

125
YEARS
1898 - 2023

LSTM
LIVERPOOL SCHOOL
OF TROPICAL MEDICINE



Annual Report

2022

2023

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Accessibility

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This document has been produced in Plain English.

Welcome



Chairman's Foreword

Jim McKenna



“As we work through our 125th anniversary year, there is still much to do, but I am pleased to say that the senior team, staff and wider LSTM community, continues to work with so much dedication and passion. I want to thank everyone for their continued efforts towards achieving our shared goal of healthy lives across the world.”

▶ To find out more, play my video here.

Director's Foreword

Professor David Lalloo



“I am delighted that our tsetse control programme, Tiny Targets, has been awarded a prestigious Queen's Anniversary Prize. This is an example of the real impact of LSTM's interventions when delivered in equitable partnership with those communities that are impacted directly by disease.”

▶ To find out more, play my video here.

Liverpool School of Tropical Medicine was established in 1898 as the first institution of its kind, undertaking research and teaching in tropical medicine. As we reflect on our impact it is important to acknowledge the origins of LSTM as an organisation which has its roots in colonialism.

As we celebrate the impact of our work we are on a journey, reflecting on those origins, to ensure our research, partnerships and education are underpinned by equity with the aim of improving health outcomes in disadvantaged populations globally.

We are developing a long-term History and Heritage strategy to guide the institution in researching and addressing our colonial past in a structured and meaningful way which we expect to publish in Spring 2024.

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 2022/23

Patron

Her Royal Highness
The Princess Royal

President

Sir Richard Evans CBE

Chair

Jim McKenna

Director

Professor David Lalloo
MB BS MD FRCP FFM
RCPS (Glasg)



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Andy Wright BSc MSc

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Robert Einion Holland FCCA MBA

Our people our culture



There was a lot to celebrate in 2023. Congratulations to colleagues who were promoted this year and to the winners in our inaugural annual staff awards. We also marked 431 years' service at a celebratory lunch with long-serving colleagues.

Progression and development

There has been lots of **career support** for colleagues including:

- Access to the free, sector-specific Prosper resources
- Our Ignite Mentoring scheme which saw 24 pairs of colleagues established across LSTM
- Leadership development programmes, including Leading in LSTM
- The Advance HE Strategic Leadership programme for professional services and academic departments which will be repeated in 2023-4

In 2024, as a signatory for the Concordat on Researcher Development, LSTM will offer a pilot Prosper in LSTM programme, giving 16 colleagues intensive career support.

Global HR Support

We are investing in every stage of our Global Employee Experience, supporting global onboarding deployment and career progression. This will involve the creation of a Global Hubs HR Working Group and the development of strategic partnership hubs through the implementation of our Global People Plan.

Equity, Diversity and Inclusion (EDI)

We continue to support our staff networks, including the newly-formed Disability and Carers Network.

This year, we launched a new programme for all staff: Let's Talk About Race. Our Executive Team undertook Advance HE's Leading an Anti-Racist Organisation programme. Specialist training on Trans awareness and positive action in recruitment will help us tackle underrepresentation.

We have made significant progress across our Race Equity and Athena Swan action plans and are launching a new Dignity at Work and Study policy and a Speak Up platform.

More on EDI

LSTM aims to be a global Employer of Choice, attracting and retaining the world's most talented people. Our People Strategy sets out our ambition and action plan. It has been our focus throughout 2023 and will remain so in the coming year.

Movers and shakers

Our senior leadership saw several changes this last year. Professor Isabel Lucas was appointed Dean of Education, Marie Gray came in as Director of External Relations, and Professors Giancarlo Biagini and Bertie Squire stepped into the new posts of Dean of Research and Innovation and Dean of Partnerships. Strategic academic appointments saw the arrival of Dr Kayla Barnes, Professor Christine Goffinet and Professor Alain Kohl.

Professor Jonathan Ball is our new Deputy Director.



Professor Henry Mwandumba was appointed Director of Malawi Liverpool Wellcome Research Programme



Priorities 2023-24

Our people our culture

An infographic outlining the priorities for human resources 2023/24 across Culture, Performance, Sustainability, Employee Experience, Progression and Development and Equity and Inclusion.



Culture



Performance



Sustainability



Employee Experience



Progression and Development



Equity and Inclusion

- Recruitment and Onboarding
- Global Support
- Wellbeing and Agile Working
- Engagement Survey

- Professional and Technical Career Paths
- Career Development Support
- Prosper Ignite Aspire
- Leadership & Management Development
- Dept Training Plans

- Training to raise awareness & literacy
- 'Start the Conversation' Workshop
- Data and Insight
- E&I Plans



Disease meets food production in a Malawi irrigation scheme study

In 2022, LSTM secured £2.6 million in funding from National Institute for Health Research, to explore and control vector borne diseases in emerging agricultural systems in Malawi, through the Shire Valley Vector Control Project (Shire-Vec). The project is a collaboration between LSTM, Kamuzu University of Health Sciences, Malawi Liverpool Wellcome Clinical Research Programme, and African Institute for Development.

Shire-Vec aims to control vector-borne diseases i.e. malaria and schistosomiasis, in a newly-established irrigation system in Malawi - the Shire Valley Transformation Programme. This 40,000-hectare irrigation scheme in Chikwawa and Nsanje districts seeks to address food insecurity and to promote agriculture-led growth in Malawi.

The project offers practical solutions to manage the impact of the SVTP across public health and agriculture. There are three work packages:

Epidemiology:

Disease abundance is quantified and historical case records assessed. Surveys of school children aged 7-13 are conducted biannually to collect malaria and schistosomiasis infection data.

Dr Rex Mbewe,
Post-Doctoral
Researcher,
MLW



Entomology:

Involves sector surveillance (monthly mosquito and snail collections are conducted around irrigated farms) and the creation of a biobank.

Social anthropology:

Behavioural practices of the farming communities and their risk of exposure to vectors is monitored.

The data so far shows high numbers of infected snails and mosquitoes, new and invasive vector species and keystone intermediate hosts for intestinal schistosomiasis, and a high prevalence of malaria and schistosomiasis in school children.

Through engagement with stakeholders and policy makers, it is hoped the novel solutions will have a lasting impact in the region by reforming policies and reducing the transmission risk and burden of vector borne diseases, whilst maintaining or improving equitable economic benefits from newly expanded irrigated land in Malawi.

Postcard from the field



Dr Claire Caygill

Post-Doctoral Research Associate in Tropical Disease Biology

Her research focuses on developing advanced organoid and organ-on-a-chip models to study infectious disease pathology, identify therapeutics and understand their mechanisms of action. Dr Caygill began as a technician within diabetes research, which led to her PhD. She's been part of a range of projects from cell biology to drug discovery and immunology.



Dr Priyanka Sharma

Post-Doctoral Research Associate in Tropical Disease Biology

Dr Sharma is working with Dr. Adam P Roberts in Tropical Disease Biology. Her work involves screening of microbial isolate libraries for production of novel antimicrobial compounds as part of the iiCON project. Dr Sharma is also the Events Coordinator of BAME (Black, Asian and Minority Ethnic) Staff Network as part of our aim to raise awareness of race equality across LSTM.

Early career researchers

LSTM's Early Career Researchers (ECRs) make an essential contribution to research, training, and partnership work.



