

125
YEARS
1898 - 2023

LSTM
LIVERPOOL SCHOOL
OF TROPICAL MEDICINE



2021 - 2022

Annual Report

Public benefit statement

The charity trustees of Liverpool School of Tropical Medicine are its Board of Trustees who have due regard to the Charity Commission's guidance on public benefit, and particularly to its supplementary public benefit guidance on purpose, which primarily for LSTM, is the advancement of education and research, and advancing health/saving lives.

Although primarily concerned with teaching, learning, research, knowledge transfer, and the development of the potential of its students, both for their own sake and to serve the needs of society and the economy, LSTM also plays a major role in shaping a democratic, sustainable, and inclusive society by striving for its research to impact policies and implementing practices.

These distinct purposes inevitably impact on its governance structures and practices, including in the need to engage both staff and students in the governance of their institution and a clear recognition of the importance of public benefit.

Public benefit reporting is also an increasingly important aspect of LSTM's transparency and accountability, and this helps the staff, students, and the wider public appreciate what activities LSTM delivers in return for both public funding and tax exemptions. A representative record of those activities is published throughout this Annual Report and Financial Statements.

Contents:

SECTION

01

Page 4. Chair's foreword

Page 5. Director's foreword

Page 6-7. Our governance

Page 8-9. Our people and culture

SECTION

04

Page 26-31. Research

Page 32-35. Research consortia

SECTION

02

Page 10-15. Impact, innovation, engagement

SECTION

05

Page 36. Postcard from the field

Page 37. Early Career Researchers (ECRs)

Page 38-39. Awards and honours

Page 40-41. Malawi Liverpool Wellcome Trust (MLW)

SECTION

03

Page 16-19. Our partnerships

Page 20-25. Faculty of education

SECTION

06

Page 42-47. LSTM group

Page 48-49. Financial highlights

Page 50-53. Philanthropy, fundraising, scholarships

Page 54. Find your future

Page 55. Student experiences

Alternative formats:

If you would like a copy of this document in an alternative format, please call **0151 705 3100** or email **info@lstmed.ac.uk**
This document has been produced in Plain English.



Chair's foreword

Jim McKenna, Chair

Liverpool School of Tropical Medicine continues to be as relevant today in addressing the issues of global health as it has been since its beginnings nearly 125 years ago. As Chair, it is my duty to oversee this unique and world leading institution ensuring that it is fit for its mission of improving the health and lives of disadvantaged individuals and communities across the world.

Our impact has been recognised in the results of REF 2021, LSTM's first solo submission, which saw us ranked second nationally for impact. I would like to thank all at LSTM for their commitment and congratulate them on this excellent result.

We are in the final year of LSTM's current strategic period and our work as trustees, along with the senior leadership team, has been to develop and enhance our strategy. We all recognise the need to change and reshape LSTM for the future and I would like to thank David and his team for their dedication in delivering on the previous strategic aims.

The new strategy facilitates an expansion of our teaching and research portfolios, reflecting the changing world and the myriad of challenges in global health today. It will position us to attract and retain the very best research and professional services staff and equip our students with all they will need to become the global health leaders of the future. Our investment in the new CREATOR building in Malawi continues, and in Liverpool we have completed our state-of-the-art teaching facilities in Pembroke House. These investments will contribute to ensuring that we can deliver our strategy during the next period.

While welcoming new board members who are able to help us in our mission and carry equity at our core, I would also like to thank those trustees who have left this year for their contributions to LSTM. Trustees play an important role in the governance of LSTM and their contribution is critical, though often unseen. It has been a pleasure to work alongside such a dedicated team, and I thank them all for their support

2023 is LSTM's anniversary year and we have a wide range of events celebrating 125 years of global health impact. Our ambitious 125 campaign will raise money to invest in brilliant people and partnerships, scholarships and fellowships, as well as flagship developments.

I look forward to what the year has to offer and working with colleagues to help LSTM deliver better health for those most in need for the next 125 years.

125
years of global health impact.



Director's foreword

Professor David Lalloo, Director



One of the highlights this year was LSTM's internationally excellent ranking for research. This underpins our mission to translate excellent science into meaningful health benefits for people all over the world.

It has been another busy year for LSTM. The work that we carry out overseas is having a positive impact on our local and regional communities. Our new strategy will set us on a path to continued success, shaping LSTM into a flexible and responsive institution, able to deal with whatever challenges that the next 125 years send our way.



To find out more, play my video here.

A truly global research and education-led institution:

591 LSTM staff

350 + Global partners

262 Education programmes

25 Research consortia

Our governance

Our governance is exercised through the Board of Trustees and its committees, which are accountable to the Members of LSTM, who in turn answer to the Charity Commission. Our Board is made up of two LSTM staff members (including the Director) and independent trustees from the fields of business, law, accountancy, politics, higher education, and the public sector with local and international experience.



Officers 2021/22

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SECRETARY & CLERK

Robert Einion Holland FCCA MBA

Click here to view our organisational chart:

www.lstmed.ac.uk/about/organisational-structure



Our people and culture

Over 500 people work for LSTM. As we enter our 125th year, we are writing our next chapter of history. Our new vision, mission, and values (launched April 2022) will support the development of our culture. Our values with examples of how we put them into practice are provided below:

Integrity

- Research integrity training programme for all staff
- Updated promotion criteria to recognise impact including through traditional academic outputs of publications and grants, and knowledge exchange activities that promote use and dissemination of research.

Inclusivity

- Engaged with colleagues to develop Race Equity action plan
- Athena Swan Silver award.



Partnership

- Established principles for equitable partnership with international partners
- Working with international colleagues to promote equitable authorship and address 'parachute research', where researchers, typically from high income countries, conduct research in low- or middle-income countries without adequate recognition of the contribution of authors in these countries. Shortlisted for the Times Higher Education EDI award.

Equity, diversity, and inclusion

Our attention is focused on equity rather than equality. Through our ED&I efforts we're seeking to address barriers to inclusion and progression to create an inclusive learning culture that values diversity.

Following independent Race Reviews at all levels, we've developed our first Race Equity Action Plan. With leadership accountable for delivery, this plan will guide our journey to tackle race inequity through processes, practices, and culture. To support this, we've invested in additional staffing, secured external expertise and training, and will work towards Advance HE's Race Equity Charter (REC) – becoming an actively anti-racist organisation.

In 2022, we celebrated achieving Athena SWAN Silver, in recognition of LSTM's impact and progress on gender equality. We will continue to build on this important work.

The BAME and LGBTQ+ staff networks are valued and integral parts of our ED&I eco-system. They help to shape policy, improve processes, and develop understanding of ED&I issues, progressing and contributing to an inclusive culture.

Learning and development

- 178 live sessions delivered to 2,366 learners
- 30 people studied professional qualifications with apprenticeship levy support
- 'Ignite' mentoring scheme launched in May 2022 with 17 mentoring relationships
- Our Learning and development programme includes professional and research development, leadership and management, and diversity and inclusion topics. This is supported by a growing e-learning programme, accessible to colleagues globally. We have introduced new development activities including leadership development, programme management and tackling microaggressions and unconscious bias.

Progression

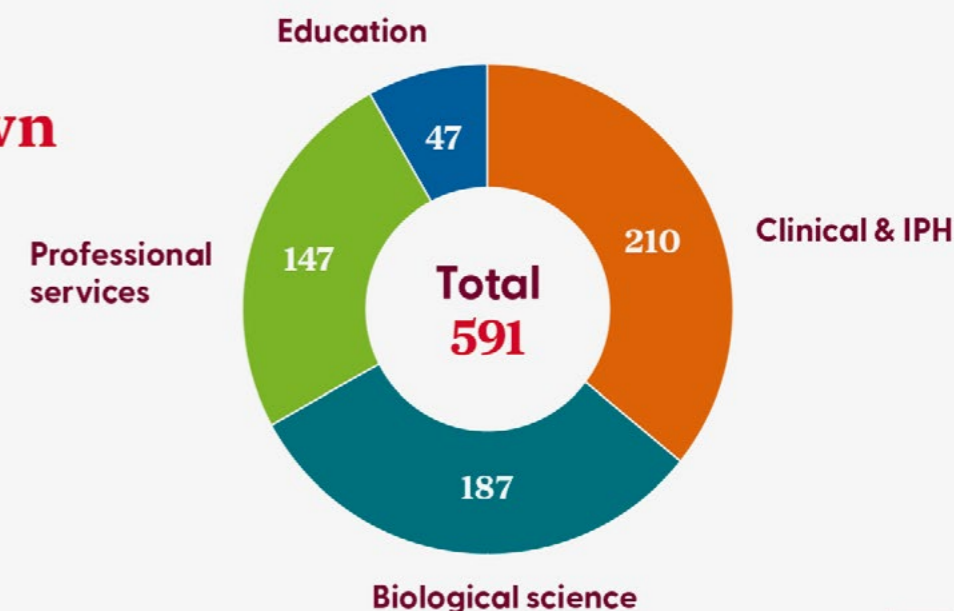
16 colleagues are currently being supported through our high potential academic career track. The following colleagues successfully completed the programme this year:

- Dr Eve Worrall, Senior Lecturer, Health Economics
- Dr Tony Nolan, Senior Lecturer, Vector Biology
- Dr Mark Henrion, Senior Biostatistician, MLW Clinical Research Programme

Congratulations to our promoted colleagues:

- Dr Nara Tagiyeva-Milne, Senior Lecturer, Education
- Dr Alvaro Acosta Serrano, Reader
- Dr Webster Mavhu, Reader
- Dr Shevin Jacob, Reader
- Dr Joanna Raven, Reader

Staff breakdown across depts:



Impact, innovation, engagement

The international response to COVID-19 demonstrated what can be achieved when academia, industry, governments, and the public come together for global good. LSTM played a pivotal role in that response, working with partners on innovations ranging from vaccinations to diagnostic validations. Such collaborations are part of a long tradition, where our research has been used to address global health challenges. From the basic science in our labs through to interventions on the ground and policy change, everything we do is designed to have real-world impact.

Knowledge generation and its practical application do not happen in isolation. We work in partnership with businesses, governments, ministries of health, other research institutions, entrepreneurs, and the public. By working collaboratively, sharing our skills and knowledge, and in turn learning from others, we ensure that our research outputs are relevant, in demand and up to date.

This section outlines some of our recent knowledge exchange projects, demonstrating ambition, imagination, and a commitment to evidence-based, positive change.

Health systems and workforce strengthening

Not all impactful research looks at disease. Our Health Systems and Workforce Strengthening Unit has been engaged in several projects which seek to strengthen health systems and make best use of available human resources.

While efforts are in place to address the global shortage of health workers, improving health workforce performance has been neglected. PERFORM2Scale sought to address this problem by scaling-up a previously successful management strengthening intervention (MSI) in three devolved contexts - Ghana, Malawi, and Uganda.

In Uganda, the team successfully integrated the MSI into the new nationwide Quality Improvement Framework which will have huge impact on the quality of health services throughout Uganda. The team learned an enormous amount about facilitators and obstacles to scale-up which can be applied in other contexts.

Health system resilience in fragile settings

We are the lead partner in the ReBUILD for Resilience consortium. Funded by the UK government, ReBUILD for Resilience examines health system resilience in fragile settings experiencing violence, conflict, pandemics, and other shocks.

It is an international research consortium that aims to produce high-quality, practical, multidisciplinary, and scalable research which can be used to improve the health and lives of many millions of people.

