

tropical



Neglected Tropical Diseases – Looking forward a decade on

2015-2016 issue

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Looking forward a decade The future of tackling Neg

Ten years ago, in 2005, a scientific meeting in Berlin coined the term 'Neglected Tropical Diseases'. This year, the anniversary of that moment peaked with two events further highlighting the prominence NTDs now have on the Global Health agenda. The German National Academy of Sciences, Leopoldina, brought together representatives of the G7 science academies to discuss three topics which Germany, as host of the G7 in 2015, would present to the participating Heads of State in June. The topics selected were the Health of the Oceans, Antimicrobial Resistance and Neglected Tropical Diseases (NTDs).¹



Professor Molyneux at Leopoldina

Chancellor Merkel, in her opening speech to the 68th World Health Assembly in May 2015, declared her support for NTDs at the following G7 meeting in June. This represents further progress for the recognition these diseases of the poor have achieved as a 'brand'. Their inclusion as a group of conditions, alongside malaria, HIV and TB within the proposed 2015-2030 Sustainable Development Goals (SDGs) in health is remarkable progress and the WHO proposed target that there would be "a 90% reduction in the number of people requiring prevention of NTDs by 2030"² reflects the need to focus on the chronic pandemic of NTDs.

"They are the Cinderella of the diseases as far as financing is concerned, despite the value for money invested in NTD programmes brings as independent analyses confirm"

The headline fact that only 0.6% of Official Development Assistance for Health is devoted to NTDs has not changed over a 5 year period; despite the higher profile the brand has achieved following the 2012 London Declaration and the Paris 2014 follow up. The G7 initiative is welcome but the financing of delivery by increased country contributions and wider bilateral support beyond the current commitment of the UK and USA must be on the G7 agenda. Euros, Yens and Canadian dollars are required beyond simply signing up to a communiqué. WHO has shown leadership in defining strategies, developing the Road

¹ The joint statements from the academies on these topics can be viewed on http://www.leopoldina.org/uploads/tx_leopublication/2015_G7_Statement_Neglected_Tropical_Diseases.pdf

² Investing to overcome the global impact of Neglected Tropical Diseases - Third WHO report on neglected tropical diseases, 2015

on: Neglected Tropical Diseases

Map of targets for each disease and through a comprehensive NTD World Assembly Resolution in 2013.

The major pharmaceutical companies have been steadfast in their continued provision of free drugs which are delivered to those countries who apply for them. Some 70% of the donated drugs reach the mouths of those in need in any one year, a far higher proportion than in most drug programmes where World Bank estimates have put the level of loss in the system at some 88%. Anti-malarials for example are subject to counterfeiting and 30% were recently found to be below the standard or counterfeit in a recent survey. Countries would have to purchase NTD drugs as they are all Essential Medicines if they were not donated. Yet the costs of delivery, now estimated at around US\$ 0.20-0.30 per year in Africa and much less in Asia, is a small fraction of the annual health budgets of even the poorest countries.



The branding of 'Neglected Tropical Diseases'

The diseases listed as NTDs have not recently emerged; they have been the subject of studies since the earliest days of the discipline of Tropical Medicine when the founder of that discipline, Sir Patrick Manson, first discovered that insects were capable of transmitting infective agents when he discovered the mosquito transmission of filarial infections in China in 1879.

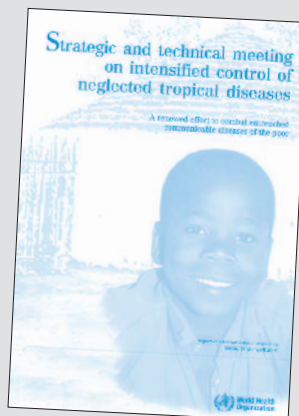
In the 1980s Dr Ken Warren, the late Head of the Rockefeller Foundation Health Department, introduced the term 'Great Neglected Diseases' but the term never really caught on. LSTM professor David Molyneux reintroduced the term 'neglected' diseases in a 2004 Lancet article. A sequence of meetings between WHO and others started to refer to the term until it was officially adopted as Neglected Tropical Diseases in the report title of an international WHO workshop in April 2005 in Berlin.

WHO then created a specific list of 17 diseases that fit the criteria of high global mortality and morbidity rates and set up a

Department of Control of Neglected Tropical Diseases. This core list has over time expanded with a number of annexes.

WHO started to develop policies recognising the need for integration of approaches and the increasing volume and diversity of drug donations. The term caught on within academia, industry and governments alike culminating in the proposal to include NTDs amongst the Health targets of UN's Sustainable Development Goals to 2030 and the recommendation to the G7 Heads of State from National Science Academies, supported by the Chair of the 2015 G7 meeting, Chancellor Merkel.

Title page of WHO report 2005 using the term Neglected Tropical Diseases publicly for the first time'



World Health Organization

The 17 Neglected Tropical Diseases and LSTM involvement

The neglected tropical diseases result from four different causative pathogens:

• Virus

Dengue »
Rabies »

• Protozoa

Chagas »
Human African Trypanosomiasis »
Leishmaniasis »

• Helminth

Cysticercosis/Taeniasis »
Dracunculiasis (guinea-worm disease) »
Echinococcosis »
Foodborne trematodiasis »
Lymphatic filariasis »
Onchocerciasis (river blindness) »
Schistosomiasis »
Soil-transmitted helminthiasis »

• Bacteria

Buruli ulcer
Leprosy (Hansen disease) »
Trachoma
Yaws

In addition to the 17 NTDs above, the WHO also lists:

• Other neglected conditions

Chronic suppurative otitis media (CSOM)
Mycetoma »
Nodding Syndrome (NS)
Podocniosis »
Scabies
Snakebite »
Strongyloidiasis »

Source: World Health Organization

Looking forward continued

Given the benefits of the products and their relevance to poverty alleviation, the case for developed countries to reassess their financing of anti-poverty health interventions is clear. WHO has made the investment case in its recent 3rd NTD report and the overall additional need is estimated to be US\$750 million /year until 2020 and US\$ 460 million /year to 2030. However, these figures exclude the costs of vector control which are estimated to be circa US\$ 2.7 billion/year with the total required for vector control between 2015 and 2030 being US\$ 32 billion. A frightening sum but one which will be increasing as the projected spread of arboviral diseases reaches more developed warmer climes as Aedes vectors adapt. New insecticidal products are required to circumvent resistance and to address urban epidemics of dengue and Chikungunya.

