of poor women, men, girls and boys - that is, research that affects change in policy and practice and doesn't simply gather dust on library shelves. The three institutions are also working to mainstream gender throughout their approaches to research and advocacy. This will gather further momentum through a prestigious seminar series on 'Gender mainstreaming in international health: Embracing new challenges' led by Sally Theobald, Rachel Tolhurst and Katie Bristow and funded by the UK Economic and Social Research Council. This will include 4 high profile seminars on gender mainstreaming jointly hosted by LSTM, Department of Public Health and Department of Sociology and Social Policy, University of Liverpool. REACH Trust and LVCT are 2 of many organisations from Africa, Asia, Latin America and Europe who will contribute to these debates which will define an agenda for action to take forward gender and health in both resource poor contexts and the UK. Do come and join us to hear more.

For further information on Liverpool VCT and Care see http://www.liverpoolvct.org, REACH Trust please see http://www.reachtrust.org/ and Gender and Health Group at LSTM see http://www.liv.ac.uk/lstm/groups/gender_health.htm

• Above left: Sally Theobald and Nduku Kilonzo with the super'kalazaar'banana.

• Below: A crowd gathers at the opening of a VCT mobile clinic, Kenya.

> "LVCT, REACH Trust and Liverpool School of Tropical Medicine share a commitment to conducting high quality, gender sensitive research that transforms the lives of poor women, men, girls and boys"

Project Leaders Shenglan Tang, Rachel Tolhurst and Tim Martineau

Collaborators
Xiaoyun Liu, Joanna Raven and Lynne MacDonald

Duration 2004-2009

Health Financing in China and Vietnam

The State Council of the Government of China has recently approved a plan for reforming its health system to ensure universal access to essential health care, and the Ministry of Health has been developing a new strategy for "Healthy China 2020".

Shenglan Tang, seconded to the WHO China Office for the past two and a half years from the School, has provided important advice and suggestions on how the reform should be designed and implemented. While serving as health policy advisor of WHO in China to support the reform of China's health system, Shenglan has also been significantly involved in policy-oriented research, as a Liverpool academic. With the support from the China Medical Board in USA, he and his colleagues have organised 19 articles on health and health care in China, published as a special series of the Lancet on 20 October 2008. In the Lancet Series seven thematic papers are on health system reform in China, of which two papers entitled *Tackling the challenges to health equity in China and Reforming how health care is paid for in China: challenges and opportunities* attributed by Shenglan as an important author. The launch of the Lancet Series has been planned at the People's Great Hall of Beijing and will be co-chaired by Prof. HAN Qide, Vice Chair of the National People's Congress, PR China, Prof. CHEN Zhu, Minister of Health, and Dr Richard Horton, Editor-in-Chief of the Lancet at the time of publication. It will be followed by a two-day workshop discussing key issues related to health and the health system in China, and debating how China's health system reform should be moved forward.

Developing equitable and sustainable rural health insurance in China and Vietnam (RHINCAV project).

Health insurance schemes are being developed in China and Vietnam, as they are in many other countries, to help reduce the costs of rural people using health services. These schemes face many challenges which vary between the countries. In Vietnam there are multiple health insurance schemes, including compulsory and voluntary schemes. Overall coverage of the schemes is low, due to low awareness, high premiums relative to income and low satisfaction with the quality of health services. In contrast, in rural China, health insurance coverage is comparatively high, but users receive relatively low levels of reimbursement of their medical expenditures. Healthcare costs are increasing rapidly; so many members are still not protected from facing catastrophic costs of healthcare due to a serious or prolonged illness. Similarities in the political and socio-economic systems of the two countries should enable them to learn lessons from each other.

Researchers in the Health Systems Development Team in the International Health Group, led by Rachel Tolhurst and Shenglan Tang are leading a study, funded by the European Commission (Framework VI Programme), which has developed and tested interventions to improve the health insurance schemes in two provinces of China and two districts in Vietnam. The project, known as RHINCAV, includes seven other partners from China, Vietnam, Sweden, and Germany.

A situation analysis was conducted in 2006 to identify the main problems in the current health insurance system in the two countries, and based on this: to develop and implement intervention activities. In Vietnam, the interventions centre on awareness-raising activities for local authorities and the target populations to increase the coverage, as well as initiatives to control costs and improve the quality of care. In China, efforts have been made to increase the reimbursement rates, extend the benefit package and strengthen mechanisms for containing costs of healthcare at facilities.

The interventions have been implemented over the last year. Evaluations are underway in both countries to assess how successful the interventions were at helping poor rural people to access affordable, good quality healthcare when they need it.

Understanding why proposed interventions have been taken up or rejected by local health authorities, and how interventions have worked is as important as assessing their effectiveness and impact. Monitoring conducted so far, has identified a number of factors influencing the uptake and implementation of interventions. For example, local health decision makers in China are influenced by political pressures, including a performance target related to health insurance coverage, rather than indicators of effectiveness. This discourages them from increasing premiums paid by members to enable higher reimbursement rates, because they fear a negative effect on coverage. The need for further capacity development for local scheme managers in the decentralised system in China has also been identified as key to enabling the long-term sustainability and effectiveness of the schemes. The rapidly changing policy contexts in both countries add both challenges and additional interest to the evaluation. The full evaluation of the interventions will be completed in 2009. Members of the Health Systems Development team are also involved, as major partners, in two other EC-funded research projects. Tim Martineau, Shenglan Tang and Xiaoyun Liu are contributing to a project led by the Nuffield Centre for International Health and Development at the University of Leeds. This project focuses on Health policy-making in Vietnam, India and China (HEPVIC), and aims to examine policy making processes in maternal health, including those related to human resources planning and management. Rachel Tolhurst, Shenglan Tang and Joanna Raven are contributing to researching the structural hinders to and promoters of good maternal care in rural China (CHIMACA), led by STAKES in Helsinki, Finland. The aims are to test interventions to increase the financial accessibility to and improve the quality of care in maternal health in rural China.

- Above: Researchers walking to an interview with a villager who had incurred a high level of expenditure on health care in Shandong Province China
- Opposite: An interview with a village doctor

> “Health insurance schemes are being developed in China and Vietnam, as they are in many other countries, to help reduce the costs of rural people using health services.”

Project Leader Tim Martineau

Collaborators
Dr Xiaoyun Lui, LATH, Capacity Project

Duration Ongoing

Building capacity for planning and managing the health workforce

In the last few years the importance of the health workforce to achieving the Millennium Development Goals and other similar aspirations has been clearly accepted. The advocacy started with the Joint Learning Initiative on human resources (2002 – 2004). This was re-enforced by the World Health Report of 2006 which called for an increase of over four million more health workers. In March 2008 the first Forum of the Global Health Workforce Alliance was held in Uganda which led to the Kampala Declaration and Agenda for Global Action. LSTM and LATH are proud to have been involved in all of these initiatives, and welcome the rise of the health workforce up the agenda in the sector.

Yet political will, even when supported with some of the large amounts of funding currently available, will not alone lead to better health care. There is a need for effective planning to get more staff and better management of the health workforce. This area of health services management is notoriously weak but also highly complex and messy in countries where the majority of health workers are civil servants, and the wage bill is controlled by the Ministry of Finance. Functionaries in departments of human resources also find dealing with a rapidly changing labour market is beyond the skills they have been provided with.

LSTM and LATH have gradually been increasing their contribution to the development of skills in human resource planning and management (HRP&M). Initially, this has been through counterpart development in technical assistance work. In several African countries (Malawi, Eritrea and Kenya) we have facilitated the development of national strategic human resource plans in a workshop format and built in the opportunity for skills development – including workforce planning where participants have had hands-on tuition.

We also make HRM&P skills accessible to a wider audience through technical notes based on our experience. Two of these – on workforce planning and broader strategic human resource planning – have been published by the US government-funded Capacity Project – a global project to improve the health workforce in mid and low income countries. LATH is one of the founding partners of this multi-million dollar project and, amongst other inputs, has contributed to several activities intended to build HRP&M skills. Both national governments and development agencies are looking for examples of ways of strengthening the health workforce that could be applied elsewhere. Margaret Caffrey of LATH has helped the Capacity Project to document promising practices of staff retention in Malawi, and task shifting in Uganda, in papers that have been widely disseminated by the project.

We are also developing the knowledge base on HRM&P through formal research projects. Recent work on staff shortages in rural areas showed that the often cited problem of staff retention was not nearly such a big problem as attracting younger staff to replace those who will eventually retire. Current research on the policy development process, involving Tim Martineau and Xiaoyun Liu, is pointing to the fact that human resource planning mostly only

> “Yet political will, even when supported with some of the large amounts of funding currently available, will not alone lead to better health care.”

happens when health service managers try to implement new policies and find they have problems. We are able to feed these practical lessons into the various processes of HRM&P skills development we are involved in.

As part of its Strengthening Human Resource Leadership programme, the Capacity Project has conducted Action Workshops to develop HRM&D skills of current and potential leaders in this area. The first, held in Johannesburg in 2006, worked with 38 participants from 11 countries in the east and southern Africa area in collaboration with WHO and the United Nations Development Programme/Southern Africa Capacity Initiative. The focus was on problem solving and related action planning. The second Action Workshop, held in Ghana in 2007, was planned with WHO, the Global Health Workforce Alliance and the West Africa Health Organization and the 41 participants from the region included a quarter from francophone countries. The simultaneous translation arrangements were excellent, though at one point, when running a small group session, Tim Martineau found himself trying to run a complicated discussion on strategic human resource planning in both English and very rusty French!

Barbara Stilwell, LATH's full-time human resources expert, posted to the Capacity Project is also the project's point person for their programme in Southern Sudan. She recently commissioned Margaret Caffrey to develop and run a short course for staff of human resource departments.

As the Capacity Project enters its final year Tim Martineau has been part of a small team which is planning to use the project's experience of Action Workshops to develop a more permanent training programme for planning and managing the workforce. We have learnt that busy staff cannot afford to take long periods of time away from work. We know that more effective learning takes place if participants get the chance to try things out in the workplace and return to share their experiences with facilitators and fellow participants. So this programme has been designed as a series of short workshops interspersed with time in the workplace. To ensure its sustainability, we are planning to team up with a local institution that might continue to run the programme after the project end.

A great strength of the School is that it is able to build its teaching on field experience from research and, in some cases, technical assistance of the staff. Until recently, there have only been opportunities for a few sessions on HRM&P on the MCommH course and a few of the other short courses; in fact Tim Martineau probably did more teaching on HRM&P as a guest lecturer in other institutions in Europe than at LSTM! However, with the launch of the new Masters in International Public Health we have now developed a full module of Human Resource Planning and Management. This was run very successfully in February 2008 and from 2009 the module is also being marketed as a stand-alone course.

With the experience we have built up over the years LSTM and LATH are now beginning to make a significant contribution to the development of skills needed for human resource planning and management that will help translate the increased political will and funding for human resources into better health services.

• Opposite: Students carrying out a workforce planning exercise on the human resource planning and management module at LSTM

• Right: Margaret Caffrey of LATH working with national consultant Francis Mayaka, at a workshop to develop Kenya's strategic human resource plan for the health sector, January 2006

• Pictured: Playtime at the Fishermans OVC Programme at Elmina, Cape Coast, Ghana.

The Addressing the Balance of Burden in AIDS Research Programme Consortium (ABBA RPC)

ABBA RPC is providing new evidence of the influence of social, economic and institutional factors on HIV threat to individuals, families, and other groups (especially women, young people and orphans). In this year's report we concentrate on some of the studies with vulnerable young people in different settings.

Studies that explore the perception of Health Related Quality of Life (HRQoL) among people living with HIV and AIDS and compare them with the general community are rare. Although now at the Management School, Dr. Antonieta Medina Lara is still very much involved with ABBA and is leading three new projects for assessing the HRQoL on orphaned children and children infected or affected by HIV. These new studies seek to understand how individuals perceive their HRQoL within the context of culture, socio-economic status, household and community dynamism and how we might better measure the impact of HIV and treatment for HIV on that quality of life, using both quantitative and qualitative methods. The studies involve data collection on how HIV/AIDS has depleted household earnings not only through the loss of income due to illness, but by diverting other household members' time and effort away from income-generating, productive and educational activities in order to provide care for the sick. In addition, studies will collect data through specially developed HRQoL questionnaires for children which place the RPC at the cutting edge of the quantitative assessment of HRQoL in relation to HIV and Antiretroviral treatment. These projects will widen the field of HRQoL by exploring the complex interactions between improvements/ deteriorations in HRQoL and changes in wealth of HIV infected individuals receiving ART and their households over time.