Our staff are working with partners on the ground in challenging and fragile settings, including Lebanon, Myanmar, Nepal, Sierra Leone, Syria, and Yemen. HERD International (a national research and development organisation) is our partner in Nepal. Through this partnership, HERD is enhancing strategic engagement with policy practitioners to help generate contextually appropriate evidence for resilient, equitable health systems. In Lebanon, staff are working with female Syrian refugees who are also close-to community health care providers to establish a support group.



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An example of the team's innovative approach includes participatory action research to support and strengthen the resilience of the local health system in Kapilvastu municipality in Nepal.



iiCON consortium

A perfect example of how we are working to spin out our research for the benefit of wider society. Led by LSTM, iiCON brings together partners Unilever, Liverpool University Hospitals Foundation Trust, the University of Liverpool, Evotec and Infex Therapeutics to work alongside industry and SMEs. iiCON's ambitious research and development programme accelerates development of new products and innovations, focusing on combating the growing global threat of infectious diseases.

Small and medium-sized enterprises

SMEs are often agile, innovative, and bring new perspectives to drug discovery, making them crucial in the development of new therapeutics. iiCON's 'hits to leads platform' gives SMEs access to world-class support, helping them move innovations through the early-stage drug discovery pathway. The platform accelerates the development of novel antibiotics to combat deadly resistant infections and World Health Organization (WHO) critical-priority pathogens.

SMEs can access research and development funding through iiCON, for example, the MAST Group, who accessed LSTM expertise for specialist testing and analysis of its COVID-19 diagnostic products.



Industry success

In under two years, iiCON has enabled 12 consumer products to reach market, secured £200 million in funding for infection control innovation, and supported the creation of 176 jobs in the Liverpool City Region. Current partners include CN Bio, Unilever, Mologic, Sanofi, Pfizer, Newcells Biotech and Sentinel.

Breakthrough lung therapy

iiCON partner, Inflex Therapeutics, has developed a new therapy to help the body tackle bronchiectasis – a serious, long-term lung condition. The pathogen which causes the condition is hard to treat and is recognised by the WHO as a critical threat to human health. The Inflex therapy is entering clinical trials at The Royal Liverpool University Hospital and will focus on RESP-X, an anti-virulence therapy to overcome the infection. RESP-X deactivates a mechanism

that stops the immune system working against the infection and is particularly useful for those suffering from non-cystic fibrosis bronchiectasis – over 300,000 people in the UK alone.

DRUM project

Antimicrobial resistance (AMR) – when organisms that cause infection evolve ways to survive antibiotic treatments – is a major challenge facing the world. Our industry partners working in drug production benefit from iiCON's disease mapping and modelling capacity, informed by global research learnings from partners. DRUM (Drivers of Disease Resistance in Uganda and Malawi), explores how water, sanitation and hygiene practices interact with antimicrobial use and human health to facilitate resistant bacteria in communities.

Pembroke House

Our new multi-million pound building, Pembroke House, builds on Liverpool's reputation as a world leader in infectious disease research and innovation. In the heart of the city's Knowledge Quarter, it features state-of-the-art immersive facilities and experiential technologies, providing a unique space for collaborating, training, earning, and working with iiCON's partners.

Vaccine equity in Liverpool

The Liverpool Vaccine Equity project took LSTM learning in the Global South and used it to address low vaccine uptake rates in some of the city's most deprived areas. That same knowledge, and the local skills and connections fostered, will be used to tackle other local health problems. LSTM and iiCON were central to the success of the initiative, supported by Liverpool City Council, Central Liverpool Primary Care Network, Hitch Marketing, and Capacity Development International, and are keen to roll out further community-based interventions.

Advancing the management of multi-drug resistant tuberculosis

LSTM has contributed to WHO guidelines on the management of MDR-TB including methods of diagnosis, shortening of treatment duration and mode of delivery. It has benefitted hundreds of thousands of people in the 82 countries that have adopted the guidelines. It has also resulted in significant \$multimillion cost savings for those countries' health systems. Some countries – including Benin, Democratic Republic of Congo, Pakistan, and Nigeria – which have rolled out a primarily home-based, fully oral MDR-TB treatment using a WHO-supported operational research package to which LSTM contributed, are expected to see further savings for patients and health systems.



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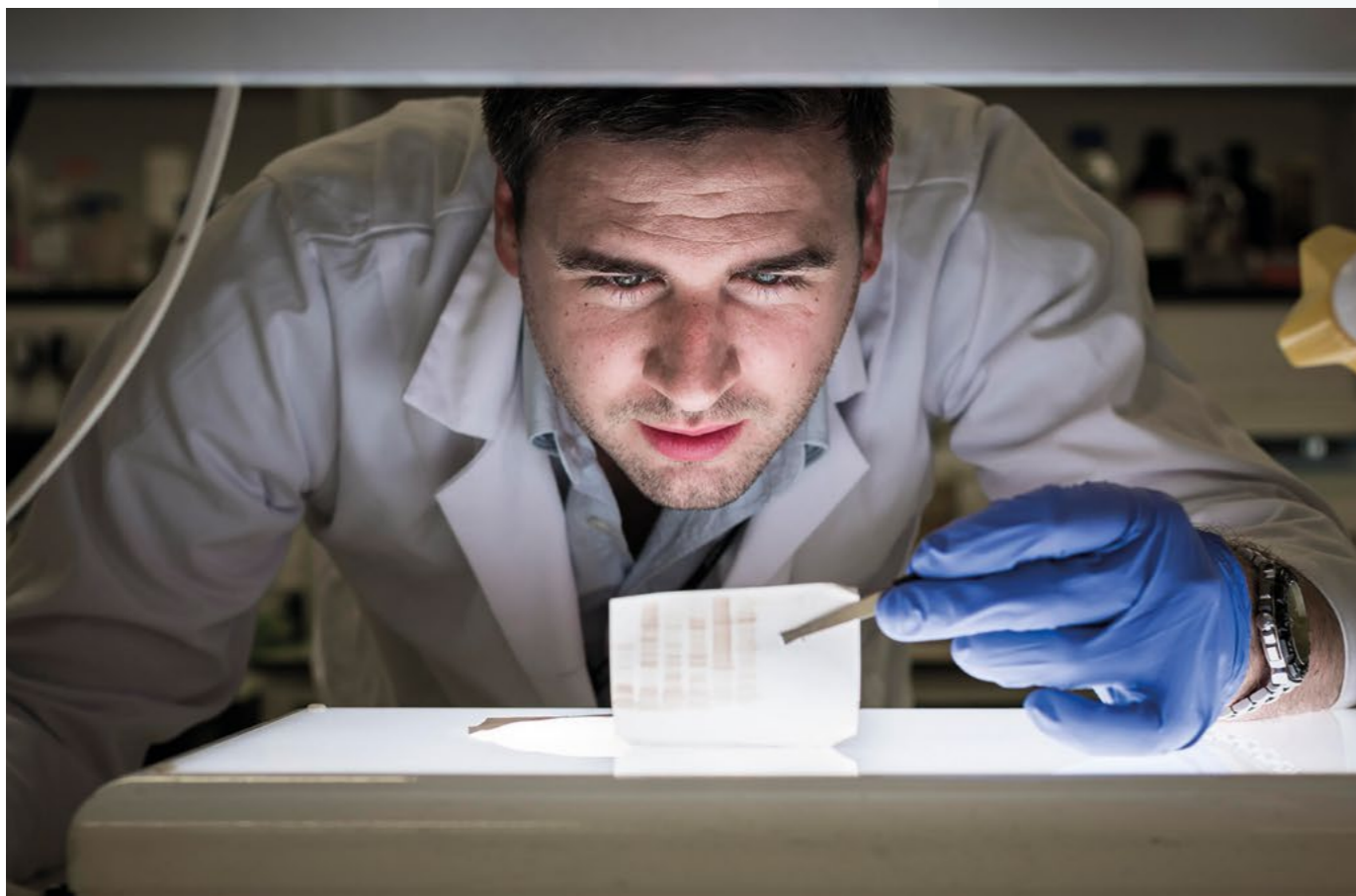
Multi-drug resistant tuberculosis (MDR-TB) is a growing problem, especially among people with TB in low- and middle-income countries (LMICs).



Insecticide-treated nets (ITNs) are the main malaria prevention tool in Africa, but their efficacy is being impacted by mosquitos' resistance to the chemical used – pyrethroid. Our research which pinpointed the underlying molecular mechanisms of resistance has led to new classes of ITNs that can control resistant mosquito populations. By 2020, 13 of the 23 malaria-endemic countries in Africa included these new classes of nets in their national distribution campaigns, protecting more than 35 million people.

A large-scale trial in Uganda found that use of this new net class reduced malaria prevalence by 27%.

LSTM's research and advocacy led to the founding of the Innovative Vector Control Consortium (IVCC) Product Development Partnership. IVCC works with partners from industry, the public sector and academia to develop novel and improved public health insecticides and formulations to combat the problem of insecticide resistance and prevent disease transmission.



Reducing the disease burden of tropical snakebite

LSTM is heavily invested in tackling the impact of snakebite - a neglected tropical disease (NTD) with high mortality and high morbidity rates. Our research and advocacy into the burden and consequences of the problem led to increased interest from funders and policymakers, directly resulting in the WHO formally classifying snakebite as a priority NTD in 2017. LSTM scientists also co-wrote the WHO strategy which aims to halve global snakebite mortality and morbidity by 2030.

Securing the quality of antivenoms is another focus, our researchers have developed a 'prequalification' programme for snakebite therapeutics in Africa. This has huge positives for people who have been envenomed and has resulted in commercial impact for antivenom manufacturers.

The Centre for Snakebite Research and Interventions at LSTM is developing the first oral therapeutic drug to provide a pre-hospital treatment for snakebite victims. This new, easily accessible drug is based on small molecule 'toxin inhibitors' and slows down the venom's effects. Funding from the Wellcome Trust, 'Cures Within Reach' and the Bloomsbury SET (facilitated by iiCON) supported preclinical and clinical research into the treatment.

“**Our lab-based work has had direct impact on the ground. LSTM staff designed and implemented a model intervention programme, ensuring the delivery of significantly improved snakebite antivenoms to countries in West Africa, resulting in new, cost-effective, life-saving treatments.**”

Global scale-up of HIV self-testing

We are working with the WHO in the field of HIV testing, leading research which has shaped its guidelines. About 20 million people do not know that they are living with HIV-infection. If the disease is to be treated and eradicated, it is essential that infected people know their HIV status so that they can make informed decisions about their health needs.

LSTM developed and rigorously evaluated delivery models in Malawi and Zimbabwe that catalysed a supportive regulatory, policy and funding environment. A total of 88 countries now have HIV self-testing policies, and rapid scale-up has increased testing coverage among vulnerable, underserved and key populations worldwide. STAR has provided millions of HIV self-tests across Southern Africa and catalysed procurement of millions more from major funders. Four manufacturers now have WHO pre-qualified HIV self-test kits on the market.

The knowledge and skills generated in Africa have been applied in the UK. 'Uptake of HIV testing within minority ethnic communities in Liverpool' aimed to reach untested people and to address health inequalities in underserved groups. By working with the Liverpool Community Pharmacy Committee and local businesses, the study successfully increased testing uptake and empowered people with knowledge of their HIV status.

“**We are key partners in the Self-Testing in Africa (STAR) initiative which aims to stimulate the market for HIV self-test kits in Southern Africa.**”



In 2022 LSTM was ranked second in the country in the REF (Research Excellence Framework) for the outstanding impact of our work. Similarly, we scored very highly for research management, working with public, and the third sector, under the new Knowledge Exchange Framework 2 (KEF 2) performance indicators.

Our partnerships

For almost 125 years, we have been working with partners across the globe to deliver outstanding research. We work better together with like-minded partners.