Whilst NTDs are often recognised as chronic diseases there is a significant and understated annual mortality. The Global Burden of Disease (GBD) estimates an annual NTD mortality at 150,000 deaths per year. There is much dispute about these figures as not all WHO NTDs are reported through the NTD channels: Rabies with 60,000; neurocysticercosis with 60,000 and snakebite with 100,000 annual deaths. The deaths from trematode induced cancers of the bladder and bile duct are not included but adding this mortality to the 150,000 GBD study suggests the real NTD mortality is over 300,000 annually whilst the burden of morbidity in Disability Adjusted Life Years (DALY) is some 47.9 million; again a figure which evokes great debate.

The NTD community has attracted increased commitment from several groups who contribute to Global Health. There has

been a significant commitment from the Bill & Melinda Gates Foundation; UK's DFID and USAID for implementation and product development research. European Foundations support for research capacity strengthening in Africa and many NGOs are committed to the implementation of programmes in the field and assisting endemic countries whilst there has been an increased interest from the broader academic community. However, there are well-recognised challenges with respect to implementation; the need for new products such as diagnostics and drugs; the difficulties of access to remote or urban populations; the potential for development of drug and insecticide resistance, the challenges of environmental changes on the ecology of vectors.

To address these challenges LSTM has reorganised its approach to Neglected

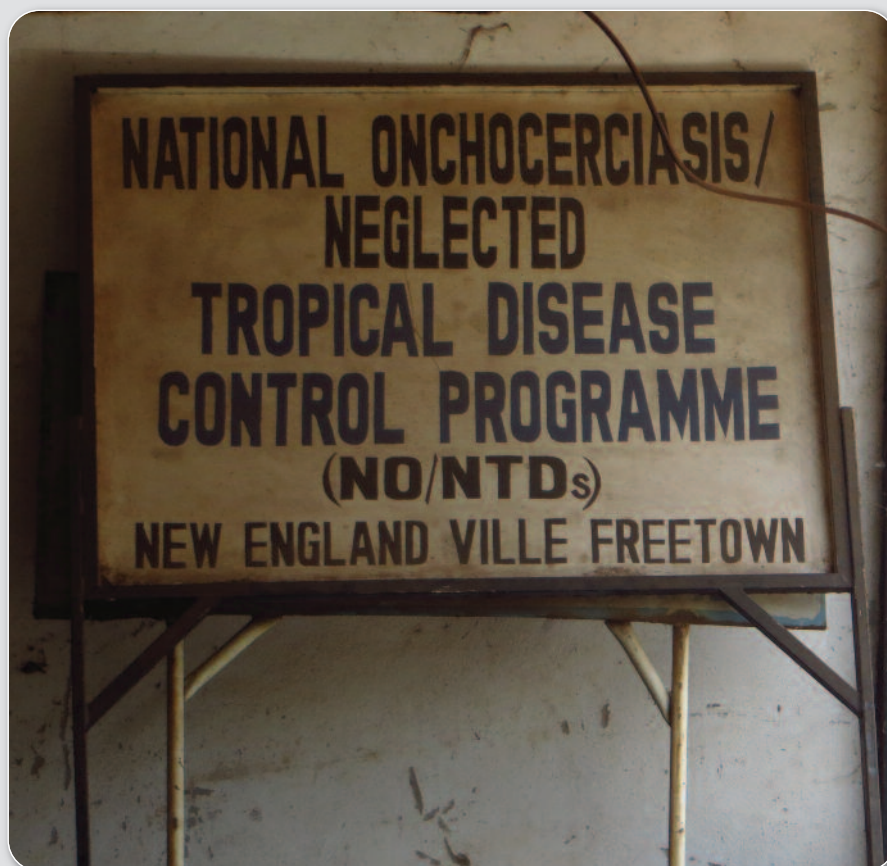
LSTM and Neglected Tropical Diseases

It is estimated that over one billion people from the world's most disadvantaged and poorest communities suffer from at least one neglected tropical disease, which can significantly impact upon their physical and emotional wellbeing. Close to 60% of the world's children are expected to reside in the tropics by 2050.

Health challenges such as the ongoing Ebola outbreak, together with the wider impact of conflict, environmental degradation, climate change and the frequency of natural disasters put the progress made against NTDs under significant threat.

Yet NTDs are markers, agents and drivers of poverty. Controlling and eliminating NTDs can make a proportionately greater contribution than any other investment – more health for less money.

Ever since its founding in 1898, LSTM has been at the forefront of providing policy makers with the scientific evidence and





by **David Molyneux**
Emeritus Professor
& Senior Professorial Fellow
Liverpool School of Tropical Medicine

Tropical Diseases utilising its breadth of scientific expertise, from laboratory research all the way to research uptake, benefiting patients worldwide. Between now and 2030 LSTM, and others, must sustain the NTD 'brand' and demonstrate that progress can be made on all these fronts.

“Poverty cannot be addressed without recognising the role that NTDs play in generating it”

Of all health programmes few have made such rapid progress towards the targets monitored by the 'Uniting to Combat NTD' stakeholders on an annual basis. The Bill Gates Annual Letter released in January

2015, to coincide with the Davos summit, confirmed his own recognition of the NTD problem and his optimism that at least some of these conditions can be eliminated. The speech by Germany's Chancellor Angela Merkel at the World Health Assembly in May of the same year highlighted NTDs as part of the G7 agenda thus maintaining the momentum.

In addition to much needed academic research, the advocacy case must also continue to be developed. The products are there albeit some not ideal. Focussed research will deliver new and affordable products or approaches within the challenging time frames established. The value for money argument and using what we have now is critical: donated drugs need to be used efficiently and effectively to reach the poorest in greatest need. The achievement of around 800 million annual treatments in 70 countries is a significant

public good which few would have foreseen a decade ago. Several billions of treatments have been delivered through many systems and in many settings in the tropics.

However, the relevance of NTDs to the core principle of Universal Health Coverage is evident from the messages from leaders of Global Health. It is time to reduce the inequities in financing NTD programmes and give the poor what they deserve: access to free and effective products.



Professor Molyneux talking to the WHO DG, Dr Margaret Chan, and WHO Regional Director for Africa, Dr Matshidiso Moeti

programmatic success to articulate relevant science into policies and guidelines. Within that process important questions are being asked concerning approaches to the control and elimination of NTDs. While scaling up access to preventive chemotherapy for NTDs is a priority, effective treatment coverage alone

is not enough to achieve the current targets.