Dr Fiona Dickinson

Post-Doctoral Research Associate in Emergency Obstetric & Quality of Care Unit

A UK-trained midwife, Dr Dickinson joined LSTM in 2012 and completed her PhD in 2021, developing a Maternity Patient Reported Outcome Measure. Dr Dickinson has a particular interest in improving the quality of maternity care in LMICs through research and quality improvement interventions.



Dr Kath Gleave

Post-Doctoral Research Assistant

Dr Gleave joined LSTM's Vector Biology department in 2015 and went on to complete a PhD by publication in 2022, which involved multiple research projects exploring the impact of insecticide resistance and parasite infection on mosquito behaviour, life history traits, and vectorial capacity. She now works with Innovation to Impact reviewing and validating methods of vector control tools.

Global Health Research

Professor Hilary Ranson



Recent projects include interventions for integrated health services for fishing communities, renewal of strategic funding for building global capacity in community engagement and bioethics research, co-development of interventions to address gender-based violence amongst female sex workers, and strengthening community resilience and trust for future pandemic preparedness.

Social Dimensions of Health Technologies Group

This year the Department of International Public Health launched this new research group. The group adopts the WHO 2022 definition of health technologies as ‘the application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of life’ (WHO, 2022). It aims to improve understanding of the social and ethical dimensions of diagnostic, therapeutic and preventive health technologies as they are developed, tested, implemented and adopted across global settings.



The Health System and Workforce Strengthening Unit

This year the team has worked on several projects including a new policy brief on intersectoral solutions to issues faced by the global health workforce, in collaboration with the WHO and European Observatory. WHO was also the team’s partner in a study and paper on governance of actions on human resources for health through institutional coordination mechanisms and human resources for health units. Staff also worked in collaboration with partners in Ghana, including the Ministry of Health and the Ghana Health Service, to support health workforce strengthening.

The unit’s main focus this year has been the **ReBUILD for Resilience programme** which has reached its halfway point. The LSTM-led consortium, which looks at health system resilience in fragile and shock-prone settings, has been active in numerous contexts including Cameroon, Lebanon, Myanmar, Nepal, Sierra Leone and Syria. Topics under investigation have included community health worker stressors and coping mechanisms, health financing, non-state healthcare, health system strengthening, service delivery, and gender and equity among health workers. Of note is work at learning sites on the Lebanon-Syria border and in Nepal’s Terai region. Overall, the consortium’s work has been very well received and given an A+ rating by its funder, FCDO.

Dean of Research Culture and Integrity

The breadth of our global health research over the last year continues to demonstrate LSTM’s commitment to equitable partnerships and capacity building, supporting and co-developing new initiatives and research projects in Sub-Saharan Africa and Asia to address some of the greatest health challenges that local communities face.

We place partnership at the heart of all of our work, benefiting from the mutual exchange of knowledge across borders and highlighting the expertise of our international colleagues working in areas where disease is most prevalent. We are committed to the co-creation of research objectives and promoting equitable authorship in international research partnerships, and an open, inclusive research culture that delivers real-world results.

Emergency Obstetric and Quality of Care Unit

LSTM's Emergency Obstetric and Quality of Care Unit combines high-quality research and capacity strengthening to reduce maternal and newborn mortality and morbidity in Africa. The team works with governments, academic institutions, health practitioners, and donors to design, implement and evaluate interventions. These collaborations ensure that research is relevant and impactful.

The unit, in collaboration with World Continuing Education Alliance Learning Management System, offers health professionals innovative Continuous Personal Development. Recently, a new antenatal and postnatal blended learning course was launched, providing flexible and self-directed learning while keeping the benefits of face-to-face support and instruction. Also, two podcast series were published, offering stakeholders a platform to discuss capacity strengthening delivery.

Centre for Childbirth, Women's and Newborn Health

The Centre for Childbirth, Women's and Newborn Health (CWNH) team is delivering nine research projects across eight countries for the NIHR Unit on the Prevention and Management of Stillbirth and Neonatal Death in sub-Saharan Africa and Asia. This includes a study exploring adolescents' experiences of maternity care in Zambia with perspectives on pregnancy care from adolescents, partners, parents, health workers and stakeholders. The early development of a Community Engagement and Involvement group of young women with experience of adolescent birth is aiding and informing the research .



Centre for Sexual Health and HIV/AIDS Research Zimbabwe

CeSHHAR Zimbabwe focuses on five thematic areas: key populations, integration of HIV prevention with sexual and reproductive health, masculinities, children and adolescents, and climate and health. By delivering research programmes and capacity strengthening with international donors this team of more than 300 staff informs health policy and programming in Zimbabwe and beyond.

This year the key populations research teams completed the AMETHIST trial: a community-led intervention to strengthen uptake and engagement with HIV prevention and care among female sex workers in Zimbabwe. Another success was the delivery of comprehensive sexual and reproductive health services to record numbers of key population beneficiaries thanks to increased funding from Global Fund and USAID. The team is also delivering four large research projects which investigate links between climate change and its adverse effects on maternal and child health.

Centre for Capacity Research

The Centre for Capacity Research (CCR) specialises in the science of research capacity strengthening, providing evidence that can help individuals and research institutions to develop higher levels of skills and a greater ability to perform useful research.

The team works closely with research funders, supporting them to use evidence on the science of research capacity strengthening in the design and evaluation of their programmes. They recently collaborated with ESSENCE on Health Research to produce **Effective research capacity strengthening**: A quick guide for funders. The guide aims to encourage funders to use an evidence-informed and common approach to research capacity strengthening programmes and is already being used by funders.

Health and wellbeing are central to the research carried out by **ARISE**. This hub was set up with partners in Bangladesh, Kenya, India and Sierra Leone and is funded by UK Research and Innovation's Global Challenges Research Fund. As the project reaches maturity, the team (including community co-researchers) has been using data to hold decision makers to account for the health of the most marginalised. Health outcomes are precarious in informal settlements and challenged by intersecting inequities, recurrent crises, poverty, environmental health hazards, and ill-health. ARISE's research allows people in informal settlements to frame their own problems and collect data for change.

A particular highlight this year has been British visual artist Luke Jerram working with ARISE and local artists in Freetown, Sierra Leone on *Power of Light* - a creative project to bring lighting to people living in informal settlements. The LED lighting provided as part of the project will also allow families to carry out important tasks in the evenings including helping children to complete their homework and family members to read or work.

 Watch a film of the work here.



Monitoring and Evaluation Technical assistance and Research (METRe)

The METRe team had an active year conducting health systems research and capacity strengthening in South Sudan, Uganda, Malawi and Zambia. Several international and bilateral organisations engaged METRe in South Sudan including UNICEF and USAID's MOMENTUM Integrated Health Resilience project to develop local monitoring and evaluation systems for its programme. The team also supported FCDO with a scoping mission to support planning of future financial commitments.

METRe staff were part of a consortium to implement the FCDO-funded Tackling Deadly Diseases in Africa programme. The team was responsible for health surveillance to ensure decision-makers across sub-Saharan Africa have data they need to quickly identify and manage disease outbreaks and better coordinate with neighbouring countries. This year METRe also supported the Global Fund for AIDS, Tuberculosis and Malaria in analysing its database collected during provision of COVID-19 vaccines in Latin America, Asia and Africa.

Also, their paper, *How to estimate health service coverage in 58 districts of Benin with no survey data: Using hybrid estimation to fill the gap*, led to an invitation to present to the World Health Organization and GAVI.