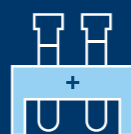


KEMRI/CDC

Our highly successful collaboration with the Kenya Medical Research Institute (KEMRI) and the US Centers for Disease Control and Prevention (CDC) continues. Research includes approx. 15 projects on malaria, supported by Professors Feiko ter Kuile and Martin Donnelly, and sexual and adolescent health, supported by Professor Penelope Phillips-Howard.

Our research portfolio has expanded to include maternal and neonatal health trials to enhance antenatal services and uptake, supported by Professor Miriam Taegtmeier, and trials with pro/symbiotic supplementation in neonates, supported by Professor Stephen Allen.

The collaboration has grown rapidly, employing over 400 staff, including several post-docs and 6 LSTM-registered PhD students. This year, the capacity to support more students was boosted with the arrival of 3 LSTM-UK employed staff based in Kisumu, Dr Sarah Staedke, Professor of Malaria and Global Health, Dr Eva Heinz, a senior lecturer in disease genomics with a special interest in antimicrobial resistance and Dr Alice Kamau, a medical statistician from the Global Health Trials Unit.



Liverpool-Guangdong drug discovery consortium

The consortium, in collaboration with the University of Liverpool and academic institutes in Guangdong, China, focussed on the development of new drug therapies for the treatment of tuberculosis, malaria, neglected tropical diseases and other infectious diseases.

The collaboration has been extended to include the South China University of Technology (SCUT), International Healthcare Innovation Institute (Jiangmen) and Wuyi University. The group has developed several UK/China co-funded initiatives in the critical area of AMR.



Tropical infectious disease consortium

Our Centre for Drugs & Diagnostics (CDD) manages the Medical Research Council (MRC) Impact Acceleration Account (IAA), which brings together the UK's expertise in tropical infectious diseases into this single translational partnership.

Partners are LSTM, the London School of Hygiene and Tropical Medicine (LSHTM), the University of Oxford, UK Health Security Agency, the Science and Technology Facilities



Knowledge, Evidence and Learning for Development

The programme supports the use of learning and evidence to improve the impact of development policy and programmes. Funded by UK aid, it is designed to assist UK government departments and partners to be innovative and responsive to rapidly changing and complex development challenges. LSTM is a partner in this consortium led by the Institute of Development Studies (IDS) in Brighton, UK.



Malawi Liverpool Wellcome Trust (MLW)

Longstanding partnership between the College of Medicine at Kamuzu University of Health Sciences (KUHEs), LSTM, and the University of Liverpool (UoL), core-funded by the Wellcome Trust (see page 40).

[Click here to find out more](https://www.mlw.mw/)
<https://www.mlw.mw/>



AGILE

With a mission to shorten the time to identify safe, effective, and affordable treatments for COVID-19, AGILE is a collaboration between UoL, LSTM, the Southampton Clinical Trials Unit, and other partners.

The team includes Infectious Diseases clinicians, clinical and pre-clinical pharmacologists, clinical trials specialists, and statisticians, each bringing a unique set of skills and expertise.



CeSHHAR Zimbabwe

The Centre for Sexual Health and HIV/AIDS Research Zimbabwe (CeSHHAR), was founded in 2012 in response to the need to expand research to accelerate and optimise public health policy and impact in Southern Africa. Over the past decade CeSHHAR has expanded its research footprint and capacity strengthening activities, employing 260 people across Zimbabwe.



The Global alliance to Eliminate Lymphatic Filariasis (GAELF)

We have hosted GAELF since 2004. It supports the WHO's Global Programme to Eliminate Lymphatic Filariasis (GPELF) primarily by advocacy and communication.





Lancaster University

We established the MRC-funded Translational and Quantitative Skills Doctoral Training Partnership (DTP) in Global Health with Lancaster University in 2016. The programme trains the next generation of leading ‘bridge’ scientists working on translational research in Global Health. The partnership has attracted further support from the RCUK National Productivity Investment Fund.



University of Liverpool

Our academic collaboration with UoL continues to thrive, delivering education and research projects such as MLW, LHP, and LIV-TB.



HCRI & MSF

Together with the Humanitarian & Conflict Response Institute (HCRI) of the University of Manchester and Médecins Sans Frontières (MSF), the Leadership Education Academic Partnership (LEAP) integrates world-class higher education into the career paths of humanitarians, with the intention of strengthening leadership within the sector.



Liverpool Knowledge Quarter

KQ Liverpool is a 450-acre innovation district which spans more than half of Liverpool City Centre, and has overseen £1bn of new developments, with a further £1bn in the pipeline. LSTM is one of KQ Liverpool’s partners, in addition to UoL, Liverpool John Moores University, Liverpool University Hospitals NHS Foundation Trust, Liverpool City Council and Bruntwood Sci-Tech.



LIV-TB

Our collaboration with UoL is co-led by Nadia Kontogianni and Tom Wingfield. LIV-TB features monthly seminars by members and visiting researchers, open to all. Membership has grown to over 160 members since 2019, with speakers and attendees from all over the globe. LIV-TB has been heavily involved with the UK Academics and Professionals to End TB group and contributed to the national and international agenda on TB.



NHS

We work closely with NHS Trusts including the Royal Liverpool, and Aintree sites of the Liverpool University Hospitals NHS Foundation Trust, and Alder Hey Children’s Hospital. Our clinical links with the NHS enhance research that serves our mission.



Liverpool FC Foundation

We have maintained our partnership with the LFC Foundation since the Health Goals Malawi project and are planning to scale up, bringing it to Liverpool communities.



NaTHNac

The National Travel Health Network and Centre, commissioned by the UK Health Security Agency, aims to protect the health of British travellers. It seeks to improve travel health advice given by health professionals, provide reliable information to the public, health professionals, travel industry, and national government.



UK Health and Security Agency

Our clinicians provide specialist advice to the UKHSA, the govt body responsible for protecting the nation’s health and wellbeing and reducing health inequalities.



Everton Football Club

We signed a 3-year partnership in Nov 2020 with Everton FC. This partnership combines EFC’s community reach with our scientific expertise and will be used for community outreach and engagement initiatives, delivered by Everton and Everton in the Community, as part of its Blue Family campaign.

Activities include visits to participating primary schools highlighting how to respond to health needs as well as the benefits of pursuing a scientific career. These visits will act as the precursor of major collaborations between us and Everton.



Liverpool Health Partners

We’re a founding member of Liverpool Health Partners (LHP), the academic health science system for Cheshire and Merseyside. LHP is a network of four HEIs and eight NHS Trusts, working together to develop ground-breaking research strategically developed to address the diverse and complex needs found across Cheshire & Merseyside.



The Pandemic Institute

We’re a founding partner of The Pandemic Institute, a partnership of academic & health organisations plus local/regional government in Liverpool, all focused on preparing the world for future pandemics. These partners have proven capability for pandemic research, innovation, and impact. With headquarters in Liverpool, the Institute has a unique local and global ecosystem, unifying on the ground intelligence to generate scientific excellence with societal impact for all. The Institute will provide comprehensive end-to-end capability across the pandemic lifecycle, a game changer that will allow the world to respond at pace in the race to prepare for the next pandemic.

Faculty of education



ISABEL LUCAS

isabel.lucas@lstm.ac.uk

Dean and Professor of Education

Welcome

What a year it has been! 2021/22 saw us meeting the challenge of global disruptions head on, while maintaining our focus on serving our students to the highest standards. In the last year, many of our students studied off campus in their own countries, in part due to the development of our expertise in distance and hybrid delivery, but also due to the agile response of our support systems, allowing us to offer greater flexibility to our programmes. This sustainable, flexible teaching method will continue as a priority to support growth in taught and research degrees.



We are preparing to move significant teaching activity into the £multi-million immersive technology suite, Pembroke House.

Designed as a future-proofed, flexible, and innovative teaching and training space, shared with the iiCON team. Pembroke House is integral to further development of our simulation-led learning, teaching, and assessment approach. The curriculum is delivered using real-world situations that enable students to immerse themselves in the sights and sounds of otherwise inaccessible experiences and to interact with that environment. In doing so, students are developing highly sought-after skills of dealing with complexity, uncertainty, pressure and making decisions in the context of ethical or moral challenges.

Finally, I want to highlight our thriving PhD programmes and their dedicated support team where continued success has translated into competitive, external awards for several prestigious studentships related to LSTM's research priorities, 100% overall satisfaction, and 100% pass rate. This is an excellent foundation to create a wider suite of Doctoral-level programmes, widening access to professionals with an interest in work-based research.

If you feel inspired to be a part of our future, I would love to hear from you.

Our year in numbers:

42

Advance Higher Education Fellows*

£4,331,000

in capital investment in education

100%

pass rate for Postgraduate Research Students

98.3%

pass rate for completing Masters and Professional Diploma Students

43%

of taught student completions at Distinction level

100%

Overall student satisfaction across Postgraduate Research Students**

*Across LSTM, accumulated total

**Internal survey based on PRES

Pembroke House – innovative immersive teaching

Pembroke House has been transformed into a new digital collaborative centre where education, innovation and research will come together. Led by LSTM in partnership with iiCON, the facility comprises three large teaching rooms and substantial social spaces designed to promote networking.

Drawing on our experiences teaching students in hybrid modes, cutting-edge video and audio technologies have been incorporated to provide learners with a more integrated, inclusive, and engaged experience, to further enhance interactions with our Liverpool-based and overseas students and partners.

Versatility has been at the heart of the design, with flexible furniture and digital collaboration boards allowing multiple room layouts to optimise use of space. The ground floor teaching room includes a pop-out immersive suite, to better create a sense of real-world learning. This centre will further enhance LSTM's reputation as a world-leading provider of specialist professional education.

To see inside Pembroke House, play our video here.





Introducing the Faculty of Education Senior Management Team...

Sarah O'Keeffe Academic Registrar	Martyn Stewart Director of Postgraduate Taught	Christos Petichakis Senior Lecturer in HE, Academic Development and Pedagogic Practice	Richard Madden Postgraduate Research Support Team Manager	Dan Robinson Manager, Technology Enhanced Learning Unit
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“**We want students to leave us as critical thinkers, agile workers, team players, confident in solving complex and changing problems, and developing their resilience in dealing with challenging professional contexts. Course leads have redesigned our new MSc programmes to focus on professional skills and competency development.**”

Education for impact

The new Masters in Public Health is mapped to public health competencies specified by key international organisations, and a core scientific and professional skills module focusing on computing, writing, communication,

and project leadership. A programme embeds scenario-based learning, providing real-world contexts, exploiting new technologies in Pembroke House. Our MSc dissertation formats are broadened to allow students to opt for more applied investigations, e.g. quality improvement and evaluation. A new portfolio of short professional courses is in planning.

Sustainable teaching

The ‘Education for Sustainability’ group was formed to ensure we contribute to the School-wide approach to sustainability. Members include colleagues and students across departments and courses to ensure diverse views and impact.

Tackling Climate Change and Injustice are embedded in the curriculum through our ‘Global Climate Change and Health’ module, part of the Masters programmes curricula and available as a standalone course. Opportunities to

develop critical understanding and the skills to take action, are provided in the ‘Academic and Scientific Skills’ module.

Extracurricular activities are timetabled, e.g. a carbon literacy workshop that utilises a HyFlex approach to attract on site and virtual audiences, seminars with guest speakers from international NGOs, World Environment Day and more. Priority is also given to student-led initiatives with staff providing support. Included in student inductions are the Sustainability policy, the work of the Sustainability and Environment Committee Environmental Working Group, and how to engage.