LSTM is working to identify and overcome critical bottlenecks through its research and implementation activities whilst evaluating alternative strategies to overcome the existing barriers to control

and elimination. In addition, the WHO recommends complementary strategies to accelerate transmission interruption, including vector control, the provision of sanitation and hygiene, health awareness and capacity building. In response, LSTM has reorganised itself by focussing on a multidisciplinary approach and establishing a cross cutting theme in NTDs, building on the particular strengths of its research departments. This draws together a broad range of existing projects but will also encompass a raft of new programmes.

Overseeing and leading this is LSTM's Emeritus Professor David Molyneux. He advocates for a better understanding of what he has termed the 'chronic pandemic of NTDs and their debilitating impact and for effective sustainable elimination and control programmes'.

Captive Memories: LSTM and Far East Prisoners of War

LSTM's Honorary Research Fellow Meg Parkes and Emeritus Professor Geoff Gill have marked another chapter in the history of LSTM's longest running collaborative project, with the launch of their new book *Captive Memories* and a conference held in Liverpool.

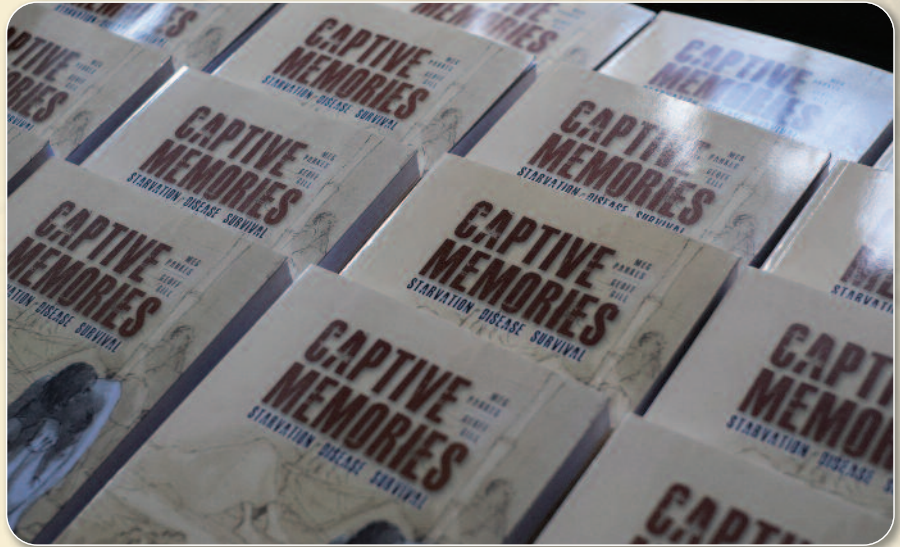
LSTM's relationship with ex Far East Prisoners of War (FEPOW) and their families began informally at the end of WWII and was formalised in 1967 when LSTM became the primary centre to carry out their Tropical Disease Investigations on 2072 ex-FEPOW. Professor Gill, amongst others, began conducting these investigations from the mid-1970s and treating a disease called Strongyloidiasis from which ex-FEPOW would continue to suffer from.



LSTM's Meg Parkes and Geoff Gill

Captive Memories charts the history of this relationship and is based on 66 oral histories, undertaken by Meg Parkes as part of a social history project which began in 2007. It was the fascinating nature of these oral histories that led to an education project, funded by the Heritage Lottery Fund in 2009, involving local school children and resulting in an online web and social media presence.

FEPOW experienced incredible hardship, suffering at the hands of their captors and from a host of tropical diseases. Forced into labour, as many as half of the men who built the famous Thai-Burma railway died



as a result. It is the exposure of such a large group of western men to these diseases that allowed LSTM not only to treat them but to learn from their experiences of continued poor health, from which they would suffer for decades to come.

Authors Meg Parkes and Geoff Gill both spoke at the book launch, acknowledging those involved and paying particular tribute to 97 year-old Tom Boardman, a sergeant in the Royal Army Ordnance Corps when captured, and who contributed to the book, as well as to Merle Hesp, whose late husband had been captured in 1942 while working on a merchant vessel transporting troops. Both were present at the book launch.

Advance copies of the book have been sent to surviving FEPOW and to the families of those who are now deceased and Meg Parkes has been delighted by their response: "It has been a privilege to meet these men and their families and I am extremely grateful to all who took part.

"Our aim in writing the book was to tell their story, to ensure that their voices were heard as they speak so clearly across the generations"

Captive Memories is a touching and personal account of the men's captivity, survival and struggles, both physical and psychological, faced after their release. Each of the 66 men interviewed (and several wives and widows) is quoted in the book, which provides a fascinating history underpinned by eyewitness accounts and personal perspectives. It is available to purchase from book sellers and the publishers (details below) and the profits from any copies purchased through LSTM will be reinvested into the further development of the project.

The 5th International FEPOW History Research Conference: 'Far East Captivity & the Aftermath Explored: 70 Years On' was attended by three FEPOW veterans and three former child internees, families of ex-FEPOW as well as academics and historians. An international line-up of speakers covering military history, medicine and author Frank Cottrell-Boyce, the scriptwriter of the film *The Railway Man*, based on the book of the same name by ex-FEPOW Eric Lomax.

Speakers and delegates travelled from as far afield as Singapore and Australia to share their stories, meet the surviving FEPOW and talk about their research and experiences. The event took place over three days and LSTM's Director, Professor Janet Hemingway welcomed attendees during the opening event at Liverpool's Liner Hotel. She, like LSTM's Chairman

James Ross who welcomed people to LSTM on the Saturday morning, paid tribute to the ex-FEPOW who were in attendance.

One of the highlights of the weekend was the presentation given on Sunday by Professor Gill about the relationship between LSTM and the ex-FEPOW who had been treated at LSTM over the last seven decades. He talked from personal experience about working with men who had suffered in silence for so long, and how much had been learned from them which has informed modern medical practice in relation to tropical and military medicine.

These events have triggered a host of new interest in LSTM and FEPOW resulting in substantial media coverage mainly via numerous BBC programmes. With more experiences continuing to be shared, the work of Meg Parkes and Geoff Gill continues.

For more information please visit:
www.captivememories.co.uk

The book *Captive Memories* can be ordered via the publisher Palatine Books (Carnegie Publishing Online) or Amazon.



Tom Boardman (middle) and Merle Hesp (left) during the *Captive Memories* book launch



The 5th International FEPOW History Research Conference in progress

REF2014 results: LSTM 6th out of 128 institutions in impact ranking

LSTM emerged high on the academic rankings of the recent Research Excellence Framework (REF) 2014, following its designation as higher education institution earlier in 2013

In the overall ranking table LSTM took 24th place out of 128 institutions, according to the Times Higher Education (THE). In addition LSTM scored exceptionally well on the THE ranking of institutions on impact by taking place 6 out of 128.