The findings from the studies on HRQoL in children will tie in with the Child Future Security project running in our Health Economics AIDS Research Division (HEARD) partner in KwaZulu Natal South Africa. A key finding of this project is the absence of significant parental planning for their children's future, especially in the situation where one or other parent is sick from HIV or other diseases. This is due more to a lack of opportunity rather than a lack of concern. HIV/AIDS is one of many stressors poor households are experiencing, and is often not identified amongst the major challenges faced by these parents and other heads of households. The research suggests two possible indicators of vulnerability in Southern Africa, 1) inability to make use of and create opportunities to deploy labour and 2) children growing up in relatively ill health and under threat of deterioration to their material and psychological wellbeing. These indicators are further explored within HEARD's life course analysis which also involves the study of elements of quality of life. They are looking at ways in which to rationalise HIV services, so that the most benefit can be obtained for individuals at different stages of life. The analysis identifies life stress points which lead to increased vulnerability and susceptibility to the direct and indirect impacts of HIV.

The research by Professor Alan Whiteside and colleagues at HEARD in South Africa, on 'Reviewing 'Emergencies' in Swaziland: Shifting the Paradigm for a New Era' shows how existing indicators illustrate the HIV threat at all levels of the community and questions whether HIV has become such a major problem in countries like Swaziland and Lesotho that the term "Emergency" is appropriate.

Also in South Africa Dr. Kelly Hallman, from Population Council, New York and her team have initiated a randomized control trial, the "Siyakha Nentsha HIV and Financial Education", which compares a participatory classroom based health education on HIV and vulnerability with a similar programme that also develops the students' understanding of the economic and financial factors related to vulnerability. The evaluation also assesses poverty measures which look at household measures of socioeconomic status, food security, physical assets, and income sources.

Effective Health Care Research Programme Consortium

Partnership for development
Improving health with decisions better informed by reliable research summaries is the main purpose of this grant. Over the last year, the Cochrane Infectious Diseases Group has consolidated its advances made with some important reviews prepared. The Consortium Partners have moved from strength to strength with a series of new initiatives, which we focus on in this report. New partners this year are based in Brazil, with Mauro Ramos running the Cochrane Sexually Transmitted Diseases Group; and in Kenya, where support to the Cochrane Collaboration is developing rapidly.

TB adherence with Chongqing Medical University:
Professor Wang and Liu Qin are long standing partners, carrying out a programme of research around adherence in tuberculosis in collaboration with partners in the Philippines. Wang and colleagues first showed that the actual adherence rate to TB treatments was actually quite a bit lower than official statistics suggested, and supplementary charging for "liver-protection drugs" appears almost universal. Recently they have characterised what these liver protection drugs are, and how much money households are spending on them.

> "The Consortium Partners have moved from strength to strength with a series of new initiatives, which we focus on in this report."

Health Insurance expansion strategies with the Centres for Systematic Reviews of Health Policy and System Research:
The WHO established centres in Uganda, Bangladesh and China. Professor Meng leads the Shandong Centre in health financing, working with colleagues on systematic reviews related to expanding health insurance, and Paul Garner is their technical adviser. This is a challenging methodological experience, but with good progress made by the Shandong team

Vellore and promoting evidence in India:
Professor Prathap Tharyan, at the Christian Medical College, is a partner and part of the Research Grant Executive Committee. He recently hosted a meeting for the Cochrane Collaboration with over 600 people participating, and has facilitated contact with the International Centre for Diarrheal Disease Research in Bangladesh. He has now established the South Asian Cochrane Network & Centre, demonstrating leadership in evidence-informed health care in the country.

Malaria treatments for Nigeria:
Professor Martin Meremikwu in Calabar recently held a meeting of Nigerian Cochrane Collaborators in Abuja, with over 80 people participating. He has promoted evidence-informed health care tirelessly in the country since 1998, and has influenced Ministerial malaria policies. His group in Calabar provide support for Cochrane authors in the country including training, combined with scientific and technical guidance.

Cape Town, TB and nutrition:
Professor Jimmy Volmink, now Dean of Research at Stellenbosch University, works with Taryn Young and colleagues running the South African Cochrane Centre, funded by the South African Government through the MRC. As partners we have a long term collaboration around TB, and are now working on reviews of policies to enhance food security and reduce the risk of malnutrition.

• Above: Professor Paul Garner with Minister of Health for Nigeria (Third from left) and colleagues.

Collaborating in diarrhoea and infectious diseases with the Philippines:
Professor Mary Ann Lansang, at the University of the Philippines, convenes a great team of authors working closely with the Cochrane Group in preparing reviews. Mary Ann will soon be moving to the Health Advisory Unit at the Global Fund, and coordination will be taken over by Marissa Alejandria.

• Above: His Excellency Jakaya Mrisho Kikwete, President of the United Republic of Tanzania at the opening ceremony of GAELF, Arusha

From Lymphatic Filariasis to Neglected Tropical Diseases

It has been a year of considerable activity and, more latterly, change for the Centre.

Activity centred on the fifth meeting of the Global Alliance to Eliminate Lymphatic Filariasis (GAELF) held in Arusha in April. Hosted by the Tanzania Ministry of Health and Social Welfare, the Centre as the Secretariat of GAELF with colleagues in the Tanzania national programme organised the three day meeting. Opened by the President, His Excellency Jakaya Mrisho Kikwete, circa 250 delegates from 30 countries worldwide enjoyed a challenging agenda. The Centre was unanimously recommended to continue as the GAELF Secretariat as was David Molyneux, the Centre's Director, as Executive Secretary.

The Global Programme to Eliminate Lymphatic Filariasis (GPELF) continues to make impressive progress. The Centre, with DFID funding, continued its support of the mass drug administration (MDA) in Bangladesh, Burkina Faso, Ghana and Tanzania. Burkina Faso and Ghana have achieved full country coverage of the endemic areas while Bangladesh and Tanzania progressively expand annually into new regions. Furthering its support the Centre has provided funding for evaluation and monitoring surveys in the regions which have passed their five year cycle of MDA.

The GPELF is the fastest growing elimination programme. In the 2007 Weekly Epidemiological Report[1] WHO reported that 48 of the 81 endemic countries had active programmes with over half a billion people receiving treatment. More than 2 billion people have been treated since the Centre started in 2000. Monitoring of the endemicity is also indicating success with infection levels dropping to below 1% in many instances - the rate at which it is considered that transmission has ceased.

Last year's report noted the growing international recognition of the advantages of treating a package of "neglected tropical diseases" (NTDs) and the role which David Molyneux played in achieving this recognition. Since then President Bush announced a new global initiative to "reduce dramatically and eventually control and eliminate the burden of NTDs" with a commitment of US$350 million over five years. For the first time at the G8 summit the UN Secretary General and the WHO Director General included NTDs in their list of health initiatives. The Centre is confident that the increased interest by many international donors will result in a reduction of the financial constraints to expand activities. Collaboration with the Global Network for Neglected Tropical Diseases (GNNTD) and other partners continues to be instrumental in raising the profile and advantages of integrated control programmes to the international donor community.

Closer to home, in September, David Molyneux was inaugurated as President of the Royal Society of Tropical Medicine & Hygiene and in November he gave his Presidential address "Combating the 'other diseases' of MDG6: changing the paradigm to achieve equity and poverty reduction". Also in November at the American Society of Tropical Medicine & Hygiene meeting he was awarded the prestigious Donald Mackay Medal in recognition of his outstanding work in tropical health. David is also one of 10 leading world experts to edit a chapter on ecosystem disturbance, biodiversity loss and human infectious disease in the Nobel Prize winner, Eric Chivian's much heralded book, Sustaining Health.

Immediately following the GAELF meeting a fond farewell was bade to David on his retirement and in July Moses Bockarie was welcomed as the Director of the renamed Centre for Neglected Tropical Diseases (incorporating the Lymphatic Filariasis Support Centre). See pages 34 and 35.

Finally, the Centre's students continue their success. Margaret (Maggie) Baker was successful in defending her PhD thesis and Esther Mwakitalu her MSc thesis. Maggie is now based in Washington working with the Research Triangle Institute on their USAID funded NTD programme and Esther continues her work with the Tanzania national programme.

[1] Weekly Epidemiological Record, World Health Organization, 2008, No.37, 2008, 83, 333-348.

• Above: Within days of his arrival Moses presented a poster on the Centre's work to HRH the Princess Royal during her visit to officially open the CTID building.

AFUTUREFREEOFLF
GlobalAlliance

• Below Right:
Survey teams going to Mfangano, Lake Victoria

• Below: Somaliland student with LSS manual.

> "the majority of deaths in the first months of life could be prevented if interventions were in place to ensure good maternal health"

Improving Maternal Health

Each year more than 536,000 women worldwide die from complications of pregnancy and childbirth – that is one every minute. Many more survive but will suffer ill health and disability as a result of these complications. In addition, an estimated 4 million neonatal deaths occur each year accounting for almost 40% of all deaths in children under 5 years. More than three quarters of all these deaths occur in South Asia and sub-Saharan Africa. The health of the neonate is closely related to that of the mother, and the majority of deaths in the first month of life could also be prevented if interventions were in place to ensure good maternal health.

Provision of Skilled Birth Attendance (SBA) and availability of Essential (or Emergency) Obstetric Care (EOC) coupled with Newborn Care are key strategies which, if implemented, will reduce maternal and neonatal mortality and morbidity. Providing skilled attendants at birth who are able to prevent, detect and manage the major obstetric complications, together with the equipment, drugs and other supplies essential for their effective management is probably the single most important strategy for preventing maternal and newborn deaths.

The Sexual and Reproductive Health (SRH) Unit in the Child and Reproductive Health Group provides the base for the International Office of the Royal College of Obstetricians and Gynaecologists (RCOGIO). The RCOGIO was established in November 2005 and is a partnership between RCOG, LSTM and LATH. Its overall aim is to make an effective and valued contribution to improving SRH worldwide and in particular to reducing maternal and neonatal mortality and morbidity. Its specific aims include: identification and prioritisation of needs in maternal and neonatal health, development of capacity of existing health systems to meet demand and provide a standard of care that will improve women's health, design and conduct operational research to identify and overcome barriers to implementation, and where effective interventions are not known, develop and pilot new interventions.

The Team consists of 7 staff members: Nynke van den Broek (Head), Jan Hofman, Eugene Kongnyuy, Charles Ameh, Adetoro Adegoke, Sue Cain and Kristian Godfrey

The SRH Unit has successfully developed a Rapid Assessment Tool to assess the availability and functioning of Maternal and Newborn Health Services. This tool was applied in 4 districts in Kenya and 6 districts in Malawi covering a total population of over 1 million and 4 million respectively. Analysis of data has shown that in general there are facilities in place for MNH, but that functioning of such facilities is sub-optimal. Minimum UN coverage especially for Basic Essential Obstetric Care (BEOC) is not achieved, and in many districts no facility is able to provide all 8 signal functions for Comprehensive Essential Obstetric Care (CEOC). It is also apparent that in many cases the available staff lack the clinical expertise to deliver such services.
The last two years have seen the development and piloting of a new intervention to improve health care provider capacity in developing countries - the Life Saving Skills Training - Essential Obstetric Care and Newborn Care Package - which has been successfully introduced in 6 sub-Saharan African countries (Kenya, Malawi, Somaliland, Swaziland, Tanzania and Zimbabwe), and is currently being adapted and scaled up nationally in the Republic of South Africa. Among healthcare providers (nurse midwives, doctors, clinical officers and specialists) knowledge about the diagnosis and management of complications of pregnancy and childbirth as well as newborn care significantly increased. A Monitoring and Evaluation framework based on the Kirkpatrick Model has been specifically designed and applied. Behaviour change has been documented via log books and focus group discussions. A new improved model consisting of training, supportive supervision and monitoring and evaluation has been developed which will be demonstrated in both sub Saharan Africa and South East Asia in the coming years.