The Masters programmes were redesigned to enhance students’ capacity to become critical thinkers and active doers – taking initiative and being empowered to apply sustainability principles in their research and practice.

Leadership Education Academic Partnership (LEAP)

LEAP is creating long-lasting, impactful relationships between LSTM and professional humanitarians worldwide.

LEAP Highlights:

- Expertise in high-impact research in public health, clinical studies, and tropical medicine
- Students offered PGCert, PGDip, or a full MSc path
- 144 students registered for September 2022.

This initiative brings together LSTM, University of Manchester’s Humanitarian and Conflict Response Institute (HCRI) and international medical humanitarian organization Médecins Sans Frontières/Doctors Without Borders (MSF) to deliver targeted, flexible, practice-oriented, and equitable postgraduate degrees. The partnership has been renewed and all partners are hopeful that this will be long-term. Demand from potential students (mostly MSF staff), is amazing. Every cohort grows.

2022/23 will see LEAP students coming to the UK for campus-based learning. A group of 40 students, will arrive from some of the world’s most urgent humanitarian situations such as Yemen, Ethiopia, Nigeria, Libya, Myanmar, Palestine, and others. They join other LSTM students in the Humanitarian Studies MSc and Diploma in Tropical Medicine and Hygiene programmes. These provide opportunities for students to meet field practitioners.

Students work with specialists who understand the challenges and constraints of remote and resource limited situations. We have seen exciting projects e.g. Visceral Leishmaniasis in South Sudan, HIV in Nigeria, and vaccination programmes’ challenges during the pandemic.

Alumni



GIRI SHAN RAJAHRAM
(DTM&H 2017)

“**LSTM provides a world-class education by leading subject matter experts with the opportunity to immerse in a culturally rich and diverse city which is the home of the Beatles and Liverpool Football Club!**”



DR SARAH RYLANCE
(PhD, 2020)

“**My PhD explored lung health across the life course in Malawi, including both epidemiological and clinical research. I now work as WHO Medical Officer for Chronic Respiratory Diseases, Geneva. The opportunity to impact respiratory health is a privilege.**”

Would you like to join LSTM’s global alumni and friends’ community. Click here to find out more.





MARTHA CHINOUYA,
Director of Global Health Programmes (online)

The Programme, informed by research and education, builds capacity of the next generation of Global Health leaders, and I am delighted to lead it for LSTM.

It supports health professionals working in resource constrained environments as well as here in the UK. Students can make a positive difference to where they work and live before they graduate, acquiring skills for partnership working and making a positive impact in mitigating the impact of health inequities including the COVID-19 pandemic and in humanitarian crisis.

65
nationalities
represented
across the
student body.



GREG HARPER,
Dagnall Laboratory Manager

Education in practice:

Having seen many changes since I joined the School, the last two years have seen a step change in how we make use of online facilities to aid in our teaching of practical classes.

As a team, we are much more experienced in what will work for future remote practical class teaching. We intend to continue the development of remote learning to allow us to reach as wide a student audience as possible.



To continue teaching to off-site students, we decided to film and record many of our classes. This allowed us to stream live sessions to students. We wanted to bring laboratory practical teaching to our online audience. Though it obviously cannot take the place of hands-on practical instruction, it did allow remote students to get a much clearer idea of how practical class techniques are run.

Finding new pathways - looking back and forward: Decolonising at LSTM

A strategic institutional drive exploring the influence of coloniality on our practices and cultures, and to 'decolonise' is underway at LSTM. This follows the publication of the first Race Equity Action Plan, the launch of our 125-year Anniversary Programme and the intention to submit to the Race Equality Charter HE within three years. Furthermore, global events including the COVID-19 pandemic, along with protest movements such as the Rhodes Must Fall, have exposed historically deep-seated systemic

inequalities in higher education and health. The protest movements raised questions about the appropriateness of our education, research, and global health partnerships. These questions are pertinent at LSTM, the oldest school of Tropical medicine in the world whose history of education offerings is closely entwined with the growth of the Empire.

The Decolonising Education Working Group (DEWG) is composed of LSTM staff and students who are contributing towards institutional reflections on the influence of coloniality in our practices, particularly within education systems. The DEWG has successfully secured funding for a two-year research associate post which will support the delivery of a coordinated and clear action plan defining what decolonisation in education means and what it 'looks' like, locally and internationally, in the context of the curriculum, student learning journeys and global partnerships.

“ This is a journey for everyone, and we look forward to honest debates and reflections! ”

Research



At the forefront of research into infectious, debilitating and disabling diseases worldwide since 1898, we still work to improve health outcomes in disadvantaged populations. Our research into disease prevention, diagnostics and treatments plus capacity development and evidence-based policy formation has measurable impacts on the lives of millions of people.

How we do research is as important as the outputs of the research itself. Partnerships with country stakeholders are a vital part of our process, making our work relevant, equitable, inclusive, and locally owned.

We have a sizeable impact in the UK too (especially in the northwest), where we conduct research and translate our knowledge into practical applications for the benefit of local communities, businesses, and partners.

Infectious diseases

An outbreak of Sudan Virus Disease (a form of Ebola) was identified in Uganda in September 2022. This Ebola outbreak was especially concerning as there are no licensed vaccines or therapeutics for the prevention and treatment of this strain. Infectious diseases experts from LSTM went to Uganda to work with the World Health Organization (WHO) to characterise this lesser-known variant of the disease, and to inform the assessment and development of badly needed treatment and prevention options.

“**LSTM research portfolio exceeds £320 million.**”

Neglected Tropical Diseases (NTDs)

NTDs covers a wide range of debilitating and deadly conditions, and LSTM staff are working hard on their control and elimination. The Centre for Snakebite Research and Interventions (CSRI) is one of our better-known teams. Members are involved in snakebite treatment development, including research exploring the use of aptamers (short sequences of artificial DNA or RNA that bind specific target molecules), natural auto-inhibitors and virus-like particles as new therapies.

Working with KEMRI-Wellcome in Kenya we are engaged in a clinical trial of an oral small molecule snakebite drug. The team is involved in research providing insight into venom and envenoming biology which it is hoped will have practical application. They have also led research that has identified two ‘new’ antivenoms for possible use in Eswatini where the existing antivenom is expensive and increasingly difficult to source. CSRI staff have secured funding from NC3R to develop a new pre-clinical snakebite model to aid therapeutic research.

Other NTD work looks at filarial pathologies, e.g. lymphoedema / elephantiasis. The team had recent success with an anti-Wolbachia therapy of lymphatic filariasis which blocks transmission of the disease but without the risks of inflammatory side effects experienced with standard drugs.



HUGS: Hybridisation in urogenital schistosomiasis study recruited a cohort of 2,400 participants in the Mangochi and Nsanje Districts of Malawi, where triple infections with various schistosomes were noted. HUGS has also conducted the first formal seasonal snail surveillance and veterinary studies of schistosomiasis in livestock. Infected snails appear most common from November to April. In terms of livestock, cattle are highly infected, with animals typically sharing similar water contact sites with local communities, with younger animals appearing to be the drivers of infection.

Professor Russ Stothard and team have completed several linked studies of medical and veterinary helminths at Knowsley Safari Park, identifying snail borne parasites. From further parasitological studies a particularly unexpected finding has been the detection of soil-transmitted helminths within their baboon population, the first report of active transmission within UK soils.

Dr Lucas Cunningham (part of HUGS team) has developed an assay to detect hybrid schistosomes upon inspection of nuclear and mitochondrial genetic targets. The assay is being used to screen parasite material from the cohort using liquid handling robots. The assay and machinery are soon to be transferred to MLW to enhance its laboratory expertise.

£2 million, five-year MRC programme grant secured to explore the therapeutic potential of targeting bioactive lipids to alleviate snakebite symptoms.

Malaria and other vector-borne diseases

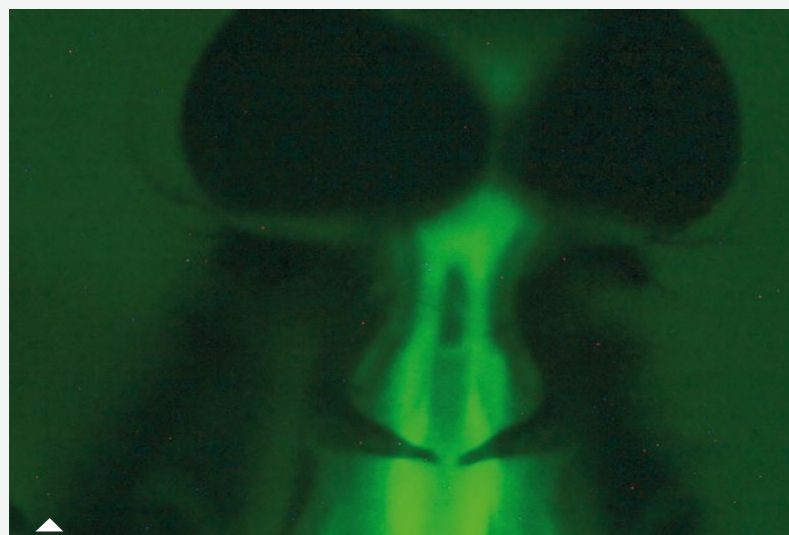
In Indonesia, we’re supporting a pilot strategy for the Ministry of Health, to prevent malaria among pregnant women by using drug treatments, improving birth outcomes. In Kenya and Burkina Faso, the Malaria in Mothers and Babies registry recruited 9,300 pregnant mothers to collect real-world data, supporting their access to the best malaria treatment. Also in Kenya, the Malaria Epi team has updated its review of artemisinin-containing antimalarials in pregnancy, informing WHO treatment guidelines.

LSTM’s Barrier Bednet (BBNet) uses just one tenth of the insecticide per net and reduces toxic risk to users. A field trial is scheduled for 2023.

We know the importance of gut microbiomes to humans. The microbiomes of mosquitoes are also variable, and lab-reared mosquitoes’ microbiomes do not reflect those present in mosquitoes in the field. LSTM’s scientists can recreate field relevant microbiomes in the lab, helping to reveal the importance of the microbiome for mosquitoes and develop new strategies to prevent mosquito-borne disease.

Genetics are important for malaria treatment and prevention. LSTM staff have identified the vascular endothelium genes which may explain the different symptoms seen in malaria infections. Therapies already used in cardiovascular disease may be relevant to treat cerebral malaria.

LSTM researchers led the way in designing 'gene drives' - rapid and self-sustaining population changes - for suppression and control of malaria-transmitting mosquitoes.



▲ **Live imaging of the thorax of an *An. gambiae* mosquito genetically modified to fluorescently label the nerves targeted by common public health insecticides**

Using genome editing tools we have introduced precise mutations into lab mosquitoes which will help us develop early warning monitoring systems to manage the emergence of insecticide resistance.

We recognise that there is a disparity between researchers in the Global North and the Global South in their capacity to harness and implement these genetic tools and have established a five-year Bill and Melinda Gates Foundation-funded (BMGF) collaboration to build mosquito molecular research capacity in Burkina Faso.

LSTM researchers are working with collaborators in Brazil to study the indoor resting behaviour of the vector of dengue, zika, chikungunya and yellow fever. They found that treating skirting boards alone with insecticide will kill more than 85% of female vectors within 48 hrs, and that changing the substrate colour to black was almost as effective as raising the insecticide dosage by a factor of ten.

In Uganda, an LSTM-developed, cost-effective method of controlling tsetse fly - Tiny Target - has proved so successful in reducing cases of sleeping sickness that a gradual scale back of the project is being undertaken by the Ministry of Health.