It is the first time that LSTM appears on these rankings under its own name following the designation as higher education institution in July 2013. LSTM provided joint submissions with the University of Liverpool (clinical medicine) and University of Warwick (public health).

"...we are an institution that prides itself to be at the forefront of translating our research into policies and practices..."

'These high rankings are testament of the exceptional level of research conducted at LSTM', said LSTM Director, Professor Janet Hemingway. 'More importantly we are an institution that prides itself to be at the forefront of translating our research into policies and practices and to see the impact of our research recognised with such a high ranking is very welcome news indeed.'



LSTM Director
Professor Janet Hemingway

RESEARCH EXCELLENCE FRAMEWORK 2014: OVERALL RANKING OF INSTITUTIONS

2014 rank order by GPA	2008 rank order by GPA	Institution	Number of UoAs entered	Total number of FTE staff submitted	Quality profile of institutions %					GPA (0-4)	Research power	Rank on research power 2014	Rank on research power 2008
					4*	3*	2*	1*	U/C				
1	1	Institute of Cancer Research	2	103	50	42	8	0	1	3.40	351	87	85
2	6	Imperial College London	14	1,257	46	44	9	1	0	3.36	4,223	8	7
3	=4	London School of Economics and Political Science	14	532	50	37	11	1	1	3.35	1,783	28	29
4	=4	University of Oxford	31	2,409	48	39	11	1	0	3.34	8,047	2	1
5	2	University of Cambridge	32	2,088	47	40	12	1	0	3.33	6,952	3	2
6	=22	Cardiff University	27	738	40	47	11	1	0	3.27	2,412	18	15
7	=22	King's College London	27	1,369	40	45	13	2	0	3.23	4,422	6	11
=8	7	University College London	36	2,566	43	39	15	2	1	3.22	8,261	1	4
=8	9	University of Warwick	23	931	37	50	12	1	0	3.22	2,997	15	16
10	3	London School of Hygiene and Tropical Medicine, University of London	2	314	42	37	20	1	0	3.20	1,004	46	59
=11	12	University of Edinburgh	31	1,753	38	45	15	2	0	3.18	5,575	4	5
=11	=14	University of Bristol	31	1,138	36	47	15	1	0	3.18	3,618	9	10
=11	13	Queen Mary University of London	21	671	34	52	13	1	0	3.18	2,133	22	21
=14	=14	University of Sheffield	35	1,043	33	52	13	1	0	3.17	3,307	13	9
=14	10	University of York	24	643	35	48	15	1	0	3.17	2,038	23	22
=14	=20	University of Bath	13	462	32	55	11	1	0	3.17	1,463	35	35
17	8	University of Manchester	35	1,561	35	47	16	1	0	3.16	4,933	5	3
=18	=14	University of Southampton	26	1,113	33	51	14	1	0	3.15	3,506	11	14
=18	=20	Lancaster University	16	580	35	48	15	2	0	3.15	1,826	26	26
20	=14	Durham University	23	740	33	50	15	1	0	3.14	2,325	20	19
=21	=14	University of Leeds	33	1,149	32	50	15	2	0	3.13	3,597	10	8
=21	=14	University of St Andrews	20	519	32	50	16	1	0	3.13	1,623	32	32
23	=35	University of East Anglia	24	455	30	52	16	1	0	3.11	1,415	36	33
=24	=33	University of Glasgow	32	1,099	31	50	17	2	0	3.10	3,408	12	13
=24	n/a	Liverpool School of Tropical Medicine	2	35	31	49	19	1	0	3.10	109	114	n/a
=26	=24	University of Nottingham	32	1,404	32	49	17	2	1	3.09	4,340	7	6
=26	27	Newcastle University	28	888	31	48	19	1	0	3.09	2,744	16	17
=26	=24	Royal Holloway, University of London	17	378	30	51	17	1	0	3.09	1,168	40	39
=26	=52	Swansea University	18	370	31	49	18	2	0	3.09	1,142	42	36
30	=28	University of Exeter	25	736	29	53	16	2	0	3.08	2,267	21	25
=31	26	University of Birmingham	33	1,065	28	53	16	2	0	3.07			
=31	49	Cranfield University											
=33	=40												

With 6th place in the ranking of institutions on impact, LSTM places itself amongst some of the major research institutions in the UK, with an overall score of 60% in the outstanding category and 36% in the international excellence category.

In the joint submission in clinical medicine, LSTM scored 30% percent in the outstanding category and 50% in the international excellence category. In the joint submission in public health these percentages were 39% and 41% in the respective categories.

The work of LSTM staff across all departments was instrumental in this assessment and included LSTM staff

working with the Royal Liverpool University Hospital; the Wellcome Trust Liverpool Glasgow Centre for Global Health Research and the Malawi-Liverpool Wellcome Trust Clinical Research Programme. REF2014 also considered the publications from several high profile LSTM coordinated projects such as the A-WOL Consortium (Anti-*Wolbachia* to combat onchocerciasis and lymphatic filariasis); the Malaria in Pregnancy Consortium (MIP) and others in the clinical medicine submission.

The Research Excellence Framework (REF) is the system for assessing the quality of research in UK higher education institutions (HEI). To do this HEIs return a submission to the REF Steering Group and expert sub-panels, who undertake the

assessment and produce outcomes.

The findings are used by the UK's four higher education funding bodies, who use the outcomes to inform the selective allocation of their grant funding for research. In addition, the assessment provides accountability for public investment in research and produces evidence of the benefits of this investment. HEI's are then benchmarked and ranked.

The next assessment is planned for 2020.