Education

Professor Isabel Lucas,
Dean of Education



What our students say:

4th for teaching

4th for skills development

6th place overall

90% student satisfaction

Top 10% for PhD supervision

*2022/23 cohort results for national student feedback surveys

It has been a successful year for Education at LSTM with our students making a demonstrable difference around the world.

Here we present highlights of activities as a World-Leading Specialist Provider (WLSP) of education in health - one of only 22 Higher Education (HE) providers in the UK.

Thanks to all our students for working with us to advance their discipline and continuing to make LSTM a unique place to study.

World-Leading Specialist Provider

LSTM was awarded WLSP status by the English HE Regulator (Office for Students - OfS), testament to the exceptional quality of our provision. The OfS also gave £5.6m funding to support the redevelopment of the Mary Kingsley Building as part of our ongoing project to create an accessible central point for Education.

Field trip to Geneva

Students on our Humanitarian Studies and Public Health Humanitarian Health programmes organised a fieldtrip to Geneva, Switzerland - a city with one of the highest concentrations of humanitarian organisations in the world. The trip involved presentations and site visits to some of the key players in the humanitarian system, including the UN Refugee Agency, the Red Cross, Sphere, the United Nations Environment and Development Programmes, and the International Council of Voluntary Agencies.



LEAP (Leadership Education Academic Partnership)

LEAP is a collaboration between LSTM, the Humanitarian Conflict Response Institute in the University of Manchester, and Médecins Sans Frontières. In November we welcomed more than 20 LEAP students to LSTM for a two-week intensive learning experience. Students from Somalia, India, Pakistan, Sierra Leone, South Africa, Palestine, the UK, Canada and France took part in classes on research design, the use of evidence, literature retrieval and academic writing. One student, Dr Asma Abdulahi from Somalia, even spoke to a Houses of Parliament Select

Committee about the food crisis in her country.

Launch of the Counselling Service

Two experienced counsellors have launched LSTM's Counselling Service. As well as offering counselling sessions, Michelle in Malawi and Tracey in Liverpool will be providing workshops to staff and students to support wellbeing and build emotional resilience.

First Postgraduate Research Conference



Over 250 students and staff from LSTM's global research community gathered to celebrate the impactful work of our postgraduate research students. Delegates were treated to a wide range of student talks and posters representing the diversity of LSTM's research. Pembroke House, with its inclusive technology, was the ideal venue for the event, allowing colleagues and students to join online from our partner hubs. A record number of students made it in person, travelling from as far as Sierra Leone and Nigeria to meet their Liverpool-based counterparts.

LSTM continues to deliver world-class translational research outputs. We provide a supportive and sustainable translational environment which enables new knowledge to be transformed into life-saving and life-enhancing diagnostics, treatments and interventions that improve the health and wellbeing of disadvantaged populations on a global basis. This year, this important pillar of LSTM's work was strengthened further through the establishment of a dedicated innovation and enterprise team, enhancing our ability to deliver on our strategic priorities and overarching mission to improve global health. We've also continued to witness outstanding successes through new funding awards, industry partnerships and prizes which provide welcome recognition and enable us to continue our vital work.



Professor Giancarlo Biagini, Dean of Research & Innovation

Department of Clinical Sciences

The team conducts world-class, clinically-informed research and education that improve health outcomes for people in low- and middle-income countries (LMICs). This year collaborations with partners, clinical training, professional development and post-graduate education have gone from strength to strength.



Impact & Innovation



This year, LSTM has continued to develop its Human Challenge Facility (HCF) - where human volunteers test vaccine and drug safety and efficacy.

Human Challenge Model

A £4.7 million award from the Research England Development Fund to establish the new facility in Accelerator Building, complemented by £2 million from The Pandemic Institute. Our partnership with the Oxford Vaccine Group also continues to strengthen, opening new avenues for research and collaboration.

We continue to have impact in LMICs and the UK. Our achievements include recruitment to the huge Stop-RSV (respiratory syncytial virus) study, which will be instrumental in shaping UK childhood immunization policy.

Our groundbreaking PCV13 trial in Malawi

is the first of its kind, setting a precedent for pneumococcal vaccine research and contributing to understanding of human infections in the region. We have also completed recruitment for Pneumo 2, the largest Controlled Human Infection Model study ever conducted, with the registration of more than 10,000 volunteers. LVG (Liverpool Vaccine Group) is taking the lead in a clinical vaccine trial for Middle East Respiratory Syndrome and we have introduced a new mycobacterial (BCG) controlled human infection model, with the potential to revolutionise the development of TB vaccines, therapeutics, and diagnostics.



**Centre for Snakebite
Research & Interventions
(CSRI)**



Simon Townley

CSRI seeks to improve health outcomes in disadvantaged populations affected by and at risk from snakebite.



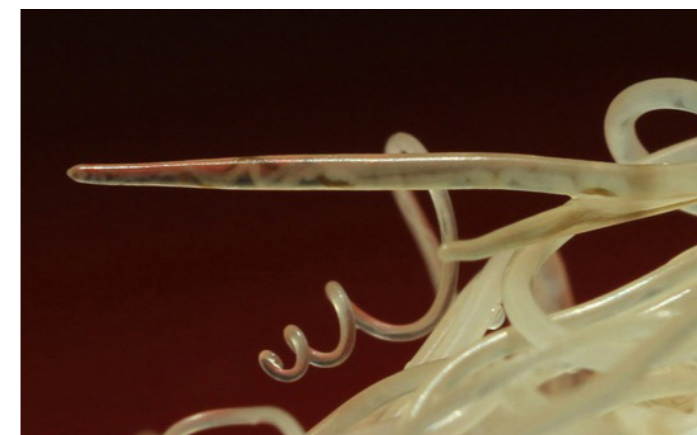
Simon Townley

Therapeutics for Neglected Tropical Diseases

Investigators at The Centre for Drugs and Diagnostics (CDD) and Centre for NTDs are being funded by the MRC to develop new treatments for filariasis. The Filariasis Lipids in Pathogenesis (FLiP) Programme promotes new therapies to improve the quality of life of filarial lymphoedema (elephantiasis) sufferers and contribute to elimination programmes.



Staff at CDD have made a breakthrough in establishing an alternative novel preclinical model to cats and dogs to accurately evaluate drugs against veterinary zoonotic filariasis, such as heartworm disease.



Dr Daire Cantillon

Anti-microbial resistance (AMR)

Dr Daire Cantillon won an inaugural Paul Bedingfield Prize in Global Health Research and a Director's Catalyst Fund award to research mechanisms of AMR in mycobacterium abscessus, an emerging high-risk chronic bacterial lung infection.

As part of iiCON, CDD investigators Dr Shaun Pennington and Prof Giancarlo Biagini established a new partnership with drug discovery and development company Evotec to establish an organoid infection model for the pathogen responsible for gonorrhoea. It is hoped this platform, once validated, can refine the drug discovery process of new antibiotic compounds.

Award success

A highlight from the last year was the award of the African Snakebite Alliance project to Professors David Laloo and Ymkje Stienstra. This £4.5 million award from Wellcome will support development of an alliance with several African partners. It is designed to identify and implement public health research to address critical gaps in snakebite knowledge across the continent. A second project, awarded by the Medical Research Council (MRC) Applied Global Health fund to Professor Stienstra, seeks to identify and build an evidence base for interventions that reduce the risk of snakebite in Africa.