The SHIRE-Vec consortium has started formal fieldwork with initial training in medical malacology, or the study of molluscs. The activities of SHIRE-Vec include the development of spatially explicit models of freshwater snail distributions and aquatic habitat suitability. These maps include both *Bulinus* and *Biomphalaria*, the snail intermediate hosts of urogenital and intestinal schistosomiasis, respectively, alongside various larvae of insect vectors for several co-endemic human diseases.

Resistance research & management

Drug resistance is a growing global problem. LSTM is using a multidisciplinary approach to explore the complex and multifactorial agents driving its emergence.

Microbial genomics is growing at LSTM. Key works include investigations into distribution patterns of resistance mechanisms in opportunistic pathogens. Several large collaborative studies from Malawi have investigated resistance in *Escherichia coli* and *Klebsiella pneumoniae*, one of the leading causes of neonatal sepsis in sub-Saharan Africa. Together with our in-depth genome analyses of *Wolbachia* we have made a substantial impact on the vector biology field.

Genome-edited mosquitoes have been used for the first time to identify the major target sites of many public health sites of many public health insecticides.

It is helping our scientists to characterise how minor mutations have major effects on insecticide resistance. Also, an MRC-funded

programme is currently working to predict insecticide resistance and provide knowledge of resistance mechanisms and associated diagnostic tools for monitoring mosquito populations exposed to new insecticides in Africa.



The Roberts Group has received two major grants to begin a £1.2 million project STRESST.

The JPIAMR-funded project aims to determine the microbiological and chemical consequences of hospital-wide antimicrobial stewardship interventions. The team will be capturing and analysing the microbiological and chemical composition of hospital wastewater leaving the hospital grounds in Blantyre, Malawi.

A second project (Innovate UK-funded) brings together Industry, the NHS and academia to determine the suitability of novel antimicrobial nano-coatings which will be installed within the hospital high touch areas to assess their suitability to prevent cross infection and reduce bacterial numbers on the surfaces.

Lung health and tuberculosis

LIGHT is a six-year, UK aid-funded cross-disciplinary global health research programme led by LSTM. Working with partners in Kenya, Malawi, Nigeria, Uganda and the UK, the team works to change policy and transform gendered pathways to health for those with TB in urban, HIV-prevalent settings.

The aim is to improve health, socio-economic and equity outcomes and to stop the spread of TB. The consortium's work is progressing well with recent successes including the launch of an online learning platform and approaches from government departments in Malawi and Nigeria to assist with national strategies.

Other work includes the 'Tupumue' project in Kenya which compared lung function of children in affluent and slum areas of Nairobi. In Malawi and Uganda, LSTM teams have worked on a WHO-led study which aims to understand the oxygen needs of individual patients, and the implications for global scale-up. Next year, MLW Malawi will run a randomised controlled trial of a novel high-flow nasal oxygen delivery device which aims to prevent death from severe lung infection in low-resource settings.

An estimated 20 million children (globally) have asthma because of living in slums.

HIV

Our work is in partnership with the Centre for Sexual Health and HIV/AIDS Research (CeSHHAR) Zimbabwe. CeSHHAR is one of our key partners in the AMETHIST programme (Adapted Microplanning: Eliminating Transmissible HIV In Sex Transactions), a five-year Wellcome Trust Collaborative Award in Science, in partnership with colleagues in Malawi, South Africa and the UK. This consortium aims to reduce female sex workers' vulnerability to HIV and increase engagement in HIV prevention and treatment.

CeSHHAR is in the Measurement and Surveillance of HIV Epidemics consortium (MeSH) funded by the BMGF. CeSHHAR leads the consortium's work on key populations, to better understand risk among sex workers and their clients, and possible interventions.

HIV self-testing has been adopted by many African countries to reach untested populations. However, questions remain about how best to reach higher-risk populations, including men who have sex with men. LSTM has been awarded a \$2.2 million CIFF grant to conduct an evaluation of HIVST in Nigeria and Uganda, working with local partners.

COVID-19

LSTM has been heavily involved in many aspects of the COVID-19 response – from diagnostics and information to immunisation and other forms of prevention. Working with partners in Malawi and Zimbabwe we conducted one of the first studies to show the feasibility and acceptability of self-testing in low- and middle-income countries (LMICs). This work informed WHO guidelines for COVID-19 self-testing released in March 2022 and local guidelines in Zimbabwe.



The Community Health Systems Group led a pilot project, Reducing vaccine inequalities in Liverpool, increasing COVID-19 vaccine uptake in the most deprived areas of the city. Building on experiences in the Global South, they created links with local communities and piloted a community-led intervention. The result was increased COVID-19 vaccination uptake.

Maternal, newborn & child health

LSTM's Centre for Childbirth, Women's, and Newborn Health (CWNH) has become an NIHR Unit on the prevention and management of stillbirth and neonatal death. This involved development of a novel Pregnancy and Newborn Diagnostic Assessment tool (PANDA), application of an innovative platform to capture respectful care data (Smiley Survey) and development of bereavement tools to support families following pregnancy loss.

A new portfolio on the impact of climate change on maternal and neonatal health in Africa is another CeSHHAR / LSTM project. This EU-funded HIGH Horizons research programme aims to address knowledge gaps around the impacts of ambient heat exposure on maternal, newborn and child health. The project will quantify and monitor these health impacts, test a personalised Early Warning System, and implement mitigation actions in health facilities.

The NIH-funded DS-I Africa Research Hub - the HE2AT Centre - uses data science to develop innovative solutions to reduce the impacts of climate change on health in Africa.



Health policy & health systems strengthening

We are heavily engaged in work informing health policy and strengthening health systems.

Research, Evidence, and Development Initiative (READ-It) strives for healthcare decisions based on unbiased, reliable, critical summaries of research evidence. This Department of Clinical Sciences initiative continues to work on high-impact reviews in COVID-19, tuberculosis, malaria, vector control, NTDs, and nutritional global guidance development.

The team includes the Cochrane Infectious Diseases Group, whose lead role in countering the COVID-19 'infodemic' has been recognised, with the authors of one review awarded. Other achievements include research about how qualitative research and synthesis could improve guideline development, a malaria technical and methods resource for WHO, and guidelines on cystic echinococcosis and TB diagnostics.

The Health Systems and Workforce Strengthening Unit is working with stakeholders in Ghana – Ministry of Health, Ghana Health Service and WHO - to strengthen health workforce management in the country. This included the design and delivery of leadership training and research evaluating human resource management policies and practices, in attracting and retaining health workers in deprived and underserved areas. The unit also completed a study for the WHO on governance of human resources for health.

The ARISE Hub – Accountability and Responsiveness in Informal Settlements for Equity – is led by LSTM in partnership with teams in Bangladesh, India, Kenya and Sierra Leone. ARISE aims to improve the health and wellbeing of marginalised populations living in informal urban settlements in LMICs, using community-based participatory research to ensure it is driven by the needs and priorities of local actors. Recent successes include ensuring COVID-19 responses met the needs of marginalised groups living and working in informal settlements. The

team is adapting strategies co-developed with communities to address health and wellbeing priorities, including climate change and mental health.

The Social Science and Chronic Disease Unit is supporting teams in West and Central Africa to develop integrated strategies for the control, management, elimination, and eradication of NTDs affecting the skin. It seeks to address chronic disease, mental health and disability, prioritising engagement with people with lived experiences. The unit is collaborating with WHO and the Anesvad Foundation to improve the promotion and implementation of approaches to skin NTDs.

In Liberia, Reducing the burden on severe stigmatising skin diseases (REDRESS), trained over 2,000 health workers in mental health services. We're developing new knowledge on affordable, timely, appropriate, and improved treatment strategies that reduce stigma and address social issues for affected populations.

Girls' and women's health

In collaboration with KEMRI in Kenya, LSTM examined the impact of menstrual cups, cash transfer, or both on HIV, HSV-2, and school dropout among schoolgirls in rural Kenya. A further MRC grant will allow the team to follow-up and examine the potential effect of school-based interventions on their own and their children's health, and social equity.

Another study with KEMRI - and Nyanza Reproductive Health Society - investigated the effect of menstrual cups on the vaginal microbiome, and prevalence of bacterial vaginosis and STIs. The team is looking at whether menstrual cups can be used by economically vulnerable women who trade sex. We're also investigating challenges faced by out-of-school girls, to identify whether community-based interventions are needed for health and wellbeing, and potential for return to schooling. Locally, we're working with partners in the northwest of England to examine the menstrual needs of economically vulnerable women.

Research consortia

LSTM continues to work in partnership with other organisations across the globe.

NTDs

AFRICAN SNAKEBITE RESEARCH GROUP



Aiming to significantly and sustainably improve health outcomes after snakebite in sub-Saharan Africa

Funded by: NIHR

Web address: www.lstmed.ac.uk/the-african-snakebite-research-group

Medical Intervention

AFRICAN RESEARCH COLLABORATION ON SEPSIS

Establishing centres of sepsis research excellence in Alawi, Uganda and Gabon

Funded by: NIHR

Web address: www.lstmed.ac.uk/ARCS

IMPACT

Strengthening the evidence around cardiac safety and drug-drug interactions with Arvs.

Funded by: European Union/EDCTP2

Web address: www.lstmed.ac.uk/research/collaborations/impact

Applied Health

ARISE

Working in partnership with marginalised people in informal urban spaces towards improving accountability for their health and well-being, in Bangladesh, Kenya, India and Sierra Leone.

Funded by: UKRI

Web address: <https://www.ariseconsortium.org/>

PERFORM

Scaling up health management strengthening interventions.

Funded by: European Union/Horizon2020

Web address: www.perform2scale.org

REACHOUT

Strengthening the vital work of close-to-community providers of healthcare in Africa and Asia.

Funded by: European Union

Web address: www.reachoutconsortium.org

READ-IT



Focusing on evidence in malaria, TB, child health, maternal health, and health systems. Preparing and updating Cochrane Reviews. LSTM hosts the Cochrane Infectious Disease Group.

Funded by: Foreign, Commonwealth and Development Office (FCDO)

Web addresses: www.evidence4health.org and <http://cidg.cochrane.org>

ReBUILD for Resilience

Investigating health systems in fragile contexts experiencing violence, conflict and other global health challenges.

Funded by: FCDO

Web address: www.rebuildconsortium.com

REDRESS

Using a person-centred approach to health systems design REDRESS will evaluate, develop and adapt health systems interventions for the management of severe stigmatizing skin diseases in Liberia.

Funded by: NIHR

twitter.com/REDRESS_Liberia

SQALE



Partnership between LSTM, LVCT Health and The University Research Company. We work closely with the Kenyan Ministry of Health, through the Community Health and Development Unit (CHDU) to develop and test quality improvement approaches.

Funded by: USAID

Web address: <http://www.reachoutconsortium.org/>

RESPOND AFRICA

Multi-disciplinary group from Tanzania, Uganda, Europe, and the UK. Our vision is to improve the health outcomes of people with chronic life-long conditions in Africa.

Funded by: NIHR, EDCTP and Horizon 2020

Web address: www.lstmed.ac.uk

Vector Control CEASE



Investigates the origins, epidemiological importance, and control of the invasive malaria mosquito *Anopheles stephensi* in Africa.

Funded by: Wellcome Trust / NIHR

ESSENTIALS

Developing and evaluating approaches to assess the performance of new classes of insecticide treated nets (ITNs) for malaria control.

Funded by: The Bill & Melinda Gates Foundation

Web address: <https://essentials.lstmed.ac.uk/>

Innovation to Impact (i2i)

Works to address barriers to the introduction of new vector control tools. It works with stakeholders across the product development spectrum to address issues pertaining to efficient and effective testing, quality assurance and regulatory affairs to better streamline the product development value chain.