RESEARCH EXCELLENCE FRAMEWORK 2014: RANKING OF INSTITUTIONS ON IMPACT

Rank	Institution	Quality profile of institutions %					GPA	Power
		4*	3*	2*	1*	U/C		
1	Institute of Cancer Research	87	13	0	0	0	3.87	399
2	London School of Hygiene and Tropical Medicine, University of London	79	17	5	0	0	3.74	1,173
3	Imperial College London	71	26	3	0	0	3.68	4,625
4	St George's, University of London	74	16	10	0	0	3.64	203
5	Cardiff University	65	31	4	0	0	3.61	2,663
6	Liverpool School of Tropical Medicine	60	36	4	0	0	3.57	126
7	University College London	63	29	7	1	0	3.54	9,082
8	King's College London	59	36	5	1	0	3.52	4,819
9	University of Oxford	62	30	7	1	1	3.51	8,457
=10	University of Bristol	58	34	6	1	0	3.50	3,982
=10	London School of Economics and Political Science	62	29	7	2	0	3.50	1,863
12	University of Cambridge	57	34	8	0	0	3.49	7,286
13	University of Leeds	54	39	5	1	0	3.47	3,987
=14	University of Edinburgh	56	34	8	1	0	3.46	6,066
=14	University of York	57	33	9	1	0	3.46	2,224
=16	University of Manchester	53	39	8	0	0	3.45	5,386
=16	University of Bath	51	45	2	2	0	3.45	1,592
18	University of Sheffield	50	45	5	0	1	3.43	3,578
19	Durham University	53	38	8	1	0	3.42	2,532
=20	University of Southampton	53	37	10	0	1	3.40	3,784
=20	Lancaster University	48	45	7	0	0	3.40	1,971
=22	Swansea University	52	38	7	2	1	3.39	1,253
=22	Heriot-Watt University	45	48	6	0	0	3.39	1,195
=24	University of Glasgow	50	40	8	1	1	3.38	3,716
=24	University of Dundee	55	31	12	1	1	3.38	1,338
26	Newcastle University	50	38	11	0	1	3.37	2,992
=27	University of Nottingham	49	40	9	0	1	3.36	4,719
=27	University of St Andrews	45	46	8	1	0	3.36	1,743
=27	University of Brighton	46	46	7	1	0	3.36	704
30	Queen Mary University of London	47	43	8	1	1	3.34	2,241
31	University of Strathclyde	47	39	12	1	0	3.33	1,858
32	University of Exeter	43	46	9	2	0	3.31	1,506
33	University of Hull	42	47	10	1	0	3.27	1,071

LSTM to award the 100th Mary Kingsley Medal



To honour those exceptional individuals and institutions whose work have significantly contributed to the fight against tropical and infectious diseases, LSTM awards the Mary Kingsley Medal.

Kevin Marsh, Professor of Tropical Medicine at the Centre for Tropical Medicine and Global Health, University of Oxford, is to become the 100th recipient of the medal. Professor Marsh has been instrumental in supporting the strengthening research capacity and scientific leadership, particularly in East Africa.

After graduating from LSTM's Diploma in Tropical Medicine and Hygiene, his research career took him to the Gambia working on malaria immunology. From there Professor Marsh joined the Institute of Molecular Medicine in Oxford, establishing with colleagues a series of research projects on the clinical epidemiology and immunology of malaria in Kenya. These have subsequently developed into the KEMRI Wellcome Trust Research Programme in Kenya, of which he became Director from its inception until August 2014. He went on to lead the development of a programme of experimental malaria challenge to support vaccine development and testing in Nairobi and became a Fellow of the UK's Academy of Medical Sciences. Professor

Marsh is currently a senior advisor at the African Academy of Sciences, Chair of the Oxford Tropical Network and Chair of the WHO Malaria Policy Advisory Committee which was recently established to advise the Director General of WHO on malaria.

The medal professor Marsh will receive in September 2015 is named after Mary Kingsley. She was a self-educated writer and traveller who set sail from Liverpool for West Africa on a boat of the Elder Dempster Line of shipping magnate Sir Alfred Jones whose annual £350 donation was instrumental in founding LSTM. Her resulting book 'Travels in West Africa', published in 1897, became an instant bestseller. Through her experiences she acquired a detailed knowledge of African society and politics and was regarded as an expert in government circles. She was a personal friend of LSTM founders Sir Alfred Lewis Jones and John Holt, with the latter acknowledging her role in 'getting us to think on the right lines and to work for the good of the African peoples.' Kingsley demanded a wider understanding of African social and legal systems and how they should be reflected in colonial commerce. It led to the formation of the Fair Commerce Party, The Congo Reform

Association and the African Society. It would be the ethos of equity, particularly in relation to improving health that would continue to drive the work of LSTM.

Mary Kingsley died in South Africa from suspected typhoid whilst tending to Boer Prisoners of War, aged just 38.

In honour of her achievements and passion, the Mary Kingsley Medal was instituted by John Holt in 1903 and was issued for the first time in 1905 to Sir Patrick Manson, by many seen as the founding father of the field of tropical medicine.



Professor Kevin Marsh

Selected past recipients of the Mary Kingsley Medal

1905: Sir Patrick Manson – Scottish physician, considered the founder of tropical medicine and a pioneer in the field of parasitology & **Robert Koch** – German physician and microbiologist. Founder of modern bacteriology and identified the causative agents of tuberculosis, cholera and anthrax.

1910: Anton Breinl – Austrian medical scientist whose ground-breaking work led to discoveries of drugs to cure sleeping sickness.

1938: Émile Brumpt – French parasitologist, credited with the discovery of the avian malarial parasite.

1949: Neil Hamilton Farley – Australian physician, instrumental in saving thousands of Allied Forces lives from Malaria during both World Wars.

1958: Rupert Montgomery Gordon – Holder of the Dutton and Walter Myers Chair of Entomology and Parasitology, giving 39 years' service to LSTM.

1973: Brian Gilmore Maegraith – Pioneer in tropical medicine. LSTM's longest serving Dean. (29 years)

1987: Adetokunbo O. Lucas – Nigerian doctor and former Professor of International Health at the Harvard School of Public Health.

1998: HRH The Princess Royal – Patron of LSTM since 1990.

2005: David Alan Warrell – Honorary Clinical Director at LSTM's Alistair Reid Venom Research Unit and Emeritus Professor of Tropical Medicine & Infectious Disease, at the University of Oxford.

A full list of recipients can be found on LSTM's website.



The photo of the statue is a close-up of a part of the Sir Alfred Jones Memorial on Liverpool's waterfront. The figure, with book and microscope looking towards the sea, represents Research and is assumed to be based on Mary Kingsley.



Ebola: supporting the response and rebuilding affected health systems

Research, teaching and in-country activity are inter-related at LSTM, providing a collective strength that makes LSTM staff leading experts in their respective fields.