Clinical success

Dr Michael Abouyannis successfully completed the first Phase I clinical trial of an

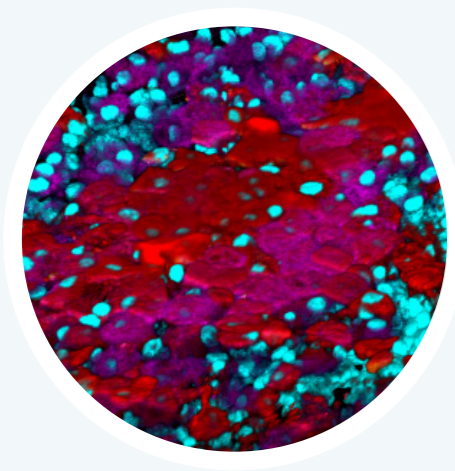
oral snakebite drug in healthy volunteers in Kenya. This Wellcome Trust and Cures Within Reach-funded research will move to clinical studies in snakebite patients. Dr Abouyannis also led the development of a global core outcome set which described key universal measures that should be used for all future snakebite clinical trials.

Dr Cassandra Modahl



In our laboratories, Dr Cassandra Modahl began a new project to investigate cytotoxic snake venoms. Supported by the Academy of Medical Sciences, Dr Modahl will establish new organ-on-a-chip and organoid lab models to characterise the skin and kidney damage caused by snakebite envenoming, with the goal of developing new therapies.

Dr Stuart Ainsworth began his NC3R-funded research to improve preclinical models of snakebite envenoming so they better mimic actual snakebites.



Emerging viral pathogens

CDD investigators are supporting anti-infectives specialist Inflex Therapeutics in the development of a new drug for COVID-19. There is an urgent need for alternative therapies in case virus mutations lead to antiviral resistance, and the COV-X project has already identified a promising lead which is being evaluated using LSTM's COVID therapeutics testing pipeline.

Diagnostics update

LSTM continues as UK lead for the Foundation for Innovative New Diagnostics (FIND) for the evaluation of novel diagnostics for emerging diseases and pandemic threats. This year we evaluated diagnostic tests for RVS, Influenza A/B and SARS-CoV-2, and follow-up funding from FIND will support the evaluation of tests for the mpox virus. CDD has also contributed to WHO International Standards for SARS-CoV-2 RNA and antigen.

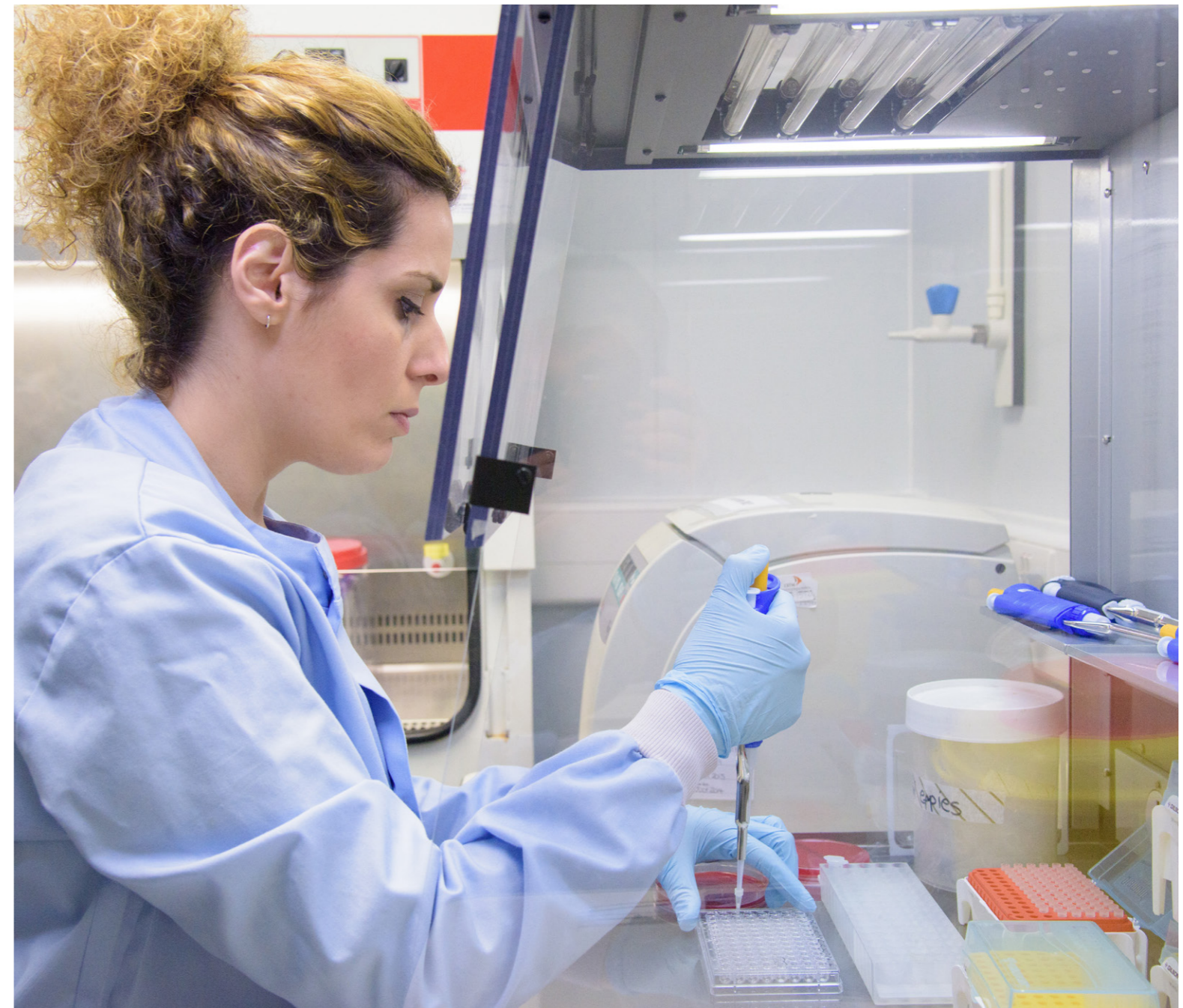
The CDD diagnostics group has partnered with the UK Public Health Rapid Support Team and the Nigerian CDC to implement a new LSTM-designed molecular test for determining mpox virus lineages, and developed molecular tests for SARS-CoV-2 variants of concern.



This year saw the opening of the UKRI-funded Good Clinical Practice virology suite. Currently for the assessment of novel treatments for COVID-19, the project has the potential to expand to other viral diseases.

CDD investigators have successfully developed the first lateral flow assay prototype to detect Crimean Congo Haemorrhagic Fever (CCHF) viral antigens. Pilot testing of the prototype has demonstrated performance that exceeds the WHO target product profile and it is now being evaluated in the field. A portable CCHF test designed by the group is hoped to lead to faster patient triage and a reduction of CCHF cases and deaths.

A grant from the Bill and Melinda Gates Foundation has enabled the Functional Genetics Group to build molecular research capacity towards new mosquito control solutions in Burkina Faso. The grant involves hosting researchers and PhD students from Burkina Faso to learn the processes of mosquito transgenesis and molecular analyses as well as building training and research facilities, both in the UK and in Burkina Faso.