Funded by: BMGF

Web address: www.innovationtoimpact.org/

PIIVEC (PARTNERSHIP FOR INCREASING THE IMPACT OF VECTOR CONTROL)

Reducing the burden of vector-borne disease through effective, locally appropriate, sustainable vector control.

Funded by: Medical Research Council

Web address: <https://www.piivec.org>

Research consortia

Strengthening Resilience against Sleeping Sickness in Malawi (STRESS)

Project based in the Vwaza Marsh Wildlife Reserve in northern Malawi bringing together experts in tsetse fly and trypanosome biology from Kamuzu University of Health Sciences, the Malawi-Liverpool-Wellcome Trust Clinical Research Programme, the University of Glasgow and LSTM.

Funded by: MRC
AMR

DRUM



Investigating the drivers of antibiotic resistance in Uganda and Malawi.

Funded by: Cross-research council AMR initiative and NIHR
www.lstmed.ac.uk/DRUM

The Infection Innovation Consortium



R&D programme bringing together industry, academia, and the NHS in a collaborative effort to save lives by accelerating the discovery, development and deployment of new antimicrobial treatments and products.

Funded by: UKRI: UK Government Department of Business Energy and Industrial Strategy (BEIS)

Web: <https://www.infectioninnovation.com/>

NEAR-AMR: Network of European and African Researchers on Antimicrobial Resistance



Analysing AMR surveillance and capacity strengthening in different national contexts.

Funded by: The Joint Programming Initiative on Antimicrobial Resistance (JPIAMR) via the MRC

Web address: www.lstmed.ac.uk/near-amr

Maternal Health IMPACT

Translating global malaria in pregnancy policy to country-level policies and clinical guidelines.

Funded by: European Union/EDCTP2

Web address: <https://www.lstmed.ac.uk/research/collaborations/impact>

IMPROVE & IMPROVE-2

Conducting research into alternative drug regimens for women with malaria in pregnancy in Tanzania, Malawi and Kenya.

Funded by: European Union EDCTP2

Web address: www.lstmed.ac.uk/research/collaborations/improve

Neonatal Nutrition Network



Aims to build capacity in neonatal units in sub-Saharan Africa, some with limited previous research experience, and also engage researchers who are new to working in poorer countries.

Web address: www.lstmed.ac.uk/research/departments/clinical-sciences/neonatal-nutrition-network

TB & Lung Health

IMPACT TB

Finding and treating TB cases in communities in Nepal and Vietnam.

Funded by: European Union/Horizon2020

Web address: www.impacttbproject.org

LIGHT

Supporting policy and practice in transforming gendered pathways to health for those with TB in urban, HIV prevalent settings to improve health, socio-economic and equity outcomes and to stop the spread of TB.

Funded by: UKAID (FCDO)

Web address: www.lstmed.ac.uk/light

Translational Tropical Infectious Diseases Consortium



Collaboration between LSTM, the London School of Hygiene and Tropical Medicine (LSHTM), the Jenner Institute at Oxford University and Public Health England, managing the MRC Confidence in Concept funding for individual projects that accelerate the transition from discovery science into therapeutic, diagnostic and vaccine development.

Funded by: Medical Research Council

Connecting individuals and organisations to address a common set of questions or goals.

Postcard from the field



DR ANDREW HOPE

**Programme Manager,
Department of Vector
Biology**

Tiny Targets

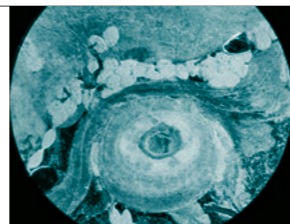
Trialled in Uganda in 2011 where its success led to a large-scale (2,500km²) control operation implemented in partnership with the Coordinating Office for the Control of Trypanosomiasis in Uganda (COCTU), in 2014. The programme deployed across five districts, with locally-recruited teams led by District Entomologists (DE) deploying 13,000 Tiny Targets biannually along the riverbanks where tsetse concentrate.



The intervention reduced the density of tsetse by >80% which modelling and empirical work showed would interrupt transmission. Management of the operation shifted to COCTU and the DEs, while researchers at LSTM continued to provide technical support.

In 2017, the programme expanded further, with targets deployed in two more districts. Our recent analyses have demonstrated that vector control has had a significant impact on the incidence of Gambian human African trypanosomiasis (gHAT) in north-west Uganda.

The vector control work is part of a wider project, Trypa-NO!, and our partner FIND has been supporting the Ministry of Health on the screening and treatment of cases. Under the Trypa-NO! partnership, we used an integrated approach of interventions to drive towards elimination.

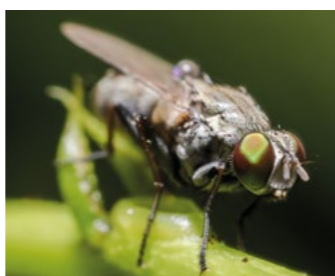


Microscopic view of infected tsetse cardia.

“It is amazing to think that in the last decade, a research project looking to develop a new technology has grown to the stage where **Tiny Targets** is recommended by the WHO, and used in six countries, two of which have declared gHAT elimination as a public health problem.

Key fact

Trypanosomiasis, (human African sleeping sickness) is caused by parasites of genus *Trypanosoma*, transmitted by infected tsetse flies.



Early Career Researchers

LSTM's Early Career Researchers (ECRs) make an essential contribution to research, training, and partnership work at the school. Here are some of the diverse contributions our excellent ECRs have made to life at LSTM.

DR AITORR CASAS-SANCHEZ

Completed his Director's Catalyst Fund and BBSRC COVID-19 Ideas Project by identifying glycosylation as a new molecular target for SARS-CoV-2. He was also awarded the Jean Clayton Fund to run the first preclinical study with glycosylation inhibitors as therapeutics for COVID-19. A Wellcome Trust Institutional Partnership Translation Award (iTPA) enabled Dr Sanchez to evaluate the dual activity of glycosylation inhibitors as both therapeutics and vaccine-enhancing agents. He is currently expanding his work by investigating new ways to exploit glycosylation against arboviral diseases.



SIRUI ZHENG

Fourth-year PhD student who joined LSTM in 2019. Her research focuses on comparing randomised treatment efficacy using the win ratio method as a core method of analysis. She took part in the Crick Innovation Challenge, held by the Francis Crick Institution in July 2022, and gained valuable translation skills and collaboration experience, alongside peers and industry experts. The experience helped her generate innovative problem-solving methods to become more fund-wise.

CHRISTIDA WASTIKA

Interested in arthropod-borne virus (arbovirus) infection in mosquitoes, Christida joined LSTM as PDRA in 2021 to investigate the interaction between human-pathogenic arboviruses and mosquitoes. She has received internal funding - the Jean-Clayton fund to generate primary data for the arbovirus vector-switching investigation. She is now exploring a novel mosquito control strategy to eliminate arbovirus-infected mosquitoes.

BEATE RINGWALD

Joined LSTM as an MSc student and will soon complete her PhD (MRC DTP). Beate works as a researcher with LIGHT consortium and is using participatory health research skills, gained through LSTM's doctoral training partnership studentship, to investigate HIV and intimate partner violence in informal urban settlements (2008-2022). In the LIGHT consortium she uses her skills to improve access to tuberculosis care among under-served populations, alongside gender equitable approaches.

Awards and honours



01
December
THE Awards 2021

RESPOND-Africa won International Collaboration of the Year, reportedly standing out for creating a series of partnerships that have resulted in a step change in research and policy.

Our people were also recognised in other categories:

Paul Rowley, Centre for Snakebite Research and Interventions (CSRI) received 'highly commended' and runner up as Outstanding Technician of the Year.

Dr Rachel Tolhurst shortlisted for Outstanding Research Supervisor of the Year.

It is good to win awards but the most important is to win together.



02
March
The Pandemic Institute Student Excellence Awards

LSTM students were amongst the winners, taking three out of the five awards on offer.

Sponsored by Liverpool-based diagnostics and COVID-19 testing company, DAM Health, five students working in infection or diagnostics were awarded £5,000.

C A Wright Medal
 LSTM's Dr Álvaro Acosta Serrano was awarded the

highest honour of the British Society for Parasitology. The award (which recognises future leaders) is a memorial to Chris Wright, Director of the Experimental Taxonomy Unit at the Natural History Museum in London, and the society's president.

April
BioNow Awards
 LSTM and iiCON received the award for outstanding contribution and the AMR Award. BioNow is a not-for-profit membership organisation that supports the biomedical, pharma, and life science sectors.



03
June
Northwest Coast Research and Innovations Awards 2022

LSTM's Liverpool Vaccine Group and partners won the COVID-19 Research and Innovation category. As LSTM PLUS, they recruited the largest number of participants to Oxford/AZ's novel COVID-19 vaccine trial in the UK.

04
Robert Austrian Research Award

LSTM's Dr Elena Mitsi won for pneumococcal vaccinology. The award promotes research in this field, which contributes to the development of new and improved vaccines, delivery systems and vaccination strategies against the bacteria *Streptococcus pneumoniae*.

'Grand Gold', Council for Advancement and Support of Education (CASE)

LSTM's Bump It Forward campaign won 'Grand Gold' which is the highest level of recognition in the program.

05
October
 LSTM was awarded the charter mark for promoting gender equality. The award recognised increases in numbers of senior female staff at LSTM; an anonymous reporting



05
Athena Swan Silver Award
Professional (ECP) Impact Award, European Laboratory Research & Innovation Group (ELRIG)

Liverpool Research Programme, received the 2022 prize for his ground-breaking work in unlocking understanding of the pathogenesis of tuberculosis.

mechanism for bullying and harassment; reductions in LSTM's gender pay gap and fixed-term contract use; an increased staff retention; greater staff satisfaction with work-life balance and flexibility; an enhanced package of COVID-19 support; career development, especially benefiting female early career researchers; gender equity and improved transparency in promotion and progression; and gender benchmarks achieved in education.

Weber-Parkes Prize, Royal College of Physicians (RCP)

Professor Henry Mwandumba, Interim Director of the Malawi

Dr Shaun Pennington, an immunologist and microbiologist at LSTM was awarded. Shaun developed several in-vitro models of infection for pre-clinical drug discovery, working closely with partners at iiCON.



Malawi-Liverpool-Wellcome
Clinical Research Programme

Of our 162 active students, 58% are female, 83% Malawian and 77% postgraduates. MLW will increase its research groups from 16 – 20, over the next few years, with most run by resident Malawians, alongside international scientists.

Celebrating excellence and capacity building

The Malawi Liverpool Wellcome Trust (MLW) is a partnership between LSTM, University of Liverpool, Kamuzu University of Health Sciences (KUHeS), and The Wellcome Trust.

With over 25 years' experience, MLW celebrates success in translational research, regional and global health priorities, malaria, tuberculosis, HIV, pneumonia treatments, maternal/ child health, and vaccine policy.

A recent MLW trial of typhoid conjugate vaccine (TCV), the first in Africa, showed efficacy of over 80%. This safe vaccine works well at preventing typhoid fever in African children, giving a highly immunogenic response in all age groups. MLW and the Ministry of Health lobbied the Global Alliance for Vaccines and Immunizations (GAVI) to fund TCV, and it is now a routine vaccination.

A decade of success

It is one of our priorities to increase capacity and clinical skills across sub-Saharan Africa, results within the last decade include:

467
academics trained
in the past decade

120
pre-Masters

58
Masters

60
pre-PhD

165
PhD

64
Post-Doctoral students

“

We conduct excellent research and train the next generation of researchers.