• Below Top:
Children involved in the first annual malaria survey for the elimination programme in the Solomon Islands.

• Below base:
Inter-Island transport for the Oversight Team, Solomon Islands.

IVCC

The Innovative Vector Control Consortium (IVCC), established with a US$50 million award from The Bill and Melinda Gates Foundation and managed by the Liverpool School of Tropical Medicine has extended its portfolio of projects with industry, aimed at delivering new formulations and molecules for development into public health pesticides for use on impregnated bed nets and as indoor residual sprays.

BASF, Bayer, DuPont, Syngenta and Sumitomo all now have one or more projects underway with the consortium. These ought to provide formulations for use as indoor residual sprays that should last up to a year, compared to 4-6 months for current treatments. The new active ingredient projects will bring a raft of potential new pesticides into early development phase, and they should, if they successfully complete stringent toxicology and ecotoxicology testing, allow malaria control programmes to eventually stop using older, less environmentally friendly insecticides such as DDT.

Three of the vector biology diagnostic projects sponsored by the IVCC have a major input from the School. The vector population monitoring programme is an excellent example of how the newly available genome sequence for *Anopheles* mosquitoes can be used to rapidly identify markers of insecticide resistance genes that can then be turned into simple PCR-based diagnostic assays for use in the field. The first prototype diagnostic kits are already being tested in Malawi and South Africa. They allow us to establish, from dead mosquito samples collected in houses, the mosquito species, whether it is infected with malaria parasites and whether it has a specific form of pyrethroid insecticide resistance. The ability to generate large amounts of information from dead samples means we can now establish sentinel sites in disease endemic countries that use householders to routinely collect mosquitoes from window traps, rather than needing trained entomologists to visit these sites at regular intervals to catch live mosquitoes.

The insecticide quantification kit is now in prototype form and ready for field trials. The kit allows disease endemic countries to undertake quality assurance on the insecticide products, their import or manufacture, without needing to resort to expensive HPLC analysis. It will also allow control programmes to routinely monitor the effectiveness of the indoor spraying operations.

The Malaria Decision Support System, under development in collaboration with the Medical Research Council of South Africa and Colorado State University is designed to help malaria control programmes collate and analyse disease, parasite and entomological data on a spatial platform to inform operational decisions in malaria control. The system, while initially designed for Africa, will be implemented in a number of Pacific Islands in 2009. Vanuatu and the Solomon Islands are currently embarking on a malaria elimination programme with support from AusAid and the Global Fund, and the system will be invaluable for them in managing and monitoring their progress as control activities are increased. Baseline data collection is now underway for these programmes.

Now that the IVCC has demonstrated that the agrochemical industry is willing to work in collaboration with the programme, and is able to guarantee that they will produce the new pesticides at a price and in a format that are appropriate for disease endemic country needs, the IVCC is moving from a Consortium structure to a more obvious Product Development Partnership (PDP) entity. The first stage in this process was establishing the IVCC as a separate company, with a Board, chaired by Sir Mark Moody-Stuart. The new IVCC company is now seeking charitable status in its own right, prior to seeking major re-financing from various donors.

IVCC
COMBATING INSECT BORNE DISEASE
The Innovative Vector Control Consortium

Anti-Wolbachia Consortium

The Problem:
Pathogenic filarial nematodes such as *Wuchereria bancrofti*, *Brugia malayi*, and *Onchocerca volvulus* affect the lives of millions of people in the tropics, with Africa harbouring >95% of the global burden of onchocerciasis (river blindness) and over a third of the cases of lymphatic filariasis (elephantiasis). These nematode worms causes diseases which either affects the skin and eyes (onchocerciasis) or which damage the lymphatic system (lymphatic filariasis).

Breakthrough on Tropical diseases

Researchers have heralded "probably the biggest breakthrough in tropical medicine in 25 years" with the development of an effective cure for diseases that affect 150m people in the developing world.

Mark Taylor, Professor of Parasitology at the Liverpool School of Tropical Medicine said a new treatment used antibiotics to target bacteria in the parasitic worms responsible for elephantiasis and river blindness.

Killing these bacteria sterilises the worms, ending the infection. Professor Taylor's group is the first to target the bacteria to control the parasite. The treatment is undergoing trials in Cameroon and Ghana.

Emma Byrne
www.ft.com/science

A·WOL
Anti-Wolbachia Consortium ©2007

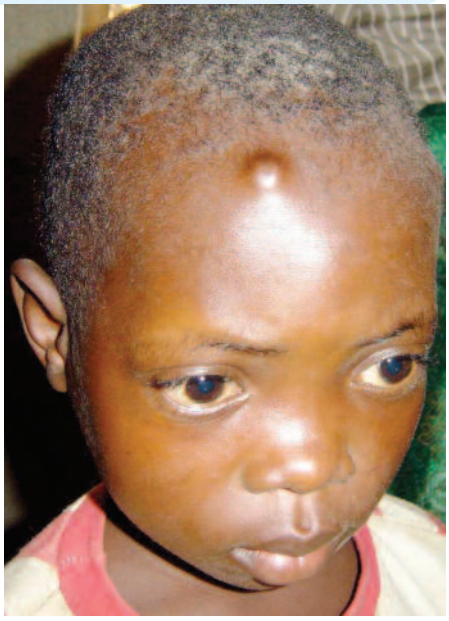
The Reason:
A common feature of pathogenic filarial nematodes is the presence of the symbiotic bacteria *Wolbachia*, which has been shown to be essential for worm development, fertility and survival, and a driver of inflammatory pathogenesis.

The Solution:
Wolbachia has provided a novel target for antibiotic chemotherapy and is the basis of the **A•WOL** programme. The aim is to turn the solution into a public health tool.

The goals of the **A•WOL** programme are to provide anti-wolbachial chemotherapy, which is compatible with Mass Drug Administration (MDA) programmes and to provide a regime suitable for a more restricted use, such as in the event of widespread development of resistance to current drugs.

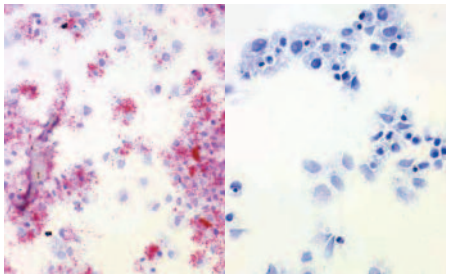
First Year Achievements
1. *Regimen refinement.*
The aim of the two trials on onchocerciasis and lymphatic filariasis is to refine existing regimes of drugs with known activity against *Wolbachia* (e.g. doxycycline, rifampicin), to either reduce the time span or dosage of treatment. One year into the programme the endemic villages in Ghana, in which the trials are to be conducted, have been defined and permission has been granted from local authorities, village elders and participants. Treatment will commence at the start of year two.

2. *Assay development*
An insect cell-line containing *Wolbachia* has been optimized for High Throughput Screening (HTS). This assay has been validated and every drug registered for use in people will be screened first as single agents and then in combination to look for novel activity against *Wolbachia*.



3. *Library screening*
In addition to screening all registered drugs at CombinatoRx, **A•WOL** has also screened a library of one thousand tetracycline like drugs designed by Paratek Pharmaceuticals. Several of these novel tetracyclines have been shown to be more potent than doxycycline and will now enter into the next round of screening. These compounds will also undergo bio-analytical and pharmacological studies.

4. *Target discovery*
Genomic studies by New England Biolabs and LSTM have identified and validated haem synthesis, energy metabolism and lipoprotein biosynthesis as targets for drug discovery. These have been identified through bioinformatics to define the genes essential for *Wolbachia* survival. Enzymes from these pathways have been cloned and produced in sufficient quantities to be screened against aptamer libraries at the University of Bonn.



- *Wolbachia* bacteria stained red (left) in a cell line which are lost following antibiotic treatment (right)

- Top: An example of an Onchocerciasis nodule.

Malaria in Pregnancy

Malaria in pregnancy can have devastating consequences on mothers and their unborn children. It is estimated that approximately 50 million pregnant women are potentially at risk of malaria each year. The consequences vary by the degree of acquired immunity of the mother. In sub-Saharan Africa, where malaria is endemic, most women have acquired a high degree of protective immunity and infections often remain asymptomatic and therefore undetected, and untreated. These 'silent' infections are associated with anaemia of the mother and low birth weight in the newborn, which greatly increases the risk of infant death. Malaria associated low birth weight is thought to be responsible for as many as 100,000 children dying needlessly every year in Africa.

In many parts of Asia and Latin America, malaria infection rates in pregnant women are much lower but more likely to cause severe disease, preterm births, and fetal loss. Current strategies to control malaria in pregnancy include preventing infection with insecticide treated nets and preventative medication, and treating malaria and consequent anaemia promptly and effectively. Unfortunately, these strategies are not widely applied for a number of reasons and where they are, there is growing resistance to the most commonly used drugs. There is also a lack of knowledge and consequent policy initiatives regarding prevention in Asia and Latin America.

In contrast to the recent focus on preventing malaria deaths in young children, the impact of malaria in pregnancy has until now been a relatively neglected area of research. In 2007, the Malaria Epidemiology Section of the Child and Reproductive Health Group received an award of $30 million from the Bill and Melinda Gates Foundation to establish a global research consortium, to join the fight against malaria in pregnancy, and committed to improving its control and treatment in Africa, Asia and Latin America. The Malaria in Pregnancy (MiP) Consortium, led by the Liverpool School of Tropical Medicine, is also supported by the European and Developing Countries Clinical Trials Partnership (EDCTP) and the European Union.

The MiP Consortium is coordinating a five year programme of research to evaluate new and improved existing interventions for the prevention and treatment of malaria in pregnancy. Ten major projects direct research in four key areas of malaria in pregnancy: i) burden assessment, ii) treatment trials, iii) prevention trials and iv) how best to scale up existing strategies and interventions. Over 40 expert partner institutions in 28 countries around the world conduct this research using standardised methods and share information to provide the evidence needed to improve the control of malaria in pregnancy. This consortium approach generates a new momentum of life-saving research, which will provide the evidence needed to inform policy makers in the shortest possible time.

The first year of the Consortium has been an extremely busy period focussing on developing the legal framework for the project and developing effective communications. Each of the Major research trials has undergone the initial planning phase and will start enrolment in the first quarter of 2009, with results expected within 3 years (treatment trials) and 4 years (prevention trials in Africa and Papua New Guinea).

Professor Feiko ter Kuile leads the Consortium and is supported by a fully staffed Secretariat at LSTM, headed by Jenny Hill. The Secretariat acts as the main source of information and communication for the Consortium and also maintains a resource centre which includes an online library dedicated to malaria in pregnancy. For a full list of partners and other details about the MiP Consortium please visit our website at http://www.mip-consortium.org/

"In contrast to the recent focus on preventing malaria deaths in young children, the impact of malaria in pregnancy has until now been a relatively neglected area of research. This consortium approach generates a new momentum of research, which will provide the evidence needed to inform policy makers in the shortest possible time"

mip malaria in pregnancy consortium

Controlling the vectors of sleeping sickness

Tsetse flies (Diptera: Glossinidae) are the vectors of the trypanosomes which cause African sleeping sickness in humans and the disease nagana in African domesticated animals. Human African Trypanosomiasis (HAT) is endemic in 37 sub-Saharan African countries covering 9m km^2 (a third of Africa's total land area) with 60 million of the 400 million people inhabiting these areas at risk of the disease. After a devastating outbreak of the disease at the beginning of the twentieth century sleeping sickness virtually disappeared from Africa in the 1960's, but rebounded in the 1990's particularly in Uganda, Sudan, DRC and Angola, and Africa is now in the middle of another HAT epidemic. Although not reflected in the officially reported cases, it is estimated that in 2004 there were ~500,000 cases with 48,000 deaths and an impact of 1.53m DALYs (disability adjusted life years). The breakdown of surveillance, allied to displacement of populations by war and natural disaster, are contributory factors to this new epidemic and present a continuing challenge.