LSTM innovation team

LSTM's newly formed enterprise and innovation team has had an impactful first year building strategic partnerships and generating new innovation consortia.

The team has developed a formal partnership with medical research charity Life Arc, securing £2.7M to further accelerate global health translational research projects for new infectious disease interventions in low-income settings. It has established the £1.1M FLIGHT consortium with partners, funded by Research England, to generate a new framework for innovation excellence for UK HEIs to advance new global health technologies.

iiCON

Since 2020, iiCON has helped 36 new products enter the market by working with a global network of hundreds of companies. As a result, patients and populations have profited from more than five billion units of new personal hygiene products, medical devices, vaccines and other disease prevention products.

The success of iiCON's activity has seen it grow into a c£200 million infectious disease R&D programme, attracting support from prestigious global organisations including The Bill and Melinda Gates Foundation, Against Malaria Foundation, The Wellcome Trust, and the MRC.

Awards & Honours



November Liverpool Chamber of Commerce Awards

LSTM won the Responsible Business Award for the Bump It Forward campaign at the Liverpool Chamber of Commerce Awards, while iCON won Best Small Business. Bump It Forward encouraged people to donate the cost of their COVID-19 vaccine to provide PPE and other equipment for African health workers.

Dorothy Temple Cross International TB Collaboration Grant

Researchers at LSTM, the Instituto Nacional de Saúde of Mozambique and the Catholic University of Bukavu in DRC won a Medical Research Foundation award to support new, collaborative projects between mid-career tuberculosis researchers in the UK and Africa.

Young Investigators Award

International Public Health PHD student Hellen Barsosio was given the American Society of Tropical Medicine and Hygiene's Young Investigators Award.

February YES22 competition

Young researchers Ashleigh Howard and Steven Mitini-Nkhoma with Charlotte Fawcett from University of Leicester won Best Healthcare Plan at YES22 – a competition for UK HEIs that helps postgraduate students, postdoctoral researchers, research fellows, and technicians learn about commercialising research ideas.

March

Smarter Working Live Awards

Liverpool Vaccine Equity Project took home the Building Collaborative Communities prize at the awards celebrating innovation, collaboration and excellence in the public sector.

Dr Cassandra Modahl



April

Northern Leadership Awards

Professor Janet Hemingway was recognised for her achievements in infection control and vaccine development, picking up Overall Leader of the Year and the Regional Leadership Award.

Academy of Medical Sciences'

Dr Cassandra Modahl was awarded up to £125,000 over two years and access to Academy's mentoring and career development programme on scheme supporting biomedical researchers at the start of their first independent post.

June

Charity of the Year

LSTM was named Liverpool Chamber of Commerce's Charity of the Year. Businesses in the region were invited to support LSTM's 125th anniversary by providing funding which could support future scholarships for North West students.

July

Innovation in Business Awards

LSTM was shortlisted for Business of the Year with over 30 employees by the Liverpool Chamber of Commerce, as well as Community Impact Award for the Vaccine Equity Project.

August

THE Awards' University of the Year shortlist

LSTM was shortlisted for THE Awards' flagship prize for the first time, recognised for our visionary leadership and transformative research and education, collaborations and partnerships that affect change for disadvantaged communities on a global scale.

Professor Mark Taylor



September Hemingway Award

Professor Mark Taylor received this year's Hemingway Award, a joint prize between LSTM and Royal Society of Tropical Medicine and Hygiene to recognise outstanding contributions to tropical medicine and hygiene.

Academy of Medical Sciences Professorship

LSTM Professor of Virology Christine Goffinet was part of a group of international emerging research leaders to benefit from up to £500,000 grant funding to take up UK Professorships.

Strategic Partnerships

Professor Bertie Squire, Dean of Partnerships



During my time at LSTM, the two things that have not changed are an unremitting focus on improving the health of disadvantaged populations and an ethos of collaboration. As we move forward into the next 125 years, we are emphasising commitment to equity in our academic partnerships in several ways, including through the establishment of a Global Hubs Council with organisations in Zimbabwe, Kenya and Malawi.

Zimbabwe

CeSHHAR (Centre for Sexual Health and HIV/AIDS Research) Executive Director, Professor Stanley Luchters leads the team working on an established programme of sexual and reproductive health research and a portfolio of research on the intersection of climate change and health. Stanley and his colleagues Dr Euphemia Sibanda and Dr Webster Mavhu have roles in LSTM's Department of International Public Health.

Malawi

The Malawi-Liverpool-Wellcome Trust (MLW) Research Programme is led by Professor Henry Mwandumba. MLW has increased capacity for African researchers and medics to be trained in Africa.



Kenya

Professor Feiko ter Kuile leads LSTM's malaria research collaboration with KEMRI's (Kenya Medical Research Institute) Centre for Global Health Research and the US Centers for Disease Prevention malaria branch in western Kenya. Dr Simon Kariuki (Chief Research Officer, KEMRI) has an honorary appointment and Dr Victor Akelo recently joined as Senior Director for Science, Site Strategy and Implementation Unit for the Child Health and Mortality Prevention Surveillance (CHAMPS) project. LSTM's office in Kenya provides support to academics in Kisumu and manages a portfolio of research on maternal and newborn health led by Prof Charles Ameh, Head of Department of International Public Health.

Other partnership work

The Liverpool Health Equity Project (HELP) supports the delivery of local solutions based on local data, to overcome barriers to vaccine uptake and other key health services.

LSTM's Amina Ismail supports multidisciplinary Community Innovation Teams working across deprived areas of Liverpool, identifying reasons for health inequity. Liverpool-based clinicians work with the NHS, while experts advise the UK Health Security Agency on imported infections.

Another includes the work with the Centre for Research in Infectious Diseases led by Prof Charles Wondji in Cameroon focusing on infectious diseases and mosquito borne infections.

Consortia hosted by LSTM include: ARISE, working with marginalised people in informal urban spaces in Bangladesh, Kenya, India and Sierra Leone and LIGHT, supporting policy and practice in transforming gendered pathways to health for those with TB to improve health, socio-economic and equity outcomes.

[Learn more here.](#)





LSTM organised seven alumni meet-ups in London, Glasgow, Mombasa, Nairobi, Harare, Chicago and Addis Ababa

Alumni

Alumni engagement has seen a significant boost in the past year. Our aim has been to reconnect as many alumni as possible and ensure they stay informed about exciting developments.

These gatherings provided a platform for alumni to reconnect, share experiences, and reminisce about their time at LSTM. We remain committed to hosting future events to further strengthen the alumni network.

Outreach efforts have led to over 50 new profiles, showcasing the remarkable achievements and contributions of the alumni community. These serve as a testament to the profound impact graduates are making in the field of tropical medicine and humanitarian efforts.

With a growing database of over 5,000 alumni and friends, we are planning to introduce an innovative alumni engagement scoring system, to identify the most effective activities for alumni engagement, and highlight areas to enhance outreach efforts.

Meet our alumni

Pamela's international experience at LSTM established critical professional relationships as part of the value of collaboration in global health. She is a Lecturer at the University of Nairobi, contributing expertise to public health programmes and operational research.



Dr. Pamela Miloya Godia (PhD, 2012)

Dr. Nyaxewo Musonda, with over 15 years of experience as a paediatrician, specialises in paediatric HIV/TB management. Her LSTM experience was pivotal in shaping her career, and she now continues her private practice at Pendleton Family Practice.