Through their AMBITION trial, MLW found a single high-dose of liposomal amphotericin B is a simpler, more cost-effective treatment for cryptococcal meningitis (CM) than the usual Amphotericin-B. The trial results changed treatment guidelines for cryptococcal meningitis in Malawi and worldwide.

MLW also provided COVID-19 diagnostics and in-country sequencing capacity, throughout the pandemic. An oxygen plant for treatment of COVID-19 and respiratory patients is now available at Queen Elizabeth Central Hospital, supported by a grant from Wellcome.

Investing in facilities

The ambitious new Clinical Research Excellence and Training Open Resource (CREATOR) building at Queen Elizabeth Central Hospital, is part of MLW's plan to increase regional specialists, with locally focused clinical expertise.

MLW aims to be the world's best research institute in a low-income country, whilst scaling up postgraduate specialist training of doctors and scientists with a particular emphasis on clinical sciences. The CREATOR is a five Storey, 3,350 square meters research and training facility, that will almost double floor space at MLW.

The new building will offer group learning spaces - the Training Open Resource (TOR) - and individual study areas at the Postgraduate Library (PGL), alongside 24/7 access and excellent internet provision.



HENRY MUWANDUMBA

Interim Director of MLW

“

The CREATOR Building gives MLW the scope to greatly increase research activities, by offering postgraduate specialists clinical training, tailored to their needs and those of the region. By providing the excellent training environment and opportunities scientists need, here at MLW, we can support and retain the next generation of Malawian scientists.

AUBREY CHALIRA PHI
MLW's Chief Operating Officer

“

There are limited postgraduate specialist clinical training opportunities in Malawi, but tremendous appreciation of the need for this training. The CREATOR building will combine postgraduate clinical training with research excellence.



LSTM group



Liverpool's clinic now opens five and a half days a week. Chester is working back up to pre-pandemic opening hours.

Well Travelled Clinics

We provide pre- and post-travel clinical services through our subsidiary Well Travelled Clinics, with centres in Liverpool and Chester. The clinics offer a one-stop shop service to meet all travel and occupational health needs.

The global travel business continued to feel the impact of the COVID-19 pandemic. As a result, the company remained at a net loss. All Well Travelled Clinics (WTC) sales increased on the previous year, so losses were reduced, but remained behind the budget forecast. WTC reduced losses by controlling both pay and non-pay costs. The team managed to re-establish two tenders from existing occupational clients. The contracts will run for a further 3 years.



PHILIPPA TUBB
MD WTC

Our core services

We're experts in travel and occupational health services, including:

- **Vaccinations**
- **Malaria Tablets**
- **Health Surveillance**
- **Oil & Gas UK and Offshore Energy UK**
- **Occupational Vaccines / Tests**
- **Pre / Post-Deployment Medical**
- **Post-Appointment Health Assessment**
- **Seafarer Medicals**
- **Sickness & Absence Management**
- **Visa Medicals.**



WTC works in partnership with LSTM and the National Travel Health Network and Centre (NaTHNaC) to deliver the Professional Diploma in Travel Health. 18 students started the diploma this year. A bespoke travel health training course is being developed for a local travel health provider.

Medical students returned on placement for their Quality & Evidence Personal Excellence Pathway (QEPEP), from University of Manchester. The WTC received a Gold Award for Excellence in Teaching for this community - based medical education programme.

WTC continues to underpin our values by making a positive difference to health and wellbeing. Our partnerships deliver excellence for humanitarian and corporate clients, and the Liverpool University Hospitals NHS Foundation Trust (LUHFT).

CQC inspection findings:

Both clinics were rated 'Good' by the Care Quality Commission (CQC), this year. Key findings include:

- **Systems are in place to protect people from avoidable harm and abuse. When mistakes happen, lessons are learned**
- **Patients get clear information about their proposed treatment. They can make informed decisions**
- **Patients' needs are fully assessed; care and treatment is tailored to individual needs**
- **Patients are offered appointments at a convenient time. Treatment is offered in a timely manner**
- **Clinicians assess patients according to appropriate guidance, legislation, and standards. Care and treatment is delivered in line with current evidence-based guidance**
- **Information about services and making a complaint is available and easy to understand**
- **Effective governance frameworks are in place to assess, monitor and improve the quality of services**
- **There is a clear leadership structure and staff feel supported by management, working well together as a team.**



DR NICK HAMON
CEO of IVCC



35 million nets, distributed in 13 countries, could avert around 8.5 million malaria cases - over 20,000 deaths.

Innovative Vector Control Consortium (IVCC)

IVCC works with stakeholders to facilitate the development of novel and improved public health insecticides and formulations and provides information tools to enable their effective use. Although primarily focused on malaria, IVCC recognises that new tools and products are likely to be effective against a wide range of other vector-borne diseases.

Vector control tools (e.g., bed nets and indoor residual sprays) are proven interventions against malaria transmission. The IVCC creates new insecticides to enhance and preserve these tools.

IVCC and industry partners, deliver improved tools to endemic countries. A product pipeline for next generation indoor residual sprays, ensures affordable insecticide resistance management is implemented worldwide.

IVCC developed long-lasting insecticide-treated nets (LLIN) and nets with single novel active ingredients. These products are cheaper and quicker to bring to market and if used in rotation can prevent premature insecticide resistance, which is a major challenge across endemic countries.

Our guiding principles:

- **Vector control is fundamental to the elimination and eradication of insect-borne disease**
- **Insect vector resistance to insecticides remains a constant challenge that must be overcome**
- **Urgency and focus on the delivery of accessible and affordable tools to populations most affected by insect-borne disease**
- **Ability to work collaboratively with a diverse group of stakeholders to build an integrated approach to eradicate malaria and other Neglected Tropical Diseases (NTDs)**
- **Transparency, open communication, and trust with all partners.**



◀ Testing the durability of insecticides on alternative mud surfaces.

“ IVCC’s progress and success depend on the continued support of funders. Throughout 2023, IVCC will work with its funding partners to renew grants and continue its ambitious strategy. ”

The New Nets Project (NNP) is the second catalytic market entry IVCC has led for the Global Fund, Unitaaid and the Bill & Melinda Gates Foundation. Data from a randomised control trial (RCT) conducted in Tanzania, was published in the Lancet in 2022. It showed next generation nets significantly reduced malaria prevalence.

The novel insecticide resistance strategy (IRS) products developed and distributed through the NgenIRS project, averted an estimated 20 to 34 million cases of malaria and 65,000 - 88,500 deaths.

In 2022, three large scale epidemiological trials began in Mali, Zambia, and Kenya to introduce a new product class, addressing the growing threat of outdoor transmission of malaria. With the results due in 2023/24, the data generated on public health impact will support a PQ-listing of this new product class.

Keeping industry partners engaged in vector control innovation is central to the evolution of IVCC’s product pipeline but incentives for the agrochemical industry to commit are limited. Working with Duke University, IVCC aims to introduce a Vector Expedited Review Voucher (VERV) to incentivise industry partners to continue innovative work.

IVCC’s progress and success depend on the continued support of funders. Throughout 2023, IVCC will work with its funding partners to renew grants and continue its ambitious strategy.



JAYNE JONES
Manager of CDPL

Clinical Diagnostic Parasitology Laboratory

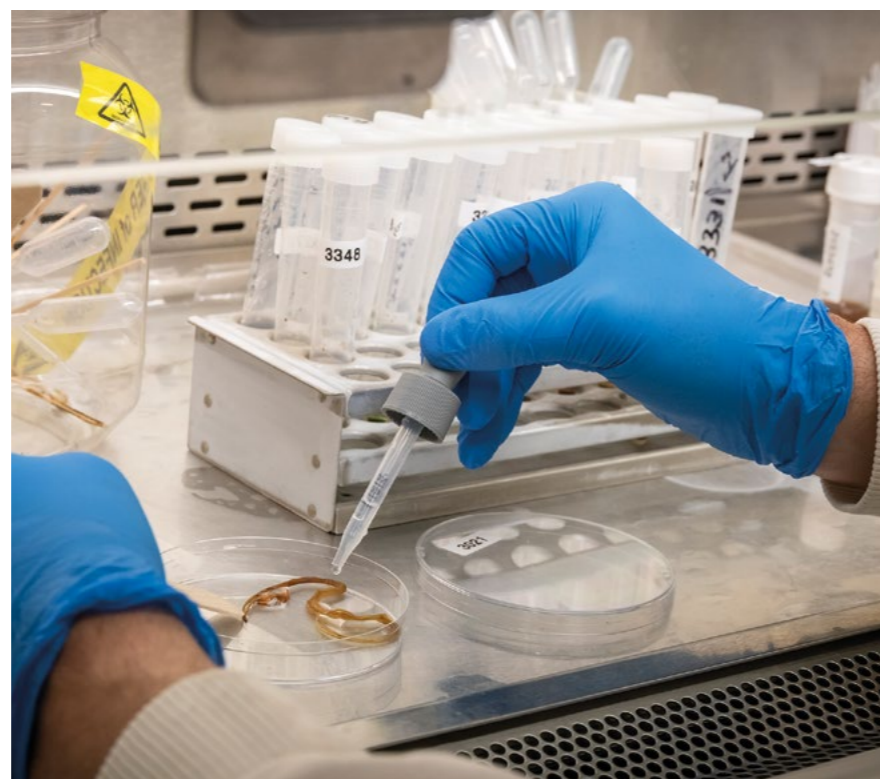
We offer a referral service for the identification of a wide range of human parasites from clinical specimens, located in the Department of Clinical Sciences at LSTM.

It has been a difficult but exciting year for the Clinical Diagnostic Parasitology Laboratory (CDPL). Workload has increased due to a rise in travel post Pandemic and through our collaboration with LSTM clinical researchers. Both streams have seen more returning travellers test positive for parasites. CDPL has provided a quality diagnostic service to health professionals treating these patients.

We continue to integrate with the LSTM Diagnostic research team. This link provides the mechanism for validation and verification of molecular tests that will enhance the portfolio of the diagnostic testing performed within the CDPL. This link also strengthens the bonds between clinical work and research being performed within LSTM.

The CDPL staff support the teaching team at LSTM by providing demonstrator and examiner roles for the practical sessions of the DTM&H courses. This gives the staff a chance to meet the students and interact with the LSTM teaching team enhancing links and sharing knowledge external to the unit.

“ I am supported in the CDPL by Biomedical Scientists Iain Slack, Jessica Mason and Simone McLaughlin, Medical laboratory assistant Paula Wright and administration assistant Angela Hargreaves. The team continue to work in a committed professional manner, and I wish to pass my thanks on to them for their support and hard work during this year. ”



The Laboratory is UKAS accredited in accordance with the recognised International Standard ISO15189: 2012.



Liverpool Insect Testing Establishment (LITE)

The LITE team comprises 18 members, (led by Dr Louise Ford, Testing Facility Manager).

The LITE facility is housed within purpose built, state-of-the-art facilities in the Liverpool Life Sciences Accelerator building. Our laboratories are fully equipped for studies to assess insecticide efficacy using both standard bioassays and bespoke testing as requested by clients.

In 2022 LSTM, as a leading member of the iiCON partnership, established a new spinout, iiDiagnostics, to facilitate industry engagement and commercial access to advanced diagnostics, R&D expertise, and specialised state-of-the-art facilities. LITE transferred its activities to this new venture, whilst maintaining close links with the Department of Vector Biology.

LITE maintains a large collection of insecticide resistant mosquito populations and provides a rapid and reliable service that meets the needs of regulators and normative agencies and accelerates the evaluation of vector control products.