Two different parasites cause HAT. *Trypanosoma brucei gambiense* is found in foci throughout large areas of Central and West Africa. *Trypanosoma brucei rhodesiense* has a much more limited distribution with foci in East and South East Africa. *T. b. gambiense* causes a chronic illness which may only become obvious after months or years of infection, and when it does become obvious the disease is already in an advanced state. *T. b. rhodesiense* causes an acute infection, appearing a few weeks after transmission. In the case of both parasites the later stages of the disease occur when trypanosomes invade the central nervous system. The classic signs of the disease are confusion, sensory disturbances and poor co-ordination with the classic symptom, disturbance of the sleep pattern, becoming obvious. Unless treated, the disease is inevitably fatal. Treatment after the appearance of neurological symptoms is difficult, and a recovered patient is still likely to have long term damage to the CNS.

With support from the Bill and Melinda Gates Foundation and the European Commission INCO programme we are carrying out studies which we hope will improve control of the tsetse fly vectors. Control of the flies is usually carried out on a very large scale, with a typical control block of 10,000 km^2. Control relies upon aerial spraying followed by the deployment of large numbers of insecticide treated targets. The high cost of deploying targets and the large numbers needing to be deployed is a severe constraint in current control programmes. The more attractive the targets are for flies, the fewer which have to be deployed. Consequently we are seeking to identify novel odour baits for the five species of tsetse flies which currently cause most of the sleeping sickness cases in Africa. We are working in Kenya, Uganda, Burkina Faso, Ivory Coast and Democratic Republic of Congo. There are three phases to the experiments. First we are trying to identify odours from animal species which are attractive to the tsetse species we are interested in. While doing this, it is important to eliminate visual responses to the host animal. To do this we hold the host animals in tents and pipe the odours to a remote trap. Once we have identified attractive animals we collect the odour in a specially designed cartridge filter and return it to our colleagues at Rothamsted Research. They identify components of that odour which stimulate the 'nose' of the tsetse fly. This reduces the number of components we have to consider further from several hundred to twenty or thirty. We then take these chemicals back to Africa and conduct further field experiments to see if they are attractive under field conditions. Similar work in the past has shown the tsetse flies of Southern Africa are particularly attracted to octenol and acetone (components of cow breath) and phenols (components of urine). If such simple chemicals also attract the vectors of sleeping sickness we will have the basis for considerably improving the control of these important vector insects.

• A fully fed Tsetse fly.

• Animals are held in tents and odours piped to the trapping device.

> "The breakdown of surveillance, allied to displacement of populations by war and natural disaster, are contributory factors to this new epidemic and present a continuing challenge."

• Pictured right:
AntiMal PhD Student Francesc Marti in the lab

AntiMal project

Introduction
More people are dying globally from malaria than they did twenty years ago because of an increasing resistance to existing drugs. With 2.7 million people dying in Africa each year; around 90% of those being children under the age of five, malaria is responsible for enormous economic burdens in the malaria-endemic regions. In fact the annual direct commercial cost of malaria in Africa alone is around €3 billion.There remains an urgent need for new, safe and affordable antimalarials for patients in resource poor settings - AntiMal aims to fill that gap.

Background
The AntiMal Project is led by Professor Steve Ward (Deputy Director, LSTM) and is co-ordinated by the School. It was set up in December 2005, with €17.5million of EU funding over 5 years and was formed with a consortium of 31 of the world's leading research groups in malaria biology, chemotherapy and drug development. Three new African members joined the consortium in 2007 adding an additional €250,000 to the project.

> "There remains an urgent need for new, safe and affordable antimalarials for patients in resource poor settings - AntiMal aims to fill that gap."

The primary aim is to produce a portfolio of potential anti-malarial drugs, delivering one or more candidate molecules into 'first into man' studies during the 5 year project period. The ultimate expectation is the registration of affordable, safe and efficacious anti-malarial drugs to treat uncomplicated severe malaria.

The consortium hopes that the expertise that will emerge from its activities will have applications across a number of infectious diseases. There may also be potential applications for these products in treatment of severe malaria.

The project has set aside €1m for a long-term research capacity building initiative in African institutions. Following a competitive call, a further 3 members will join the consortium later this year from Burkina Faso, South Africa and Zimbabwe. This will increase the number of consortium members to a total of 37.

Developing others
The project has a firm desire to develop young scientists, and €1m has been specifically allocated to develop a cutting edge PhD programme.

The students chosen originate from ten countries across Africa, Asia and Europe and during the course of their PhDs, they will attend workshops and practical courses in London, Paris and Heidelberg - in addition to their core training in Montpellier. The training is of the highest quality and is based on the successful EU Malaria Graduate PhD Training programmes.

The consortium has also greatly benefitted from ongoing development, with a number of workshops taking place in 2007:

- 30 delegates attended the Good Laboratory Practice (GLP) and Good Clinical Practice (GCP) workshops.

  This included an introduction to key GLP and GCP principles, the importance of compliance and regulatory agencies, relevance to clinical research and application into every day work. The GCP workshop was facilitated by those with direct experience of running clinical trials for malaria treatments.

- A Project Management Workshop was held in Nairobi, demonstrating how to project manage effectively. Delivered in an interactive and practical way, it used real life situations to enhance decision making, influencing skills, managing of meetings and personal effectiveness.

Progress so far
The 2007 project review assessed the results of the initial 25 scientific work packages and agreed to take forward 12 that were deemed to be the most likely to achieve the AntiMal goal over the next 18 months of the programme.
These are classified into 5 key clusters:

- Novel quinolines
- Novel peroxides
- Lipid targets
- Discovery
- Platform Activities

Future Plans
The project is well on course with the next formal review scheduled in March 2009. This review will decide the funding over the remaining 18 months of the project.

Further details of the project can be found at: www.AntiMal.eu

• Pictured: Community sensitisation before research in the schools.

CRESTHA

Dr Angela Obasi and Jenny Renju (nee Komrower) of the Clinical Research Group have led the process and impact evaluation of Phase 2 of the MEMA kwa Vijana (MkV)(Swahili for Good things for young people) in Mwanza Region, Tanzania, which ended in July this year.

This four-year programme has been implemented in every school and government health centre in over 600 villages. It aims not only to improve the sexual and reproductive health (SRH) of adolescents in Mwanza Region, but to support national and international adolescent SRH by providing policymakers and programme managers with evidence and recommendations on strategies for effective scale up of interventions that improve the sexual health of young people.

The first phase of MkV1 began in 1999 as a community randomised trial, which successfully demonstrated that an innovative, multifaceted intervention could be replicated on a large scale using existing government structures, when supervised by a dedicated NGO. Furthermore, the intervention, designed by a team led by Dr Obasi produced significant improvements in all areas of reproductive health knowledge; all attitudes and several reported sexual behaviours. This intervention was the first intervention of its kind to demonstrate such substantial impacts after such sustained (3 year) follow up in such a setting.

Since 2004, research in Tanzania, led by the Liverpool of Tropical Medicine (LSTM) in partnership with the National Institute for Medical Research (NIMR) and the African Medical Research Foundation (AMREF) MkV2 has sought to address several key remaining questions.

1. How well can such programmes be scaled up to district or national level?
2. What factors would determine the success of such a scale-up?
3. What is the impact of scale up on intervention coverage and quality, and how can these effects be mitigated?
4. What additional interventions are needed to translate improvements in knowledge, attitudes and reported behaviours into falling HIV and STI rates?

By training ten regional government officials, sixty-four district officials and 103 Ward Education Coordinators the programme has reached 511 health workers, 1,611 teachers and approximately 101,244 pupils in their last 3 years of primary school. This scale up has resulted in significant improvements in the knowledge, attitudes and reported self efficacy of pupils, teachers and the district implementers.

The overall results were reviewed at a dissemination planning workshop held in Mwanza in June this year, subsequent to which our findings have been detailed in fifteen comprehensive research reports and 16 briefing papers for policy makers and programme managers, which span all levels from National Policy makers through regional and district level to community leaders, and implementers at school and health facility level.

Findings have also been disseminated in over 10 national and international conferences, and through numerous formal and informal interactions with health professionals, policy makers and programmers.

In addition to the intervention scale-up the MkV collaborative institutions, in partnership with the UK Medical Research Council, have developed and piloted a parenting intervention that was designed to support the School and health facility interventions. Our preliminary research confirms the feasibility of this 5-session intervention which includes a cascade model of training, and that parents, especially women, report improvements in their knowledge, attitudes and practices on parenting skills, adolescent sexual health and community risk.

The wealth of information collected during the MkV experience is still being analysed and more outputs are expected in the coming year.

website www.memakwavijana.org

"Indeed, I see changes with standard 5, 6 and 7 and these are big changes...because of the participatory techniques that are being used by teachers who are trained by MkV"

Head teacher, rural primary school, 2008

LATH

This year LATH has had a change in leadership welcoming Dr Stewart Tyson into the post of Chief Executive Officer of LATH and saying goodbye to John McCullough who chose to move on after 9 years at the helm, taking up a post with the Micronutrients Trust in Senegal. Dr Stewart Tyson joins LATH from the UK Department for International Development where he was the Head of Profession for Health from 2004-2008, providing expert advice on the strategic direction and quality of DFID's policies, research agenda and country support. Stewart has worked in international health development over the past 25 years. He is particularly interested in delivery of more effective aid through sector wide working and in broad based efforts to strengthen national health systems in low income settings. Stewart trained in medicine in Liverpool and holds a Masters degree in Community Health in Developing Countries from LSTM.

Continuing the theme of endings and new beginnings this was a landmark in LATHs history of long-term programme management with the closure of two of our major projects, the DFID funded Partnership for Transforming Health Systems (PATHS) Programme in Nigeria and the Technical Assistance support to the SWAP in Malawi. LATH has been involved in both of these programmes for over 5 years. Both programmes received excellent reviews and feedback which have laid the foundation for future work.

LATH's business development has focussed on maintaining our position in Africa while exploring new opportunities in other areas of Africa and Asia, including Sierra Leone, India and Pakistan. Further investment in our USA presence in Washington, DC has provided an initial strategic base for assessing and pursuing priority business from US clients.

Under our ongoing programmes we have been expanding to work in new areas both technically and geographically. Our work in the sector of Human Resources for Health has brought us to Lesotho and Afghanistan. Under the USAID-funded Neglected Tropical Diseases Programme Achille Kabore has been involved in ground breaking work in integrating the treatment of NTD's within the health systems being (re)built in fragile states such as Sierra Leone and South Sudan. Under the USAID funded Capacity Project Barbara Stilwell has been leading project inputs in South Sudan and recently commissioned LATH's Margaret Caffrey to develop and deliver a highly successful leadership and management development programme for staff of human resources departments.

We expect our work in South Sudan to expand further due to the imminent start up of the Technical Assistance to the Health Priorities Project which was successfully bid for during this period. This programme is to work directly with the Ministry of Health South Sudan with funding being provided by the Multi-Donor Trust Fund.

LATH has recently started to operationalise our programme to support Indoor Residual Spraying for malaria control in up to 15 African countries. This work is funded by USAID as part of the US Presidents Malaria Initiative. LATH will be providing technical assistance in: entomological surveillance, insecticide selection and resistance monitoring/management and economic evaluation. Our role in this programme is critical to ensure that the huge resources being put into IRS under PMI are used effectively to gain maximum health impact. The support will be provided through two long-term entomology posts in Kenya, supported by technical staff at LSTM and LATH and by some country level entomologists.

LATH continued its support to Ministries of Health in Kenya, Malawi and Mozambique in implementing the sector-wide approach to delivering health services. The first external evaluation of the Essential Health Services Programme in Kenya recommended

> “At the current time it is the only certified postgraduate training course offered covering the full range of consultancy work.”

- Opposite: LATH Finance Director and Dr Richard Pendame with UNHCR staff departing Garissa Western Kenya
- Below: PATHS CPD workshop participants performing HCS test.

expansion into more districts of Nyanza Province, which has resulted in a major extension to the programme through to 2010. Expansion of the work we are doing in Malawi has lead to the registration of a Malawian subsidiary ‘LATH Umoyo Ltd’ and investment in our offices and in-country presence.