In March 2014, in the early stages of the Ebola outbreak in West Africa, LSTM Honorary Lecturer and Research Training Fellow, Dr Tom Fletcher was seconded to WHO, due to the urgent requirement for infectious disease specialists. Before long he was sent to Conakry in Guinea, where he was involved in setting up isolation facilities and managing cases with the Ministry of Health and Médecins Sans Frontières (MSF). Within weeks teams of clinicians were able to significantly reduce fatality rates, from 70-90% to 40-50%. Returning to Geneva, Dr Fletcher coordinated the wider WHO clinical response and by June 2014 he was landing in Sierra Leone, where he quickly recommended that his former supervisor at LSTM, Senior Lecturer Dr Tim O'Dempsey lead the WHO clinical response at the government's main Ebola treatment centre in Kenema, eastern Sierra Leone.

Upon arrival, Dr O'Dempsey was immediately confronted with high caseloads and limited resources that

restricted the ability to deliver the required level of care. Medical and nursing staff numbers had been significantly reduced due to Ebola related deaths and fear of infection. Patients suffering from other illnesses were avoiding the hospital and community-level health services were completely over-stretched.

Given the global reach of LSTM teaching programmes, it was no surprise that while



Dr Tim O'Dempsey

at Kenema, Dr O'Dempsey encountered two of his former students from LSTM's Diploma in Tropical Medicine & Hygiene:

Dr Takuya Adachi and Dr Catherine Houlihan. He also visited the MSF Ebola treatment centre in Kailahun where he met Anya Wolz, a 2013 graduate of LSTM's Diploma in Humanitarian Assistance, who was coordinating the MSF response to the outbreak.

As the outbreak was reaching its peak, NHS doctors and nurses were volunteering to help with the UK's response. LSTM's travel health subsidiary, Well Travelled Clinics (WTC), coordinated the health screenings for 236 NHS staff who were seconded to Ebola treatment centres in Sierra Leone, via the DFID funded organisation UK-Med. WTC set-up a temporary clinic at the Army Medical Service Training Centre in Strensall, England, to conduct health screenings and ensure the rapid deployment of the volunteer medics. WTC staff also conducted the health screenings for many of those volunteers returning to the UK following their secondment.



Dr Derek Sloan in his PPE kit



working in Sierra Leone with the Ministry of Health and Sanitation (MoHS) to improve maternal and newborn health services through different training programmes including the Making it Happen (MiH) programme.

CMNH, in consultation with MoHS, reluctantly took the decision to suspend these training programmes in August 2014, though the team continued to work with MoHS to combat the epidemic and supply infection control supplies to the main maternity hospital. By March 2015 the situation had improved to the extent that CMNH was able to resume its work with the MoHS to rebuild the maternity services and measure how much Ebola has affected maternity services and medical staff across Sierra Leone.

The ongoing Ebola outbreak is unprecedented, both in size and complexity and requires a sustained regional and international response. It needs to ensure that health services become strong enough to meet the needs of vulnerable populations. Health systems development can only become effective if recommended evidence-based approaches are adopted by governments and organisations responsible for delivering pro-poor health and development goals.

The ReBUILD Consortium, led by LSTM, is working with countries affected by humanitarian emergencies, including Sierra Leone, to strengthen policy and practice related to health financing and staffing. While another LSTM led research consortium, REACHOUT, has been contributing to the UK All Party Parliamentary Group on Africa, guidance to those grappling with health systems strengthening in Ebola-affected countries.

Now more than ever, community-based healthcare provision has the greatest potential to improve health system functioning and health outcomes in Ebola-affected countries and beyond.

While clinicians were seconded to treatment centres throughout West Africa, questions were being asked in the UK concerning the risk of Ebola or other viral haemorrhagic fevers being imported into the UK. LSTM Senior Clinical Lecturer Dr Nick Beeching, provided advice to medical professionals in the UK on the importance of rapid diagnosis in patients presenting with fever or a history of fever who had returned from an endemic region within 21 days. A series of interviews by mainstream media served to reassure the public, explaining how the Ebola virus is contracted and the extensive procedures, employed by Public Health England and the NHS, to identify and treat suspected cases before and after arrival in the UK.

seminar of the DTM&H course on viral haemorrhagic fevers with an emphasis on Ebola. The seminar, attended by medical students, NHS staff and health systems researchers, discussed the WHO response and the coordination and logistical challenges and wider impact on health systems of the current outbreak.



More LSTM clinicians and technicians volunteered to support the UK response, including Senior Lecturer Dr Derek Sloan, who travelled to Sierra Leone, where he became UK-Med's Clinical Lead for the Quality Monitoring Team, providing oversight to Ebola treatment centres, including those in Kerrytown, Makeni, Port Loko and Moyamba. Sophie Dunkley, from LSTM's Vector Biology Department, volunteered to undertake a placement with MSF to work as an Epidemiologist, based at an Ebola Management Centre in Guinea's capital Conakry.

The impact of Ebola on fragile health systems goes beyond a direct effect on morbidity and mortality, it has also affected the overall level of access to healthcare. In a widely cited commentary LSTM's Senior Professorial Fellow David Molyneux pointed to the lessons Neglected Tropical Diseases (NTD) programmes could provide in dealing with the Ebola outbreak. With NTDs being markers, agents and drivers of poverty of over a billion of the poorest, their control and elimination approach are very dependent on community health workers to reach those most in need.

During the Ebola outbreak the number of women dying in childbirth in Sierra Leone increased to one in every seven. These complications were largely due to the lack of resources and maternity services available. LSTM's Centre for Maternal and Newborn Health (CMNH) has been

LSTM's support to Public Health England (PHE) and the Department of Health increased during the outbreak to assist the West African countries affected by the Ebola. Led by Professor Laloo, this advisory role includes helping to advise the Chief Medical Officer and DFID on the UK response in West Africa.



Professor David Laloo

During the April 2015 update of the Best Practice Series on Ebola virus infection, the BMJ invited Dr Beeching to be a co-author of the online platform providing an interactive reference for clinicians interested in all aspects of the presentation, diagnosis and management of people with Ebola virus disease.

The first Briton to become infected during the outbreak was volunteer nurse and former LSTM student Mr William Pooley. Having recovered from the virus, Mr Pooley returned to LSTM to speak at a special

Making blood transfusion safer



Through the work of the T-REC consortium, LSTM has been contributing to improving the supply of safe blood in sub-Saharan Africa. The consortium has focussed on increasing the research capacity of blood services in Africa so they can solve their specific problems themselves and generate evidence to influence policy makers.

Funded by the European Union, T-REC has been working in Ghana and Zimbabwe from 2011- 2015, with academic partners from the UK, Denmark and The Netherlands.