LITE has UK-Good Laboratory Practice accreditation and access to world leading expertise in insecticide resistance, insecticide quantification, and bioassay methodological development, ensuring that we can provide services that meet the needs of manufacturers, procurers, and end users of vector control products.

To broaden our client base and expand the range of services offered, LITE employed Dr Adriana Adolphi, an experienced vector biologist, as its first Business Development Manager earlier this year. This has led to several exciting new opportunities, including the first use of our 'Peet Grady' chambers to test new prototype aerosol sprays against mosquito populations, as well as a revamped offer for testing repellent products and for HPLC-based insecticide quantification services.

“ All testing is performed to the highest standards, following GLP processes and regulations. ”

LITE methods:

- CDC Bottle Assay
- WHO Tube Assay
- Larval Insecticide Bioassays
- Topical Testing
- WHO Cone Bioassay
- Track Sprayer.

Following LITE's successful tender bid to IVCC we continue to support IVCC with testing insecticides and product prototypes. To broaden our client base and expand the range of services offered, LITE employed Dr Adriana Adolphi, an experienced vector biologist, as its first Business Development Manager earlier this year.

Financial highlights

LSTM has coped well with the challenges of COVID-19. The research pipeline remains critical to our success. Reported group income of £197m (2021: £193m) reflects significantly lower 'gifts in kind' in the last couple of years compared to previously but excluding those LSTM reported total income of £150m (2021: £133m), representing a 13% increase.



Financial position

USS pension provision movements continue to significantly impact our reported results, the £12.2m USS pension deficit expense resulting in a £7.5m deficit (2021: surplus £6.7m). Excluding this charge and unrealised currency and investment losses of £1.7m, an underlying operational surplus of £6.5m (2021: £4.4m surplus) has been achieved.

Group net assets at the year-end totalled £48m (2021: £55m) and excluding deferred capital grants of £32m (which are unlikely ever to be repaid), net assets totalled £80m. Group cash has decreased by £8m largely reflecting the cyclical nature of research grant drawdown and applications. Overall, the financial condition of LSTM, with the

support of our research funders, remains healthy despite challenging world political and economic conditions. That support is illustrated in the strong pipeline of LSTM and IVCC Research projects with a portfolio of £561m and an unexpended balance of £183m (2021: £250m). The application pipeline at 31 July was £232m (2021: £105m). Subsequent to the year end, success in a number of the grant applications has seen the unexpended balance pipeline return to a more normal level.

The 2022/23 budget of £1m surplus represents research income expectations marginally lower than the 2021/22, a prudent view on government support, the funding cost of new facility investments and reflects the challenging political and economic conditions.

Highlights

69%
of group income through Research grants and contracts

13%
growth in underlying income

£6.5million
underlying Group operating surplus

£48million
net assets at 31 July 2022

2021/22 group income



- ▶ Research grants and contracts **(69%)**
- ▶ Tuition fees & education contracts **(2%)**
- ▶ Funding body grants **(13%)**
- ▶ Other income **(16%)**
- ▶ Donations and endowment **(1%)**

Income excluding gifts in kind (£'000)

2021/22	150.1
2020/21	132.9
2019/20	123.6
2018/19	127.6
2017/18	114.9
2016/17	90.4
2015/16	78.4
2014/15	73.5
2013/14	65.4
2012/13	60

State-of-the-art facilities

With the support of the Liverpool City Region Combined Authority and Research England, the derelict Pembroke House in Liverpool has been converted into a 'state-of-the-art' teaching facility and will be the backbone to our Education growth plan led by Professor Isabel Lucas, newly appointed Dean of Education. iiCon will use the immersive and interactive space for innovation and collaboration in bridging the gap between industry, academia, and the NHS to improve infection control and save lives.

Investing in research

In Malawi, construction continues on the CREATOR building, in conjunction with our partners Wellcome Trust and University of Liverpool. Such significant investment across LSTM's estate reflects our world class leadership in global health, particularly infectious diseases, and is essential to support our excellent dedicated teams.

Philanthropy, fundraising, scholarships



Our 125th anniversary campaign

Formally launched by patron HRH The Princess Royal at the House of Commons, this major anniversary offers an opportunity to examine our history while looking to the future. LSTM has the power and responsibility to tackle systemic injustice and inequity in health and reflecting on an association with a colonial legacy, the future lies in working through equitable partnerships around the world to tackle to major health challenges facing humanity.

As a custodian of immense scientific knowledge, LSTM's expertise in areas like malaria, sleeping sickness, COVID-19, Ebola, anti-venom therapeutics, and monkeypox has led to the development of many new treatments and disease preventions. Unique national and international partnerships mean LSTM is uniquely placed to help solve some of humanity's major health challenges.

The campaign represents a fundamental shift that requires bold investment to support further development of scientific, health expertise and leadership in Sub-Saharan Africa and Asia, challenging traditional power imbalance and providing opportunities for Masters and PhD students.

This Global Leaders programme will enable the creation of five new senior leadership positions in five African hubs; Malawi, Kenya, Cameroon, Zimbabwe, and Tanzania.

This campaign represents a vision for the future and what will be seen as transformative opportunities to create safer, healthier, and more equitable futures for us all.

We believe the campaign presents a game-changing opportunity to create safer, healthier, and more equitable futures.

The 125 Fundraising Campaign aims to leverage strategic investment in the research leaders of the future, over a ten-year period, by investing in partnerships and people, globally.

LSTM is looking for donors from across the globe to partner with, through this important new campaign. It is an opportunity to play a significant role in developing international disease resilient networks, whilst also supporting important UK-based research such as a new Human Challenge clinical trials facility, in Liverpool.

This will be the largest, dedicated in-patient clinical trials facility in the UK. The COVID-19 pandemic highlighted the importance of taking a collaborative and organic approach to medical research – one that recognises the inter-connectedness of the modern world.



Professor Charles Wondji, LSTM Vector Biologist (based in Cameroon), gave a talk about his own career journey, from Early Career Researcher at LSTM, to pre-eminent academic at the Centre for Research in Infectious Diseases (CRID), in Cameroon.



LSTM's Director, Professor David Lalloo, explained how the campaign contributes to LSTM's legacy:

“ LSTM aims to move from being a UK - based organisation, operating abroad, to a truly global network of multi-disciplinary experts. The 125 campaign enables us to strengthen our skill-sharing and collaborations with experts in sub-Saharan and Asian countries that face the burden of neglected and tropical diseases.

Through 125, LSTM will create a Global Fellowship Programme to support 25 exceptional, promising researchers with funding and mentoring, whilst a Global Leaders Programme creates senior research leadership positions in Malawi, Kenya, Cameroon, Zimbabwe, and Tanzania. LSTM will work with this powerful global research network to continue building capacity and skills, where they are most needed in the world.

Celebrating 125 years

125th Anniversary programme

LSTM's programme of events to celebrate our anniversary, history and heritage, scientific excellence and innovation, global impact, and global health in the next 125 years.

Alchemy

Science and public art spectacular, in partnership with Culture Liverpool, which will showcase LSTM's science as you've never seen it before.

LSTM past, present and future

National Lottery Heritage Funded project (£145,000), which includes exhibitions and schools' engagement focusing on historic figures and how their work influences scientists today.

Living Liverpool

Citizen science projects (based on Swab and Send), which engages the public in the hunt for new antibiotics. It will build a microbiology map of Liverpool with 125 swabs potentially looking for new active compounds and antibiotics.

On your soapbox

In partnership with Unilever, there will be a microsite with TED Talk inspired bitesize vignettes about our work, people, alumni, and partners. Alongside this is a public lecture series, webinars and podcasts, and a dedicated website collecting stories and housing information about the programme and fundraising campaign.



Scholarships

LSTM awarded donor-funded scholarships to 15 students across 11 countries, covering Masters, PhDs, and professional courses.

NADIA NANDET FOMUSO

From Cameroon, received the Thomas Mark Scholarship:

LSTM offers courses that help people from low- and middle-income countries, like mine, to improve themselves and their careers. The fees are costly and not affordable to the average person; these scholarships give highly - skilled people the chance to experience this rich learning environment, whilst supporting capacity building in their home country.

HOF

The Hamish Ogston Foundation

For the Queen's Platinum Jubilee, the Hamish Ogston Foundation donated £100,000 to LSTM to be awarded in the form of £5,000 grants for early career researchers.

The grants will be distributed by three of LSTM's major hubs in sub-Saharan Africa, in Malawi, Cameroon and Kenya, ensuring that the grants are awarded to early career researchers in low- and middle income countries, strengthening partnerships and capacity to deal with some of the most urgent questions in global health.



The Hamish Ogston Foundation is proud to work to eliminate disparities in both access to medical treatment and health awareness around the world. These Platinum Jubilee early career grants provide opportunity for the next generation of health professionals to gain invaluable experience in the research methods that they need to progress their careers dedicated mostly to the rural poor who do not have immediate access to medical diagnosis and treatment

DR MICHAEL VAUGHAN

Health Project Director at the Hamish Ogston Foundation

Founders' Circle

To mark the launch of our 125 Campaign, we established the Founders' Circle. Membership of this group is open to the first 125 donors pledging £1,000 or more to the campaign (as a single payment or instalments). Donations to the Founders' Circle will be used to establish a matching fund to leverage further support from LSTM's wider supporter community in 2023.

Bump it Forward



Bump It Forward has raised £285,000 from 5,000 donors and provided 1,323,017 items of PPE to health professionals in seven countries.

Bump It Forward asked people to donate their vaccine's value (c£25/\$33) to protect African health workers until vaccines reached them.

The campaign won the international Circle of Excellence competition's Grand Gold award, Council for Advancement and Support of Education (CASE). It is also nominated for International Collaboration of the Year Award at the Times Higher Education Awards, and Socially Responsible Business and Business of the Year awards at the Liverpool Chamber Innovation in Business Awards.

Find your future

Study at LSTM



What we offer:

- Masters in Clinical Sciences, Humanitarian Studies, Tropical Disease Biology, and Public / Global Health
- Professional Diplomas in Clinical Sciences
- Short courses in Public / Global Health.

[Click here to find out more about studying at LSTM](#)



WHITNEY MWANGI
(MSc Global Health, 2021)



The experience I gained from LSTM is incomparable. You gain lasting knowledge for different professional responsibilities through first-hand experience and interaction with other students.

Student Experiences

ELIZABETH MBUGUA
(MSc Global Health):

Undertaking this course has positioned me to work with the Ministry of Health in, among other things, formulating organ donation and transplant policy in Kenya.

HASSAN IBRAHIM
(MSc Public Health):

The staff and the students' diverse experiences and backgrounds enrich discussions. Hybrid learning methods make participation inclusive for everyone.

TEMITAYO LABOR
(MSc Tropical and Infectious Diseases):

Studying at LSTM was an amazing experience. I found the course intense but enjoyable. I acquired valuable skills and interacted with world-leading experts.

DALITSO KALUA
(MSc Tropical Disease Biology):

Studying at LSTM was the best adventure I have had so far. The staff are so supportive and helpful. As an international student I felt heard, seen, and cared for.

SARAH POLLOCK
(MSc International Public Health Sexual Reproductive Health):

My time at LSTM was nothing short of inspiring. Through my learning and conversations with staff, I realised that there are many opportunities that await me now.

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Contact us:

Liverpool School of Tropical Medicine
Pembroke Place
Liverpool
L3 5QA



+44 (0) 151 705 3100



+44 (0) 151 705 3370



info@lstmed.ac.uk

Company registration number: **83405**

VAT registration number: **887125885**

Registered charity number: **222655**