In an important piece of collaboration LATH is working for the Stop TB partnership New Diagnostic Working Group to facilitate and support the Group to produce a scientific blueprint for new diagnostics. We are assisting in the development of a descriptive pipeline for new diagnostics and facilitating the development of criteria to position new diagnostic candidate technologies within the development process and at different health service levels. Russell Dacombe and Imelda Bates have also made significant contributions to the design and delivery of Malawi’s first BSc in Medical Laboratory Technology whose first intake of students graduate in 2009.

LATH has continued to focus on our four technical niche areas: Malaria, Laboratory Systems, Human Resources for Health and Maternal and Neonatal Health. Each niche area has a strategy group made up of LATH and LSTM staff who meet quarterly to share information and develop strategies to assist with winning new business, delivering technical assistance and developing technical products or services. We continue to work closely with the Royal College of Obstetricians and Gynaecologists International Office at LSTM to develop opportunities for joint working in the field of maternal and neonatal health.

This year Carmen Maroto Camino joined the LATH staff team as our Public Health Specialist. After ten years dedicated to clinical work in the Spanish Public Health System, Carmen transferred to international public health. Carmen has worked in emergencies and post conflict settings, focusing on reproductive health, primary healthcare and surveillance and control of infectious diseases.

In 2008 LATH and LSTM jointly launched the Short Course in International Health Consultancy. At the current time it is the only certified postgraduate training course offered covering the full range of consultancy work. The first intake of 10 international students completed the course in April and provided very positive feedback on the innovative course content and teaching methodology. The subsequent course to be held in September 2008 had 18 students pre-registered and interest in the course continues to grow.

LATH would like to acknowledge the hard work and commitment of its staff, LSTM colleagues and consultants throughout the world who have continued to help us contribute to the improvement of lives of disadvantaged communities in low income countries.

Making the most of modularisation

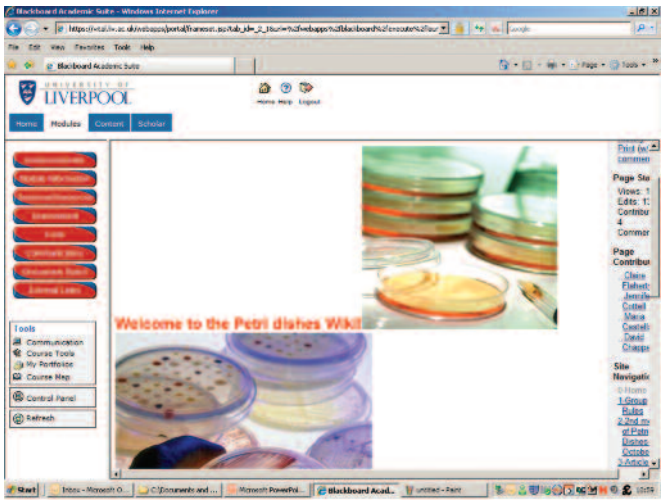
First year of the modular framework for MSc Programmes

In 2007/08, LSTM introduced a new modular framework for Masters Programmes. Students now follow a core set of modules specified for their particular Programme and then select from a variety of optional modules. This provides students with the opportunity to tailor their Programmes according to their individual interests and prior experience. As the modular system becomes embedded, it should make the delivery of teaching within the School more efficient by eliminating duplication of teaching between Programmes, thereby generating the time to pursue new initiatives. It also opens up exciting opportunities for the School to develop novel programmes on cross-cutting interdisciplinary themes.

Development of Overseas Education and Training Programmes

There has been excellent progress with the establishment of the Centre for Strategic Health Studies in Syria. The Centre aims to train health professionals to Masters and PhD level in public health, health systems management and health economics, with several of the teaching staff being based in LSTM. In addition to the wealth of subject expertise that LSTM is able to provide, an important element of the capacity development arm of the programme is to enhance the learning and teaching skills within the Centre. Approaches to teaching, learning and assessment are currently focussed on didactic delivery and rote learning. Hazel Howden-Leach, an Academic Developer in LSTM, has worked with staff at the Centre to introduce them to more student-centred methodologies and is developing a structured teacher training programme for delivery in Syria that offers certification to a recognised UK standard.

Since 2005 Imelda Bates and Russell Dacombe (LSTM/LATH) have been assisting the College of Medicine in Malawi to design and deliver an innovative work-based BSc in Medical Laboratory Technology. The course aims to equip laboratory professionals with the skills necessary to develop and manage a quality laboratory service to support Malawi's Essential Health Package. To our knowledge this is the first work-based BSc course for laboratory managers in sub-Saharan Africa and is a model for teaching practical management skills in a resource-constrained setting.



- Collaborative web site ('wiki') produced by the 'Petri Dish' Study Group during the new 'Researcher Development' module. Students used this innovative teaching tool to support each other's learning by sharing useful resources (including links to their favourite music!)

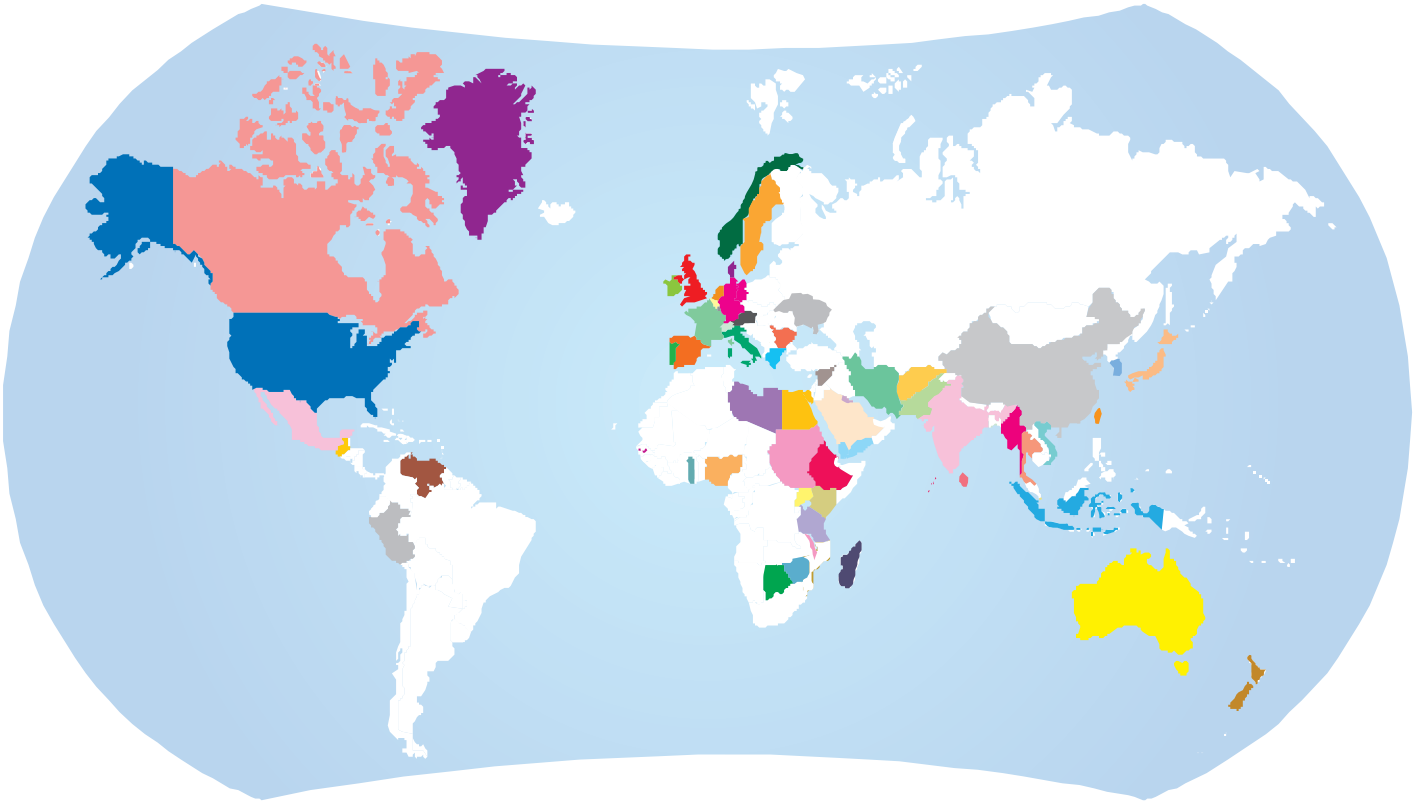
Imelda Bates has developed a 1 year, part-time, work-based Diploma in Project Design and Management run by local staff in a teaching hospital in Kumasi, Ghana, but awarded by LSTM. The course supports health professionals from a range of disciplines to design, conduct and write up their first piece of research aimed at improving patient management in the hospital. In addition to driving changes to improve institutional research capacity, the course has markedly improved success rates in clinicians' professional exams.

Director of Education

In August 2008, the School appointed Dr Sue Assinder as its first Director of Education. Her post is a key strategic appointment which will shape the future development of learning and teaching at LSTM as it strives to become an international leader in education.

"To our knowledge this is the first work-based BSc course for laboratory managers in sub-Saharan Africa and is a model for teaching practical management skills in a resource-constrained setting."

Student Numbers 2007-2008



Afghanistan	2	Iran	2	Saudi Arabia	6
Australia	8	Ireland	9	Singapore	2
Austria	1	Italy	5	South Korea	1
Belgium	2	Japan	7	Spain	7
Botswana	1	Kenya	5	Sri Lanka	2
Bulgaria	1	Kuwait	2	Sudan	9
Canada	5	Libya	5	Sweden	2
China	4	Madagascar	1	Switzerland	4
Denmark	5	Malawi	15	Syria	1
Egypt	2	Malaysia	6	Taiwan	1
Ethiopia	2	Maldives	1	Tanzania	5
France	3	Mexico	2	Thailand	5
Gambia	1	Myanmar	1	Uganda	4
Germany	16	Netherlands	6	UK	244
Ghana	6	New Zealand	2	USA	14
Greece	1	Nigeria	18	Venezuela	1
Guatemala	1	Norway	16	Vietnam	1
India	6	Pakistan	3	Yemen	6
Indonesia	1	Peru	1	Zimbabwe	3
		Portugal	3		

Research Grants and Contracts

Dr I Bates

Royal Society Travel Award: Ghana/Tanzania - UK Science Networks **£8,560**

Hemocue AB. 'Evaluation of the cost-effectiveness of HemoCue (HC) and Copper Sulphate for screening blood donors in urban and rural health facilities in Vietnam' **£20,930**

The Wellcome Trust. 'Blood Transfusion Research Workshop Kenya'. **£56,540**

The Wellcome Trust. 'The safety and efficacy of umbilical cord blood transfusion in severe malarial anaemia in children'. (supplement) **£31,578**

Dr P Bates

The Wellcome Trust. 'Developments & use sandfly EST microrrays to study gene expression in response in *Leishmania* infection'. (supplement) **£1,595**

Professor B Brabin

University of Amsterdam 'The Tropical Paediatric Programme' (supplement) £20,207

Professor AG Craig

The University Sains Malaysia. 'Cytoadherence and Post-adhesive interactions in *Plasmodium falciparum* infections'. **£25,094**

The Wellcome Trust. Wellcome Trust Senior Research Fellowship for Dr Britta Urban for study entitled 'Cellular immune responses in children with *Plasmodium falciparum* infection. **£1,060,166**

The Wellcome Trust. 'Early induction of pro-adhesive state by *Plasmodium falciparum* cytoadherence'. **£282,537**

The Wellcome Trust. 'Parasite-host interactions in malaria pathogenesis & Transmissions'. (supplement) **£697**

Dr L Cuevas

The World Health Organization. 'A Multi-centric trial of front-loaded smear microscopy in the diagnosis of Tuberculosis. **£169,462**

The Economic and Social Research Council. 'Identifying barriers to TB diagnosis & treatment under a new rapid diagnostic scheme. **£229,244**

Dr M Donnelly

United Utilities. 'Technical Consultancy for Controlling Chironomids in Audenshaw reservoir'. **£32,018**

Professor P Garner

The World Health Organization. 'Reduced osmolarity oral rehydration'. (2 supplements) **£5,764**