Leading the consortium was Imelda Bates, Professor in Clinical Tropical Haematology at LSTM. Through the consortium four T-REC funded African PhD students have researched priority topics in blood transfusion in Africa. The purpose is to train experts who can become leaders in transfusion research. The students were selected for their skills and enthusiasm to develop a long-term research career in blood transfusion in Ghana or Zimbabwe.

A component of T-REC is the Diploma in Project Design & Management (DPDM) where transfusion staff can undertake a one-year part-time course and a workplace research project. Courses in both Ghana and Zimbabwe have resulted in clinical and laboratory based projects involving the development of research skills, data gathering and analysis, report writing and how to present the findings of their research. The DPDM equips students with the skills and confidence to conduct their own research, essential to build the capacity of blood transfusion services in their home countries.

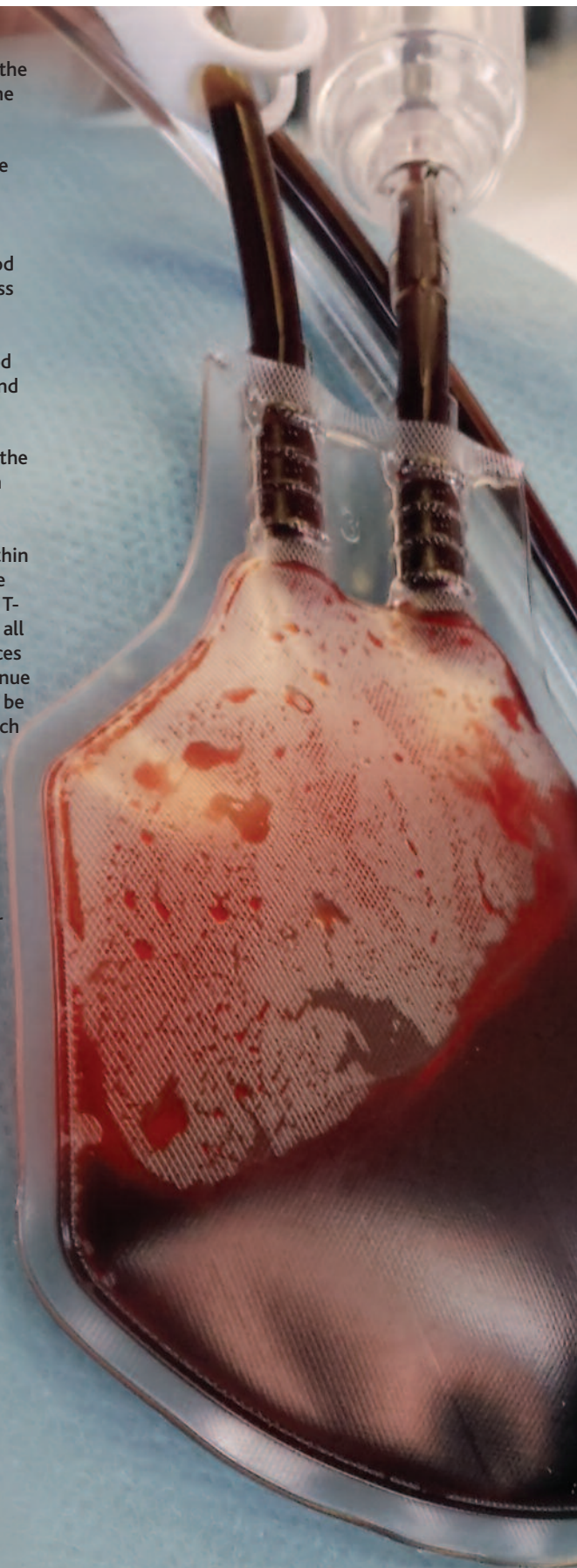
At the final consortium meeting held in South Africa during February 2015, delegates attended from across Europe, USA and many Anglophone and Francophone African countries. The gathering examined and assessed the research priorities for blood transfusion services in sub-Saharan Africa that had been established a previous meeting in Kenya in 2008. The 35 participants at the 2 day workshop included blood service directors, researchers, clinicians, funders, policy makers, commercial organisations

and NGOs. Under consideration were the challenges for financially sustaining the T-REC initiatives beyond 2015.

Key research priorities identified at the workshop were: the urgent need for investigating pragmatic and culturally sensitive approaches to blood donor recruitment; the persistent lack of good evidence on the costs and effectiveness of different blood service models; and the critical need for appropriate IT systems to manage and optimise blood stocks and blood donor recruitment and tracking.

Professor Bates was keen to highlight the importance of the work that had been carried out, saying: "T-REC has been successful in beginning the essential work of building research capacity within the blood transfusion sector. To ensure that there is an ability to scale-up the T-REC work to other countries, we must all now focus on finding alternative sources of funding that will enable us to continue to build those partnerships that could be crucial in further strengthening research capacity in sub-Saharan Africa."

It is hoped that T-REC activities will boost the number of individuals undertaking future research in transfusion topics in sub-Saharan Africa. Enhancing research capacity in these ways will contribute to better and safer blood supplies in Ghana, Zimbabwe and elsewhere in Africa.



LSTM's International Education Initiatives: Going Global

LSTM is currently at a transformational stage of its development, having obtained Higher Education Institution (HEI) status in 2013. This was followed in March 2015 by Institutional Accreditation from the University of Liverpool. Both these developments allow LSTM to further its global footprint, using innovative and dynamic initiatives, in the area of teaching and learning.

A key strategic element in this process will be the focus on partnership development, especially within the areas of capacity strengthening and education. To oversee this and further develop LSTM's international educational profile, LSTM has created the new role of Director of International Education and Knowledge Exchange Initiatives. Michael Lurie, previously International Director at the University of Salford, took up the role in January 2015.



“Our programmes resonate strongly across key regions globally where we provide programmes that are market-leading in terms of their development and impact”

International Education Initiatives will focus on 4 key areas:

- **Pipeline:** Setting up an institutional pipeline of collaborative activity and identifying opportunities for engagement with potential partners.
- **Infrastructure:** Establishing a framework for partnership development supported by policies and procedures to ensure compliance and governance of collaborative initiatives in line with all academic related approval processes.
- **Partnerships:** Building on existing relationships whilst engaging with key stakeholders in government, industry and the wider higher education community both in the UK and abroad as part of offering bespoke and innovative programmes.

- **Promotion:** Promoting the 'LSTM Story' through the eyes of our students and staff and conveying the impact of our activity across the globe.