Dr. Nyaxewo Musonda (MSc Tropical Paediatrics, 2018)

Colin, a humanitarian leader, holds a master's degree in Parasitology & Medical Entomology from LSTM. He has worked with various global organisations and currently serves as CEO at MapAction, emphasising geospatial analysis for effective crisis response.

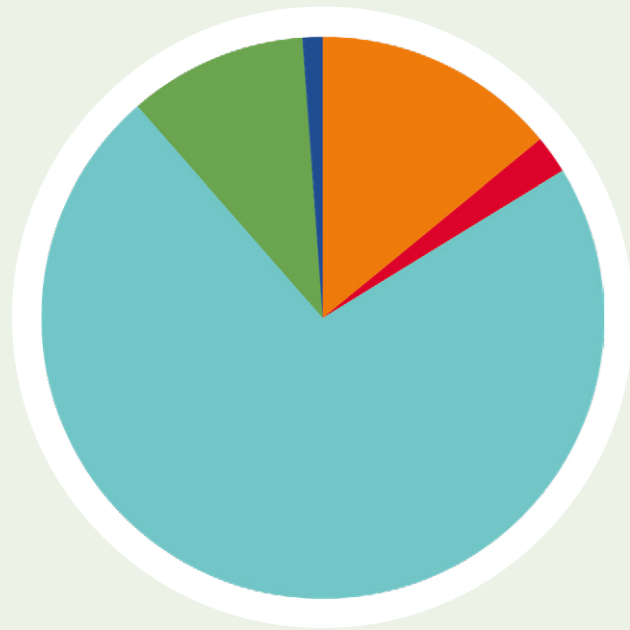


Colin Rogers (MSc Parasitology & Medical Entomology, 1994)

Financial highlights

The LSTM Group has had another successful year with a group surplus of £7.8m. Research income has grown by 10% (including gifts in kind), funding from the Office for Students and Research England has grown 4% and overall income was £155 million. Net assets have improved by 16% and cash and investment balances remain very healthy. This has been achieved against a backdrop of significant investment in buildings and IT infrastructure.

2022/23 group income



73% Research grants and contracts

10% Other income

1% Investment income

14% Funding body grants

2% Tuition Fees and education contracts

0% Donations and endowments income



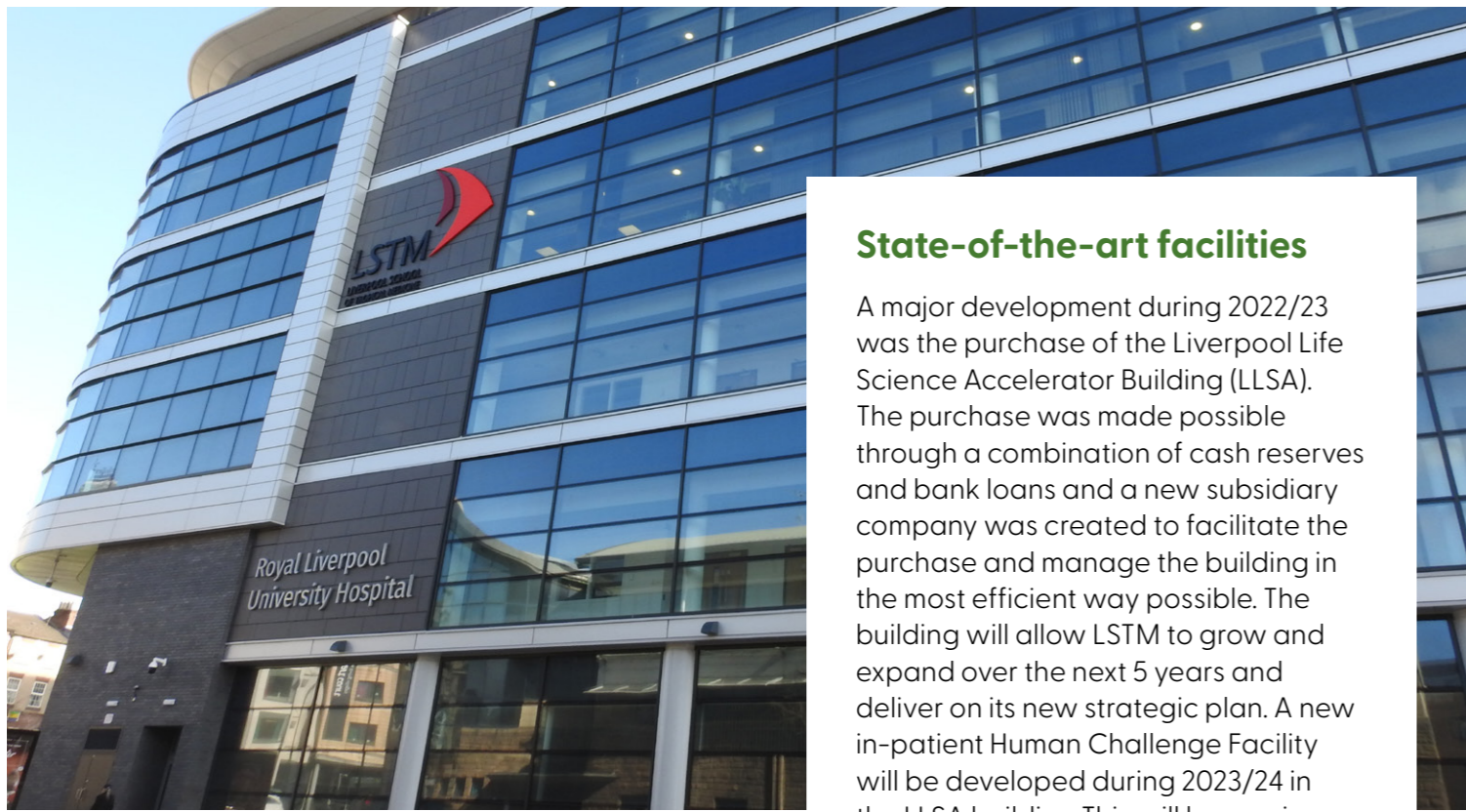
Highlights

73% of group income through research grants and contracts

4% increase in funding body grants

£7.8 million group surplus

£56 million net assets at 31 July 2023



State-of-the-art facilities

A major development during 2022/23 was the purchase of the Liverpool Life Science Accelerator Building (LLSA). The purchase was made possible through a combination of cash reserves and bank loans and a new subsidiary company was created to facilitate the purchase and manage the building in the most efficient way possible. The building will allow LSTM to grow and expand over the next 5 years and deliver on its new strategic plan. A new in-patient Human Challenge Facility will be developed during 2023/24 in the LLSA building. This will be a unique and cutting edge facility for infectious disease research.

Group financial position

The LSTM Group has reported total comprehensive income of £7.8 million (2022: £7.5 million deficit) this year with research income outstripping predictions and a substantial increase in funding from Research England based on a fantastic result in the recent REF exercise. Excluding USS pension provision changes, currency and unrealised investments adjustments, an underlying group operational surplus of £6.9 million (2022: £6.5 million) has been achieved.

Group net assets at the year-end totalled £56 million (2022: £48 million) and excluding the USS pension provision of £20 million (which is likely to be reversed in 2023/24), net assets totalled £76 million. Group cash has decreased by £4 million, largely reflecting the cyclical nature of research grant drawdown and applications.