Department for International Development. 'Effective Health Care Alliance Programme (EHCAP) Increase in decisions related to the health sector based on best available evidence in middle and low-income countries'. (supplement) **£1,643,447**

Dr G Gill

The Thackray Medical Research Trust. 'Medical Innovation and Invention of the Burma Railway 1943-45'. **£24,963**

Dr S Gordon

Commonwealth Scholarships. 'MPhil in Pulmonary Immunology – Kondwani Jambo.' **£57,400**

The American Thoracic Society. 'Promoting the development of the Pan African Thoracic Society,. **£6,332**

Dr R Harrison

The Wellcome Trust. 'Bioinformatic & DNA immunisation strategies to generate neutralising antibodies specific to conserved haemostatis-dispruptive toxins in African Viper venoms', (supplement) **£896**

Dr I Hastings

The Portuguese Science Foundation. 'PhD Studentship - Tiago Antago'. **£6,926**

Dr A Hassan

King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs. 'Institutional development of the School of Public Health, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia'. **£1,100,000**

Ministry of Health of the Syrian Arab Republic. 'Technical Assistance to the Centre of Strategic Health Studies, Damascus, Syria'. **£3,403,836**

Professor J. Hemingway

The World Health Organization. 'Systematic Coordination of Commissioned Reviews for TropIKA.net'. **£41,274**

Gates Malaria Partnership. 'PhD Studentships'. (supplements) **£4,998**

Professor R Heyderman

EuropeAid. 'Increasing prevention and treatment of TB through development of a rapid, sensitive and affordable biological marker (genomic or proteomic) for diagnosis of TB in HIV positive and negative populations. **£261,406**

The Wellcome Trust. 'Science Communication Officer for the Malawi-Liverpool-Wellcome Trust Clinical Research Programme'. **£102,600**

The Wellcome Trust. 'MLW Programme: Learning & Training building Extension'. **£800,000**

Professor A Kroeger

The European Commission. 'Salary Replacement for Professor Kroeger's work on Denco Vietnam'. **£67,976**

Dr D Lalloo

European & Developing Countries Clincial Trials Partnership (EDCTP). 'Strengthening of long term clinical & laboratory research capacity, cohort development & collection of epidemiological & social science baseline data in Uganda & Malawi to prepare for future HIV vaccine trials'. **£168,597**

Professor MJ Lehane.

The Wellcome Trust. 'Tsetse trypanosome interactions and reactive oxygen species (ROS)'. **£244,486**

The World Health Organization. 'A user-friendly decision support system to improve vector control operations against trypanosomiasis'. **£6,412**

Dr G Lycett

The Biotechnology and Biological Sciences Research Council. 'Post Genomic, functional genetic analysis of parasite/insect interaction'. **£281,509**

Dr P McCall

Vestergaard Frandsen SA. 'Investigation of *Anopheles gambiae* arrival patterns at a conical bednet'. **£19,782**

Professor ME Molyneux

The Wellcome Trust. 'Malarial Disease in Children'. (2 supplements) **£200,304**

Dr H Ranson

The Royal Society. 'Travel Award: Insecticide resistance detection in dengue vectors in Vietnam'. **£3,966**

The World Health Organization. 'Insecticide Resistance in African Malaria Vectors'. **£101,134**

Dr SB Squire

FIND-Foundation for Innovative New Diagnostics. 'Technical Guidance/ Support by G Mann to FIND re TB & Poverty'. **£14,652**

The World Health Organization. 'Technical Support for policy development and design of pro-poor interventions in TB control and collection and analysis of data'. **£11,812**

The Norwegian Heart and Lung Association. 'Triage Plus for TB-HIV: improving community-based provision for TB and HIV in Africa'. (supplement) **£2,600**

Professor M Taylor

The Royal Society. Travel Award 'Ghana/Tanzania – UK ~Science Networks.' **£9,988**

Professor F ter Kuile

The Bill and Melinda Gates Foundation. 'Malaria In Pregnancy (MIP) Consortium'. **£14,508,454**

Dr S Theobald

Research Programme Consortium – 'Realising Rights: improving sexual and reproductive health for poor and vulnerable populations'. (supplement) **£9,480**

Dr N van den Broek

The World Health Organization. 'Evaluation of Skilled Birth Attendance (SBA) as a global strategy to reduce Maternal and Newborn Mortality and Morbidity'. **£4,875**

Department for International Development. 'Zimbabwe: Saving Maternal and Newborn lives in the context of HIV/AIDS in Zimbabwe'. **£103,250**

Obstetrical and Gynaecological Society of Malaysia. 'LSS-EOC Skills in Kuala Lumpur, Malaysia'. **£21,824**

The World Health Organization. Study to audit 'Pregnancy Morbidity in a rural population in Malawi 2008'. **£5,000**

The World Health Organization. 'Implementation & Evaluation of Life Saving Skills - essential Obstetric & Newborn care Training in Zimbawe'. **£5,060**

The World Health Organization. 'Testing of proposed New WHO Classification of Cause of Maternal Deaths'. **£5,500**

The World Health Organization. 'Development of guidelines for use of Misoprostol'. **£7,580**

The Human Relief Foundation. 'Essential Obstetric - Newborn Care Package for Iraq'. **£9,790**

Professor SA Ward

The European Commission. 'The safety pharmacology of artemisinins when used to reverse pathophysiology of malaria in pregnancy (ARTEMIP)'. **£1,470,625**

Dr D Williams

Novartis. 'Support on SRA on Neospora vaccine development '. (2 supplements) **£208,651**

Dr C Wondji

The Wellcome Trust. 'Characterisation of pyrethroid resistance in field populations of *Anopheles funestus*, malaria vector in Africa'. **£678,834**

SHARED AWARDS

Dr R Harrison

Biotechnology and Biological Sciences Research Council. 'Elucidating the transcriptional and post-translational systems that regulate snake venom assembly and that control autolysis and self-toxicity'. **£7,355**
Shared with Dr Simon Wagstaff

Professor R Heyderman

The Wellcome Trust. 'Impact of HIV infection on naturally-acquired mucosal immunity to *Streptococcus pneumoniae*'. **£573,037**
Shared with Professor Neil Williams, University of Bristol

The Wellcome Trust. 'Malawi-Liverpool-Wellcome Trust Clincial Research Programme'. (Core grant renewal)

Shared with Professor Peter Winstanley, University of Liverpool
£8,018,653

Dr L Kelly-Hope

The Royal Society. 'Travel Award: Ghana/Tanzania - UK Science Networks'. **£7,355**
Shared with Dr Hilary Ranson

Professor SA Ward

The Wellcome Trust. 'Molecular basis of artemisinin resistance in *Plasmodium falciparum*'. **£39,962**
Shared with Professor Alister Craig

Erin Dilger

Erin Dilger is a self confessed "country lass" from the wilds of North Yorkshire. It may not sound very exotic, but it is this rural landscape on the edge of the beautiful Yorkshire Dales National Park which has fostered her continued interest in nature, and more specifically in insects.

Years on, and still a keen naturalist, Erin read Zoology at Durham University, graduating in 2006. Since then she has worked with the university on two entomology projects. Firstly, she assisted on a project investigating butterfly range expansions and whether they are keeping pace with climate change in County Durham and Northumberland. Then, in 2007, she worked in the Gambia on the STOPMAL Project. The project, funded by the Medical Research Council, was designed to investigate the effectiveness of house screening to prevent the transmission of malaria by stopping mosquitoes entering houses. The project was based in a number of rural villages centred on Farafeni, in the centre of the country. Erin was a field worker, and collaborating with Gambian colleagues, helped with setting out mosquito traps in the evenings and collecting them the following mornings. She then extracted the collected mosquitoes in the laboratory, and identified them.

She is now studying for her MSc in Biology and Control of Parasites and Disease Vectors at the School. Following the original inspiration provided by her tutor, Professor Steve Lindsay, participation in these fascinating research experiences has given her an insight into how research works *in situ*, along with a variety of fieldwork and laboratory techniques. When coupled with her desire to help people, this has led her to want to study vectors and parasites at one of the top institutions in the world, the Liverpool School of Tropical Medicine.

As for the future? Erin is hoping to develop a career in medical entomology research that will not only benefit people, but will provide her with new levels of understanding, and the opportunity to appreciate communities and countries.

Stephane Moissaing

Stephane grew up in an agricultural setting in Auvergne, France. He studied logistics at university in Clermont-Ferrand, and then began a career in humanitarian assistance. This led to him going to Kosovo, Albania and Montenegro in 1998 with the NGO Enfants du Monde, where his direction evolved from logistics to project management. This European involvement was followed by work in Nicaragua and El Salvador with MSF, and more recently in Afghanistan with the French NGO Solidarity. He has subsequently worked mainly in East Africa with various NGOs, including Medicines du Monde in DRC, Sudan, Uganda and Ethiopia. Stephane has now moved into the management aspects of aid work, and so moves around to coordinate the various programmes in various countries, e.g. when in Afghanistan he was also looking after programmes in Pakistan and Uzbekistan.

Stephane decided to come to the LSTM to study on the Masters in Humanitarian Assistance course because he wants to expand his outlook in the whole field of humanitarian assistance. Previously all his work has been of a technical nature, and has been dictated by the policies of the various NGOs. He feels that taking the Masters course will broaden his outlook, and provide him with a foundation outside the technical environment in which he has worked. He hopes that this will lead to a further career in humanitarian assistance, but with a more holistic approach to the provision of assistance. So Stephane would hope to be involved in policy making as well as still being able to use the skills he has developed in the implementation side of providing help where help is needed.

LSTM offers this Masters with a broad and critical view of humanitarian assistance, and it is totally suited to Stephane's needs. It brings an academic perspective to the HA ethos, and Stephane feels that his contribution to the course is his technical experience. After having gained his academic qualification he wants to work at a higher level than previously, still in the field of humanitarian assistance, with a mix of field and head office experience

Mohamed Suliman

Mohamed was born and brought up in the Sudan. His basic education was in Khartoum, and afterwards he travelled to the United Kingdom to study A-levels and was accepted into Medical School at the University of Nottingham in 2000. He graduated in 2006 and then completed the two-year post-graduation Foundation Programme which is prescribed for all UK medical graduates, so that they can become fully registered members of the General Medical Council.

Mohamed had always maintained a desire to practice medicine in the Sudan. His vocation was in Emergency Medicine and fortune smiled last year when the Sudanese Ministry of Health launched a scheme for training in Emergency Medicine. This was linked to an increasing government commitment to establishment Accident and Emergency departments in hospitals in major cities throughout the country.

Hence, Mohamed committed himself to returning to his country, but he felt that he needed specialised training in dealing with infectious diseases and conditions that prevail in tropical countries. As this particular aspect of his medical training was not covered in Nottingham, Mohamed looked around, and found that the Diploma in Tropical Medicine and Hygiene at the LSTM perfectly suited his requirements. The course was of the right length of time; provided a sound scientific basis for medical conditions in the tropics, as well as focussing on the wider issues of public health and epidemiology. He also noted that there is great emphasis on clinical and practical aspects of disease management, all of which will be useful skills he will draw on, on his return to the Sudan.

Since his arrival in Liverpool, Mohamed has met an exciting group of students and staff, with a wide variety of backgrounds, some of whom are intriguing characters!
The combination of embarking on a steep learning curve, coupled with the fascinating activities available in Liverpool as its European Capital of Culture draws to a close, will be an unforgettable period of Mohamed's life in the United Kingdom.

Angela Obasi

As early as four years of age, Angela told her family that she was going to be a doctor, and has never wavered from that. She qualified in medicine at Kings College, London. Having already developed an interest in tropical medicine, she then trained at St Pancras Hospital for Tropical Diseases. Growing up in an African family in Blackburn, she was very much aware that people in England were well off in terms of health care compared with people in tropical countries. It was the people in the tropics she wanted to help most.

When she began her training at St Pancras, HIV Aids was emerging as an increasingly important cause of tropical illness. Her experiences of managing the end stages of HIV related disease convinced her of the importance of developing effective prevention strategies, especially in Africa. Most of her research since then has been aimed in that direction.