Lurie continues: 'We are exploring further innovative delivery models for LSTM programmes on offer beyond our current provision in the UK. This extends to blended learning and teaching models with some regional areas of focused teaching and further geographical diversification. We are engaging with like-minded partners to seek mutually beneficial collaborative opportunities.'

Potential partners could vary from private or public academic institutions seeking opportunities to broaden their offering or government, industry and NGOs seeking to upskill their staff with highly specialised and bespoke training programmes.

Types of suggested partnership models:

- Bespoke arrangements for students at LSTM, from short courses to PhD level
- In-country delivery of LSTM programmes by LSTM staff or through joint delivery with a partner
- Blended learning delivery models with some concentrated teaching taking place in the UK
- Provision of LSTM programmes in a particular location to attract local or regional audiences
- Bespoke programmes for organisations and institutions.

For more information about LSTM's international education initiatives or to discuss a potential opportunity, please contact:

Mr Michael Lurie, Director of International Education and Knowledge Exchange Initiatives on
Michael.Lurie@lstmed.ac.uk

In brief...

BMJ award for maternal health training

LSTM's Centre for Maternal and Newborn Health's (CMNH) Emergency (Essential) Obstetric (EOC) Training has been declared the winner in the Women's Health Category of the 2015 BMJ awards.

The Women's Health Team was one of 13 awards presented at the ceremony at the Park Plaza Hotel, on 6 May 2015 and was the only international project featured in the category. A small team from CMNH was invited to present their work to the panel of judges in March this year along with the other five teams shortlisted. Dr Mary McCauley and Dr Charles Ameh led the presentation and Mary McCauley was at the ceremony to receive the award, along with Head of CMNH Professor Nynke van den Broek and volunteer Lucie Baylis.

The three-day skills and drills training package delivered in Liverpool and in 11 countries across sub-Saharan Africa and South Asia is helping to reduce the current rate of more than 536,000 women



worldwide who die each year from complications of pregnancy and childbirth.

Professor Van den Broek said: "We are absolutely delighted to have won such a prestigious award, especially given the quality of the other teams that were shortlisted. I have to thank Mary and the rest of the team for their dedication to the Making it Happen programme, which is designed to help save the lives of mothers and their babies in some of the world's poorest communities. The panel of judges were particularly impressed by CMNH's huge database of UK based doctors and midwives who go out to the countries we work in to teach the EOC course. They work with us as volunteers, and without

their time and commitment we would not be able to deliver this life saving training"

The BMJ Awards have been running for seven years and have seen a tremendous number of talented and dedicated teams recognised for their hard work. Winners and finalists have come from across the spectrum of healthcare, and have included GP surgeries, nurse practitioners, paramedic teams, surgeons, speciality doctors and research teams. Many of those who have won, or who have been shortlisted for, an award have found they are able to take their projects further, gain wider interest and improve the health and lives of more patients.



LSTM patron HRH Princess Royal opens Wolfson Building



Keeping pace with LSTM's expanding research activities requires additional facilities to house new and growing global health projects. The Wolfson Building is the latest addition to LSTM's campus and was opened by HRH Princess Royal in December 2014.

The opening event was attended by LSTM project partners, civic leaders and major supporters. LSTM Director, Professor Janet Hemingway said: "The opening of the Wolfson Building is yet another landmark in the history of LSTM. It will further increase our opportunities to bring the very best in research and scientific innovation out of the lab and directly to the people who need it most, enabling LSTM to continue its work to tackle some of the most challenging health problems in the world today."



The building will house some of LSTM's expanding research consortia, which are based at LSTM, including: the Innovative Vector Control Consortium, the Filariasis Programmes Support Unit, the Centre for Maternal and Newborn Health and the COUNTDOWN consortium as well as multiple meeting rooms



Malawi-Liverpool-Wellcome
Clinical Research Programme



Professor Stephen Gordon appointed director of the MLW Programme

LSTM's Professor Stephen Gordon has been appointed as the next Director of the Malawi-Liverpool-Wellcome Trust Clinical Research Programme (MLW).

Stephen Gordon arrived in Malawi in June 2015 has been touched by the warm welcome he has received from the staff in MLW. "The energy and ambition of the staff leading Departments and Research Groups is immediately evident" he said. "We look forward to working together to ensure that MLW is recognised as a premier health science research programme in public, academic and leadership circles. We share a vision with the College of Medicine, Wellcome Trust and our many research partners of research, training and clinical service to make a positive difference to health in Malawi."

Recent successes of the MLW programme include two WT Fellowships awarded to Kondwani Jambo and Augustine Choko, as well as the Ministerial visit to the launch of the "Care for Life" exhibition featured on the MLW website.

Professor Gordon was the recipient of one of the first Wellcome Trust Clinical Tropical Fellowships which were closely linked to the formal setting up of the MLW Programme in 1995. The programme is a partnership between the College of Medicine at the University of Malawi,

LSTM, the University of Liverpool and the programme's major funder, the Wellcome Trust. Attracting funding from both UK and international funding agencies, MLW has demonstrated outstanding leadership and excellence in malaria, HIV / TB, childhood anaemia, severe bacterial infection, mucosal immunology, vaccine research and household air pollution. More recently, it has added themes of Social Science, Child Survival, Pharmacology and Non-Communicable Diseases research to its portfolio. Malawian and international scientists work together to conduct high quality research relevant to sub-Saharan Africa and to develop a greater scientific capacity for Malawi and the region.

His appointment follows the departure Professor Robert Heyderman who left MLW after eight years as Director. "It is a fantastic opportunity to take up the reigns after Rob's departure," Professor Gordon continued, "MLW has really benefited from his tenure, with secure systems and robust science now underpinning a large organisation. My hope is that I can continue building on the existing MLW partnerships and continuing addressing the high disease burden in the region and its associated health problems."

Professor Jaffar new Head of International Public Health Department

Professor Shabbar Jaffar has been announced as Head of LSTM's Department of International Public Health as of 1st July 2015. He succeeds Professor Imelda Bates who has been acting Head of the department since 2012. She will now be focussing on the expansion of LSTM's Capacity Research Unit.

A Professor of Epidemiology, Professor Jaffar comes to LSTM with over 20 years' experience in various epidemiological studies and randomized trials in Africa. Most recently he was Director of the Global Non-Communicable Diseases Centre at the London School of Hygiene and Tropical Medicine. His main interests

include HIV, HIV/TB, health services/optimizations research and cryptococcal meningitis.

LSTM's Professor David Laloo, Dean of Clinical Sciences and International Public Health said: "I am delighted to announce Professor Jaffar's appointment and we look forward to working with him."



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