The research pipeline remains strong for both LSTM and IVCC projects with a combined unexpended balance of £181 million (2022: £183 million) and the overall portfolio balance remains healthy at £620 million (2022: £561 million). Post pandemic, the number of applications submitted to funders during the year rose 13% on the previous year to 252.

The financial forecast for 2023/24 is for a breakeven position as the organisation continues to invest in growing and improving its infrastructure, transforming its professional services functions and growing its academic base.

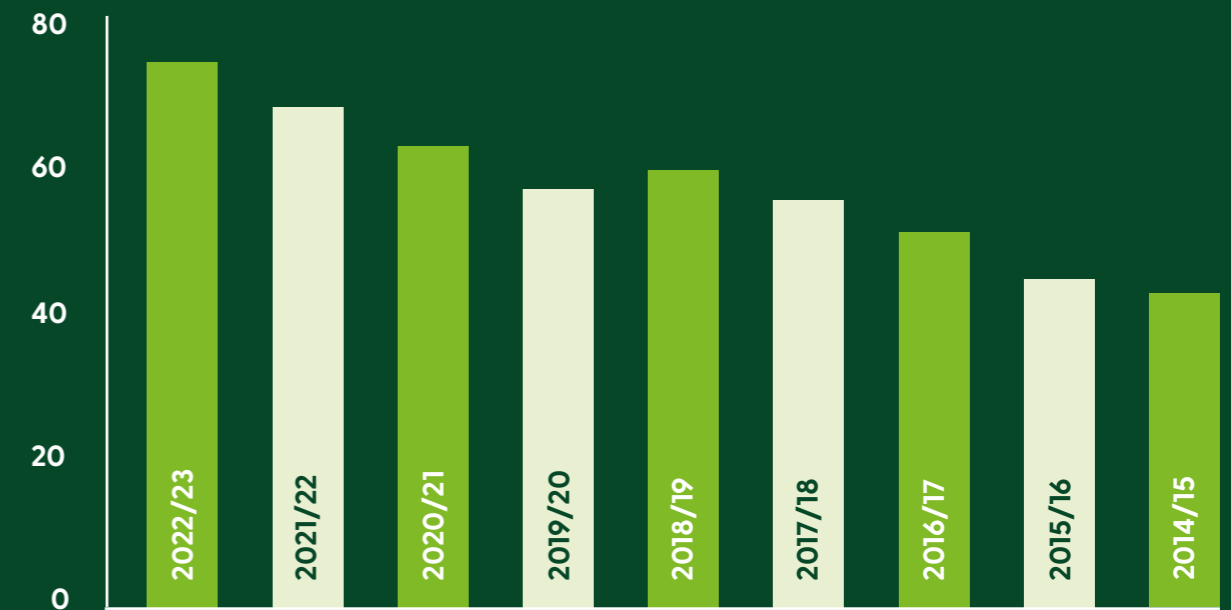
Investing Overseas

In Malawi, construction of the CREATOR building, in conjunction with our partners Wellcome and University of Liverpool is nearing completion. This development will accommodate an expected 30% increase in clinical research activity as well as creating a training facility for doctors and scientists.

IT Infrastructure

Significant cash has been spent on updating the IT infrastructure over the past 12 months to bring it into the 21st century. This work will continue as an ambitious 'digital first' strategy is rolled out. The implementation of a new finance system began in April and will be completed the following April. This will transform the access, reporting and analysis of financial information throughout the organisation and lead to both process efficiencies and enhanced decision making.

Overall, the financial condition of LSTM remains healthy despite challenging world political and economic conditions and ongoing funding challenges that remain within the Higher Education sector.



Group net assets excluding USS pension provision (£m)

LSTM Group

1. IVCC facilitates the development of novel and improved public health insecticides and formulations, and provides information tools to enable their effective use.

Mitsui Chemicals and Crop Life Solutions achieved WHO Pre-Qualification listing of VECTRON™ T500, a new indoor residual spray product containing TENEBENAL™, while Interceptor® G2, a next generation treated net, received a WHO-Global Malaria Program policy recommendation. Trials carried out in Tanzania (funded by Wellcome) and Benin (funded by Unitaid and the Global Fund) demonstrated that the nets reduced malaria incidence by 44-46% compared with standard, pyrethroid-only nets.

In June, IVCC announced that the Centre Suisse de Recherches Scientifiques (CSRS) facility had been granted Good Laboratory Practice certification by the South African National Accreditation System. CSRS conducts studies with new malaria vector control products against local resistant mosquito populations in the environments where they will be used. Also with support from IVCC, the Papua New Guinea Institute of Medical Research opened a facility which will support the Newly Adapted Tools Network Against vector-borne disease Transmission programme, funded by IVCC through funds from the Australian government.

Also, following the retirement of Nick Hamon in December,

Justin McBeath was appointed as IVCC's new CEO.



2. LITE growth through spinout company, iiDiagnostics.

LITE's facilities are part of the UK Good Laboratory Practice compliance monitoring programme. This contributes to regulatory non-clinical laboratory studies that feed into WHO dossiers for product prequalification, facilitating market uptake. LITE data recently contributed to the prequalification of a new product for Indoor Residual Spraying.

After setting up, iiDiagnostics, LITE is growing its portfolio to meet market demands, now including topical repellent testing and is working towards spatial repellent testing.



Insecticide Treated Nets (ITNs) testing were also introduced this year. LITE has implemented tests to quantify behavioural changes when mosquitoes interact with an ITN.

The Liverpool Insect Testing Establishment (LITE) test vector control products for commercial and academic partners, aiming to accelerate their path to market. Working with the Department of Vector Biology, LITE specialises in rearing and testing insecticide-resistant mosquito colonies. The team maintains eleven colonies, housing six mosquito species, each a vector of human diseases.

3. Well Travelled Clinics

The popular drop-in clinic in Liverpool reopened this summer.

Though some staffing challenges impacted on WTC service delivery. However, after recruiting new personnel and introducing a new patient administration system WTC ended the year on a high.



WTC continues to make a positive difference to health and wellbeing, for its humanitarian and corporate clients, and in its work with local hospitals.

WTC won a new occupational health contract and is working with The HALO Trust, which works in landmine clearance. WTC also secured a contract to recruit to a randomized, double-blind, placebo-controlled trial to evaluate a dietary supplement to maintain gut health during travel. This research is funded by the Henry Jackson Foundation and is run with the Uniformed Services University, USA and the Royal Centre of Defence Medicine, Birmingham.

WTC contribute to higher and continuing education in LSTM. This year, twelve students undertook the Diploma in Travel Health. Staff also teach on the Diplomas in Tropical Medicine and Hygiene, and Tropical Nursing, as well as contributing to teaching Master's and PhD students. WTC also welcomed several student placements.

4. Clinical Diagnostic Parasitology Laboratory (CDPL)

The last 12 months have been challenging but exciting for CDPL. The team's workload has increased due to a rise in travel and through its collaboration with LSTM's clinical researchers, resulting in more returning travellers testing positive for parasites. CDPL has provided a quality diagnostic service to health professionals treating these patients. Despite this increased workload the team continues to meet turnaround times.

The CDPL continues to work with LSTM's Diagnostic Research Team. This link provides a mechanism for the validation and verification of molecular tests that will enhance CDPL's portfolio of diagnostic testing. Staff also support teaching at LSTM, providing demonstrator and examiner roles for the practical aspects of the Diploma for Tropical Medicine & Hygiene. This gives CDPL staff the opportunity to meet students and enhances links and knowledge sharing with LSTM's teaching team.