She has completed a five year research programme in Tanzania, developing and evaluating strategies for HIV prevention in young people in a programme funded by Ireland AID. Once the research has been analysed, she hopes these strategies will be taken up by governments and local health services in Africa so that they can be measured in terms of effectiveness and sustainability.

Her research in Tanzania involved research into the day to day lives of young people, their families and communities. She is convinced that the environment around young people and the pressure on them from their parents and community in terms of certain sexual and reproductive behaviour has to be addressed by the community itself if intervention is to be successful.

“At LSTM there are people I can brainstorm with to get research ideas and there are lots of opportunities for collaboration, not just in my own clinical research group but with other research groups. There is a good network of engaged partners and I feel lucky to be part of an institution which is so highly thought of. My future research will address some of the key issues of the interaction between epidemiological and sociocultural factors in HIV and reproductive health in greater depth and across a broader range of countries."

Clare Strode

Clare Strode’s Merchant Navy father fired her young imagination growing up in Liverpool with tales of foreign places which his ships visited. A fascination with the natural world and a natural inclination towards science subjects, steered Clare to the School, and her role as a postdoctoral scientist in the Vector Group.

She studied for a BSc in Marine Biology and Zoology and an MSc in Animal Parasitology at the University of Wales in Bangor.

Unsure of how she made the transition from marine biology to tropical medicine, but on reflection, she says that reading a book called ‘Blood Sucking Insects’ by Mike Lehane, then also at Bangor and now Professor of Molecular Entomology and Parasitology at the School, helped propel her towards vector biology.

The MSc triggered her interest in mosquito research and she undertook a PhD with Professor Harold Townson at LSTM, studying insect immunity and its effects on parasites. Finishing her PhD Clare undertook a post doctorate position with Professor Hemingway and Dr Hilary Ranson. Since then, she has been investigating insecticide resistance in the malaria-transmitting mosquito *Anopheles gambiae* and the dengue-transmitting *Aedes aegypti*.

In addition to her post-graduate research, Clare was last year appointed Assistant to the Director of Postgraduate Research, Professor Steve Ward. She is also an harassment advisor at LSTM.

Because of her work, Clare has finally travelled to some of those places her father used to describe to her, including the Amazon Jungle, Australia, the United States and Africa. She is soon to head to Beijing to represent Professor Hemingway at an insecticide resistance congress. Travelling has enabled her to see at firsthand the devastating effects of poverty and diseases in areas such as West Africa and this gives added impetus to her work.

She also appreciates working in a place with such a global flavour. “For example, I share an office with an Aussie, a Kiwi, an Egyptian, a Ghanaian, a couple of Greeks and some Brits.”

Giancarlo Biagini

Senior Lecturer Dr Giancarlo Biagini came to the School after spending time in industry with Unilever and academia at Cardiff, Sydney and Cambridge. At the School, he combines his knowledge from those two backgrounds in the quest to find drugs to treat malaria.

Born in Truro and brought up partly in his father's native Italy, and then back in Cornwall, Giancarlo did a four year biotechnology degree at Cardiff University which included a year working in industry with Unilever. He followed this up with a PhD at Cardiff University working on the cellular bioenergetics of anaerobic protozoa.

His next move was to Sydney, where he spent two years researching the biochemistry of the gut pathogen *Giardia* which yielded several publications. In addition to devoting much of his time in Sydney on research, Giancarlo managed to become a competent surfer.

Returning to Britain in 2000, he conducted research in electro-physiology at Cambridge before coming to the School in 2001 to work on aspects of malaria biochemistry and pharmacology with Professor Steve Ward. His move to Liverpool was motivated by a desire to work on a medically important organism. In 2004 he took his first steps as an independent researcher securing a Leverhulme Trust Early Career Fellowship.

He is now a Senior Lecturer in malaria biochemistry and pharmacology, working closely with Professor Ward and Professor Paul O’Neill - a group which has just received £1.4 million from the Wellcome Trust for a drug discovery project.

“We hope this will lead to drug candidates for anti-malarial drugs which will be cheap and effective at treating people suffering from malaria and also which may provide protection for people travelling to malaria endemic countries”, explains Giancarlo.

He enjoys the “unstuffy” atmosphere of the School compared to some previous academic experiences and the multi-cultural aspect of being part of an international organisation. Most of all, he is inspired by the fact that unlike pure research on model organisms, his current basic and translational research has tangible benefits to people living in resource-poor countries.

Officers 2007-2008

Patron
Her Royal Highness
The Princess Royal GCVO

President
Sir Mark Moody-Stuart KCMG PhD FGS

Chairman
Mr James Ross, BA (from 7.12. 07)
Mrs R H Hawley MBE (to 7.12. 07)

Director
Professor J Hemingway BSc PhD FMedSci HonFRCP

Vice-Presidents
Lord Alton of Liverpool
N C F Barber, CBE
N Baring CBE LLD
J Borden, OBE (from 7.12.07)
Sir Arnold Burgen FRCP FRS
Baroness Cox of Queensbury
Sir Richard Evans CBE
Emeritus Professor H M Gilles CMG UOM KCSJ MSc DSc MD FRCP FFPH DMedSc
J Newell OBE JP
M Oglesby
The Rt. Hon. The Lord Owen CH
Sir Michael Perry GBE
J Roberts
JM Smith
Sir Crispen Tickell GCMG KCVO
Sir David Weatherall DL MD FRCP FRCPE FRS
Sir Leslie Young CBE LLD DL

Board of Trustees

Chairman
Mr James Ross, BA (from 7.12.07)

Vice-Chairman
Vacant

Hon Treasurer
IM Jones, ACIB (from 7.12.07)

Deputy Hon Treasurer
J Schofield BA, ACA

Director
Professor J Hemingway BSc PhD FMedSci HonFRCP

Elected Members

Dr I Bates MBBS, DTMH, MD, FRACP, FRCPath
J Brown LLB
MJP Cooke FCA (to 7.12.07)
W D Fulton FCA JP DL (to 7.12.07)
Dr T Francis BSc (from 7.12.07)
D Greensmith MA
Professor J Hemingway BSc PhD FMedSci HonFRCP
Mrs R Hawley MBE (to 7.12.07)
Dr A Hoskins MB BAO BCH, MCommH, FFPH
C M Jones BA ACIS
I M Jones ACIB
ATR Macfarlane BA FCA (to 7.12.07)
SR O'Brien MP
JH Ross BA (from 7.12.07)
Professor J R Saunders BSc PhD
J Schofield BA, ACA (from 7.12.07)
SP Sherrard (to 7.12.07)
Sir Brian Smith PhD DSc FRSC
ACM Winter MA (from 7.12.07)

Secretary & Clerk to the Board of Trustees

R E Holland MBA, FCCA

Academic & Academic-related Staff 2007-2008

Director
Professor J Hemingway

Deputy Director
Professor S A Ward

Chief Business Officer
P L Gould

Director of Administration & Support Services
R E Holland

Professors
Professor of Molecular Entomology and Parasitology
M J Lehane

Professor of Tropical Paediatrics
B J Brabin

Professor of International Health
P Garner
J Valadez

Alfred Jones and Warrington Yorke Professor of Tropical Medicine
Vacant

Middlemass Hunt Professor International Community Health
A Kroeger

Professor of Tropical Health Sciences
D H Molyneux
M Bockarie

Professor of Clinical Tropical Medicine
M E Molyneux
R S Heyderman

Selwyn-Lloyd Professor of Medical Entomology
Vacant

Professor of Veterinary Parasitology
A J Trees

Walter Myers Professor of Parasitology
S A Ward

Professor of Tropical Child Health
Vacant

Professor of Molecular Parasitology
A G Craig (joint Pharmacology & Therapeutics)

Professor of Parasitology
M Taylor

Readers
P A Bates
P G Bray
D G Lalloo
P McCall
H Ranson
S B Squire
S Tang

Senior Fellows
G Barnish
H Townson

Senior Lecturers
I Bates
N J Beeching
M Boele van Hensbroek
M L Chance
L Cuevas
M J Donnelly
I G Edwards (joint Pharmacology & Therapeutics)
E B Faragher
G V Gill (joint Department of Medicine)
S B Gordon
D Haran
R Harrison
I Hastings
T Martineau
A Obasi
T O'Dempsey
M J Paine
M Taegtmeyer
F ter Kuile
S Theobald
DJL Williams
N Van den Broek

Lecturers
K Abba
A Adegoke
G Biagini
K Bristow
H Bromley
R Dillon
L Ford
R Gulati
A A Hassan
J E Hodgkinson
J Hofman
E Kongynuy
J Krzywinski
X Liu
G Lycett
G Mohamed
R Sinfield
R Tolhurst
Y Wang

Research Staff
Vector Group
A Darby
M Coleman
A Dowd
N Dyer
A Enayati
J Esterhuizen
A Lenhart
J Lindh
A Lynd
L Kelly-Hope
E Morou
P Muller
D Nikou
P Pignatelli
B Stevenson
C Strode
E Warr
D Weetman
C Wilding
C Wondji

Veterinary Parasitology Group
S Dowdall
C Guy
S Lake
C McCann
J McGarry
B Makepeace
R Norton

Molecular & Biochemical Parasitology Group
J B Alexander
A Ardrey
S Ashleigh
M Bates
D Bridges
S J Chakravorty
J Davies
N Fisher
E Gitau
I Hale
Z Hyder
L Johnson
D J Johnson
K L Johnston
S Jones
N Khammo
R S Langley
L Ochola
C Okpara
J E Salcedo Sora
M Sant' Anna
A E Shone
T Szestak
S Wagstaff
R Wilson
Y Wu
P Stocks
B Urban

Disease Control Strategy Group
J Goodman
O Hassall
H Howden-Leach
A Medina-Lara

Child & Reproductive Health Group
A Delpisheh
S A Dellicour
J Hill
S Povall
DJ Terlouw
M A Yassin

Clinical Group
J W Bailey
D Fullerton
J Komrower
M Parkes
N Swann
R Thomson
H Tolmie
K Wakeham

International Health Group
G Gyte
K Jones
H MacLehose
J Raven
R Robb
H J Smith

Annals of Tropical Medicine & Parasitology
K R Wallbanks

Annals of Tropical Paediatrics: International Child Health
J B S Coulter
V Coulter

Lymphatic Filariasis Support Centre
DH Molyneux
M Bockarie
J Fahy

Innovative Vector Control Consortium
J Hemingway
L Byrne
T McLean
J Moore
R Sloss
A Spencer

Wellcome Trust Tropical Centre
R S Heyderman
G Appleford
D J Miles
M E Molyneux
J Montgomery
M Sanjoaquin
S C Wassmer
S A White
S Glennie

Liverpool Associates in Tropical Health
J McCullough
S Cooper
V Doyle
D Freeman
S Collens

Well Travelled Clinics Ltd
P Tubb

Retirements

John takes on a new challenge in helping the world's most vulnerable people

This year the School said a fond and grateful farewell to John McCullough, who has departed after a decade of developing Liverpool Associates in Tropical Health (LATH) Ltd into a considerable force for achievement in fighting tropical diseases among the world's poorest people.

When John breezed into LATH in 1998 as Managing Director, his challenge was to revitalise the consultancy arm of the School, and he has more than met that challenge. He was the first full time manager and had the support of one full time administration person - Pat Reid who is still with LATH. Inspired by his enthusiastic approach to the task, LATH has grown to more than 20 staff in its Liverpool base and a workforce of 35 in the developing world.

"I came to make things happen and I hope people feel that I did", said John. "We were sitting on a strong technical and scientific base in a centre of excellence with a 100 year history, and all the networks that had produced. The expertise we were able to draw upon to attract new business was quite phenomenal".

Under his dynamic and passionate leadership, LATH has become associated all over the developing world with vital and life changing health programmes for malaria, HIV Aids, TB, maternal and neo-natal health. It has formed trusted partnerships with many health ministries and organisations such as DIFD, The World Bank, The Global Alliance for Vaccines and Immunisation and, more recently, the US-AID funded programme focusing on neglected tropical diseases in some of the world's poorest countries.

One of his proudest legacies has been in assisting the setting up of an important partnership with The Royal College of Obstetricians and Gynaecologists to collaborate in reducing maternal mortality in developing countries and raise the standard of sexual and reproductive healthcare worldwide. To illustrate how diverse LATH has become in his time, it now has programmes assisting the Chinese government to introduce new health systems.

"I feel I am leaving behind a very different organisation to the one I took on", said John before his departure. "We have gone into totally new areas. I feel very proud of what LATH has achieved, not only in having such a positive impact in trying to improve the quality of health of the poorest of people in developing countries but also in employing people and a lot of consultants from developing countries."

John is most proud of LATH's work in Malawi where LATH has led five projects and has 18 full time technical advisors in a relatively small Ministry of Health. Similarly, when he joined, LATH had one major project in HIV Aids in Nigeria - now there are seven.

When John joined the School in 1998, he had already spent time working in Senegal in primary education and cultural work. Seeking a new challenge and with an urge to return to Africa, he is delighted to have returned to Senegal as Regional Director for Africa for the Micro Nutrient Initiative. "The initiative will save a huge number of lives because a major deficiency of such things as vitamin A and iron can cause fatal anaemia and weakens the immune system", said John. We wish him well in his new endeavours.

In April, David Molyneux retired as the Director of the Lymphatic Filariasis Support Centre. David has had a long association with the School. He first joined as a Lecturer in the Department of Parasitology in 1968. Following overseas appointments in Nigeria and Burkina Faso, he returned to the UK as Professor of Biology at the University of Salford in 1977 and in 1991 became the School's first Director, a position he held until April, 2000 when he became Director of the Lymphatic Filariasis Support Centre.

David has been the backbone of the success of the Centre since its launch. With core funding from the Department for International Development (DFID), GlaxoSmithKline (GSK) and operational funding from DFID and The Bill & Melinda Gates Foundation, the Centre, under David's leadership, is highly regarded worldwide and is a key partner in the activities of both the Global Alliance to Eliminate Lymphatic Filariasis (GAELF) and Global Programme to Eliminate Lymphatic Filariasis (GPELF). The Centre is the Secretariat for GAELF and David is its Executive Secretary. With Centre funding, David has ensured that 13 PhD, Masters and Certificate students from national programmes have successfully graduated. He is a prolific author with publications in high citation journals which have raised the profile of lymphatic filariasis and more recently the benefits of treating a package of neglected tropical diseases.

All this has not gone unrecognised having recently been awarded the Donald Mackay Medal for his contribution to tropical medicine and last year he became President of the Royal Society of Tropical Medicine & Hygiene, a position which clearly recognises his expertise in this very broad field.

However, although retired from full-time employment, the School is delighted that he has agreed not to escape that easily. At a time when the Centre is re-launching as the Centre for Neglected Tropical Diseases, David will continue on a part-time basis for a further two years to contribute to the Centre's advocacy and support activities. David commented "I am thoroughly enjoying the leisurely benefits of retirement but I am also very happy to continue my association with the Centre. I am particularly pleased to continue my advocacy role and support my successor, Moses Bockarie, as he moves the Centre forward into a new era".

Moses Bockarie is welcomed as the Director of the Centre for Neglected Tropical Diseases (incorporating the Lymphatic Filariasis Support Centre). Moses though is no stranger to Liverpool, having completed both his MSc and PhD at the School.

After graduating, Moses returned to his home country, Sierra Leone, to continue his work as a medical entomologist before moving to the Papua New Guinea Institute of Medical Research, becoming Principal Research Fellow and Head of the Vector Borne Disease Unit in 1996. There he managed an extensive research portfolio including malaria and neglected tropical diseases (NTDs) such as lymphatic filariasis and soil-transmitted helminths. In 2005, he joined the Center for Global Health and Diseases at Case Western University, USA as Visiting Professor where he continued his work on NTDs.

David Molyneux, who has known Moses for many years, is delighted with the appointment: "I do not know of a more appropriate person to continue and expand the activities of the Centre, formerly the LF Support Centre but now renamed to recognise its expanded activities and the increasing profile of neglected tropical diseases (NTDs) in global public health. It is a very exciting time for neglected tropical disease control and elimination and I know Moses will contribute greatly."

Moses is an internationally experienced researcher. He has undertaken duty travels to 27 countries in Africa, Asia, Australia, Europe, United States, South America and the Pacific and is a member of the WHO Panel of Experts on parasitic infections.

A member of several professional societies including the Royal Society of Tropical Medicine and Hygiene, and having adjunct faculty positions in the University of Papua New Guinea and James Cook University in Queensland, Australia, he also serves on the editorial board of the Malaria Journal and is a

regular editor and contributor to scientific journals.

His vision for the Centre is "to improve the quality of life for the bottom billion by providing technical assistance to establish an evidence base for developing tools and control strategies for NTDs". In an interview for the Schools "tropical", Moses said he was excited about the opportunities ahead and he was delighted to have the opportunity of being part of the School's success story.

Emeritus Professor honour

Emeritus Professor Herbert Gilles has recently been appointed a Companion of the Most Exalted Order of the White Elephant of the Kingdom of Thailand. This is one of the highest decorations awarded by Thailand, it was established in 1861 by King Rama IV, and is only awarded by his Majesty the King of Thailand. This prestigious honour is in recognition of Professor Gilles academic and research help that he has provided to the Faculty of Tropical Medicine at Mahidol University, Bangkok, as an honorary consultant for the last 30 years.

Professor Gilles, who this year marks his 50 year association with LSTM, was appointed lecturer in 1958 by the then Dean, Professor Brian Maegraith. Professor Gilles was seconded to the University of Ibadan, Nigeria until 1965 when he returned to Liverpool as a Senior Lecturer. He was then appointed Professor of Tropical Medicine in 1970. He retired in 1986, but remains in constant contact with the School and still delivers lectures to many students each year. During his tenure with the School, Professor Gilles was the Dean from 1979 to 1984, and has served as a Consultant to the World Health Organization. He is also Visiting Professor of Public Health in Malta.

In 1982, Professor Brian Maegraith was also awarded the Order of the White Elephant, in recognition of developing the Diploma in Tropical Medicine and Hygiene at Mahidol University.

Joe Valadez joined LSTM's International Health group in July from the World Bank, where he was the Senior Monitoring and Evaluation Specialist on the Global HIV/AIDS Programme and the Malaria Booster Program for Africa.

A community epidemiologist, he earned his Doctorate in Science at Harvard, joining the Harvard faculty in 1986. He has since worked in more than 45 countries, including Kenya, where he was Director of Projects for the African Medical and Research Foundation and in Rwanda where he served as Senior Health Officer for UNICEF immediately after the genocide, helping the new Rwandan government develop a Ministry of Health. Much of his research has focused on the development of rapid and practical programme monitoring and evaluation techniques that adapt quality control statistics as used in industry for application in community health programmes. He developed a state of the art Lot Quality Assurance Sampling method during the mid-1980s which is used internationally and recently integrated this approach with cluster sampling for applications in large countries. Currently, he is developing new approaches for rapid mapping of disease prevalence to support community treatment programmes of schistosomiasis and school-based intermittent preventive treatment of malaria. He is also working to assess the relative effectiveness of diverse service delivery strategies on covering community populations with public health programmes.

Listing his priorities on joining, Joe said: "I'm developing a six-month workplan to guide my efforts while I settle into LSTM. Firstly, I intend to learn about the work that colleagues are carrying out so that I can link my own research with them whenever possible. Secondly, I am studying the priorities of likely donors and preparing concept notes which I can use to begin a dialogue with them - in my opinion, the best recipe for successful development of funding proposals is to include donors as participants early in the design stage. Finally, I'm consolidating my contacts with partner agencies so that I can establish a network of institutions with whom I and LSTM can collaborate."

Opening of CTID by HRH The Princess Royal, Patron of the LSTM on 18th July 2008.








Rotarians Eliminating Malaria in Tanzania

Dr. Guy Barnish, Senior Fellow in Parasitology, was earlier this year doubly honoured by REMIT (Rotarians Eliminating Malaria in Tanzania). REMIT, one of the preferred projects of the 2003-04 RIBI (Rotary International in Great Britain and Ireland) President Brian Stoyel, raises funds to provide insecticide treated bed nets, insecticides and medicines to combat malaria in northern Tanzania.

The first honour was to be invited to become a Patron of REMIT, along with the late Professor Chris Curtis of the London School of Hygiene and Tropical Medicine.

The second was when Guy was honoured with the award of a Paul Harris Fellowship, one of Rotary Foundation's highest awards, which was created in 1957 in memory of the founder of Rotary as a way of showing appreciation for contributions to the Foundation's charitable and educational programme. The citation on the award states, "In appreciation of tangible and significant assistance given for the furtherance of better understanding and friendly relations among peoples of the world."

In presenting the award, Brian Stoyel said that it was presented in recognition of Guy's work against malaria over the years.

If anyone would like to support REMIT, they can contact them on www.remit.org.uk/ or email brian@stoyel.co.uk

Dr. Bertie Squire, Reader in Clinical Tropical Medicine and co-manager of the Centre for Research on Equity and Systems for TB and HIV/AIDS (CRESTHA) at LSTM, has recently been elected the highly prestigious position of President of The International Union Against Tuberculosis and Lung Disease ("The Union"). He carried out his first public duties at the 39th World Conference on Lung Health in Paris on the theme of "Health Systems Responses to Threats to Global Lung Health". The next World Conference will be held in Mexico in 2009 on the theme of "Poverty and Lung Health".

The Union is the only international voluntary scientific organisation that provides a neutral platform to fight TB, HIV, asthma, tobacco and lung disease. It was established in 1920 as a federation of national associations, and today provides direct field assistance to over 75 countries, conducts clinical trials and organises international conferences and training courses (see *www.theunion.org*) .

Bertie came to LSTM in 1995 from the position of head of the Department of Medicine, Kamuzu Central Hospital, Lilongwe, Malawi. Since then he has built up a collaborative TB research programme with colleagues in many countries. The focus of his work has been on generating the knowledge required to make TB control services more accessible for the poor. He and his group run the Secretariat of the TB & Poverty Subgroup of the Global STOP-TB Partnership.

Photograph Credits

Covers	Guy Barnish
Page 2	McCoy Wynne Photography
Page 3	Guy Barnish
Page 4	Provided by LSTM
Page 5	McCoy Wynne Photography
Page 6	Guy Barnish and Philomena Hinds
Page 7	Joy Oliver
Page 8	Provided by Nduku Kilonzo, and Bertha Nhlema Simwaka,
Page 9	Provided by Phi Hinds and Miriam Taegtmeyer
Page 10	Boyong Yuan, Joanna Raven and Xiaoyun Liu
Page 11	Xiaoyun Liu
Page 12	Guy Barnish and Tim Martineau
Page 13	Tim Martineau
Page 14	Dave Haran
Page 15	Paul Garner
Page 16	Anon and McCoy Wynne Photography
Page 17	Provided by the RCOG International Office
Page 18	Ian Tulloch, AusAID.
Page 19	Mark Taylor and Kelly Johnston
Page 20	Francois Nosten
Page 21	Ray Wilson and Steve Torr
Page 22	Anon
Page 23	Jenny Renju
Page 24	Dougal Freeman
Page 25	Russell Dacombe
Page 30	Guy Barnish
Page 31	Guy Barnish and Djouaka Rousseau
Page 34	Provided by David Molyneux
Page 35	Provided by LATH, the Royal Thai Embassy and Joe Valadez
Page 36	McCoy Wynne Photography, Guy Barnish, provided by REMIT and the International Union against TB and Lung Disease

Editorial Team
Editor - Guy Barnish
Editorial Assistant - Irene Reece
P.R. Officer - Eileen Taylor

LSTM
LIVERPOOL SCHOOL
OF TROPICAL MEDICINE

Affiliated to the University of Liverpool

Pembroke Place
Liverpool L3 5QA
Telephone: 0151 708 9393
Fax: 0151 705 3370
email: imr@liv.ac.uk
http// www.liv.ac.uk/lstm

Company registration number 83405
VAT registration number 732 5378 31
Registered Charity number 222655

Liverpool 08
EUROPEAN CAPITAL OF CULTURE

INVESTOR IN PEOPLE