The last year has also seen staffing changes with the retirement of Paula Wright after 40 years at LSTM (thank you, Paula!) and the arrival of two new Biomedical Scientists and a new Medical Laboratory Assistant.

125 years

1. Anniversary celebrations

Our celebrations have included an ambitious programme of events that have transformed public engagement and inspired new audiences while raising awareness of global health issues.



This began with a lecture by Professor Chris Whitty, Chief Medical Officer for England and the UK government's Chief Medical Advisor. Professor Whitty delivered 'A systematic approach to addressing pandemics and epidemics' at LSTM's annual Leverhulme Lecture (Oct 2022).

2. Living Liverpool

This science project (based on Swab and Send), engages the public in the hunt for new antibiotics.

Living Liverpool took the citizen science Swab and Send project into schools allowing LSTM scientists to create a unique map of Liverpool's microbiological profile.

The project builds a microbiology map of Liverpool with 125 swabs potentially looking for new active compounds and antibiotics.



3. Immersive exhibits

The project also saw the co-creation of the Tropical Medicine Time Machine (TMTM) with two sci-artists. This pop-up museum landed at venues and festivals across the city, transporting audiences through LSTM's history and exploring its ground-breaking work in vector biology, snakebite research, public health, and travel health. TMTM also featured school 'loans boxes' containing workbooks and

activities, delivered to schools within Everton in the Community's (EITC) network.

The exhibit featured past scientists Dr Alwen Evans (LSTM's first female lecturer in Entomology and her landmark study of flies and mosquitoes and their role in spreading malaria), and Professor Tim and Dr Joy Gordon. It was on display at the World Museum and Museum of

Liverpool in the summer of 2023 and reached over 300,000 visitors.

Visitors were invited to explore the work of past scientists to discover how their legacy impacts research of today, as LSTM continues to address some of the major health challenges of our time.

4. Past, present and future

LSTM secured a National Lottery Heritage Fund grant to create an extensive programme of activity that invited audiences to reflect upon and engage with our rich heritage and work. LSTM - Past, Present, and Future welcomed students from Liverpool LifeScience UTC to explore the institution's past scientists and their stories.

Students researched and presented on LSTM's early scientists and influencers, touching on themes of colonialism and women in STEM subjects. The programme also engaged the city's adult learners via a series of talks highlighting the importance of addressing LSTM's colonial past, and the impacts of colonialism and racism today.

LSTM staff also took part in events marking British Science Week and Pint of Science.



5. Future plans

We are developing a long-term History and Heritage strategy to guide the institution in researching and addressing our colonial past in a structured and meaningful way which we expect to publish in Spring 2024.

Philanthropy

Philanthropy has helped to support 15 scholarships for students in 2023.

“ Without this scholarship, attending this course would have been a distant dream for me. I’m deeply grateful for the donor’s generosity supporting students like me who couldn’t afford educational opportunities overseas. By investing in my education and future you are more than just changing one person’s life, it has the potential to impact an entire nation as the knowledge I gain will be channelled to the community and make a great impact. ”

Zikre Gebremariam
(MSc Tropical
Paediatrics, 2024) -
Thomas Mark



125 Campaign

We are approaching the start of our 125th anniversary year and our first institution-wide fundraising campaign. The campaign focuses on building resilience, skills and capacity in low and middle-income countries (LMICs) through investing in brilliant people and partnerships to bridge gaps in global health and scientific capacity. It will:

- Support breakthrough research ideas through seed funding.
- Provide scholarships and fellowships for talented students.
- Invest in our research and training infrastructure.
- Develop global scientific leaders.

Fundraising

Thank you to all who have supported LSTM over the past year; individual donors, organisations, alumni, and trusts and foundations, raising almost £260,000 to support LSTM’s critical work around the world.



Institute for Resilient Health Systems

The Institute will examine and understand critical drivers of resilience, vulnerability and inequity, and how these are tested and exacerbated during crises. We will apply knowledge from experience in fragile and unstable contexts to the most vulnerable health systems. Critically, it is designed as a virtual entity, with key investments focussed on developing and connecting scientific leaders in LMICs.

Charity of the Year (COTY)

We were delighted to be named Liverpool Chamber of Commerce’s COTY for 2023-24. The partnership provides opportunities to engage the local business community with LSTM’s 125 Campaign through supporting scholarships for the next generation of global health leaders.

Supporting LSTM

We are actively seeking a group of 125 donors to support our 125 Campaign and join the ‘Founder’s Circle’. By making a gift of at least £1,000, you can support LSTM’s work to make a difference in global health, and to improve the health outcomes for the world’s most vulnerable. We would like to thank those who have already supported or pledged their support. All gifts, irrespective of size, contribute to LSTM’s work.

Learn more here.



Student quotes



Isabel Cooper, MSc Tropical Disease Biology

“This has been a successful year for me. I’ve developed a wide range of laboratory skills and tropical disease knowledge, along with the theory to compliment those skills and put my work into a wider context. I have also enjoyed participating in LSTM’s networking events and have widened my industry network which is creating career opportunities. The LSTM experience is giving me essential skills which I can apply to all aspects of my life.”

Yolanda Emmanuel Molkuh, Master of Public Health (Sexual and Reproductive Health) and recipient of a 125th Anniversary Scholarship

“I once heard “the health of a nation will not improve until the health of a woman is improved” and I thought ‘why save just one life when you could save a hundred?’ My passion for medicine comes from a desire to improve prospects for women in Nigeria. Being awarded a scholarship is not simply benefitting me – it’s building knowledge and expertise to share with others, empowering my whole community.”

“

Sammy Obabo, Master of Public Health (Sexual and Reproductive Health) and recipient of a 125th Anniversary Scholarship

Throughout my long nursing career, I have been inspired by the community, which faces challenges in terms of knowledge gaps and lack of resources and expertise. This course is the ideal path to advance my career, aligning with my professional goals. It will help me gain expertise, join the sexual and reproductive health leadership in Kenya, and better serve underprivileged populations.

”



“

Henry Youd, MRC DTP PhD Candidate

I have had a rewarding start to my journey at LSTM, looking at insecticide resistance in mosquitos. I’ve gained technical skills and have become a proficient programmer. I’ve also improved my skills through acting as a postgraduate research representative, demonstrating, reviewing manuscripts, and presenting at a conference. I have achieved this with the excellent advice and support of my fantastic supervisors and colleagues at LSTM.

”



Study at

125

YEARS

1898 - 2023

LSTM

LIVERPOOL SCHOOL
OF TROPICAL MEDICINE



Become a global health leader of tomorrow.

An Unrivalled Learning Experience

Our programmes offer an authentic, skills-focussed applied learning experience with global impact.

Extend your subject knowledge, advance your career, and gain a competitive edge in global health when you study at the world's first school dedicated to tropical medicine education and research.

Our expert led programmes focus on learning through real-world case studies and scenarios that develop students' confidence in solving complex problems.

Alumni Discount

LSTM offers a generous 20% tuition fee discount* to students who choose to continue their studies or return to LSTM to gain a Master's or Postgraduate Research Qualification.

For more information contact:
mylstm@lstmed.ac.uk

For more information visit:
lstmed.ac.uk/study

Public benefit statement

The charity trustees of Liverpool School of Tropical Medicine (LSTM) 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.



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