Leading the work on neglected tropical diseases

The 10th anniversary of the London Centre for Neglected Tropical Disease Research is an occasion to reflect on the achievements and the research targets for the future.

On Jan 26, 2023, the London Centre for Neglected Tropical Disease Research (LCNTDR) celebrated its 10th anniversary with a research event at the Natural History Museum, London, UK. Founded in 2013 with an original partnership between Imperial College London, London School of Hygiene & Tropical Medicine, Natural History Museum, and the Royal Veterinary College, the LCNTDR is an innovative research collaboration that brings together leading experts to conduct cross-disciplinary and cross-sectoral research to build the evidence base around the design, implementation, and evaluation of neglected tropical disease (NTD) programmes.

Since its inauguration, the Centre has grown to include thirteen research institutions from London and low-income and middle-income countries where NTDs are endemic, and has contributed to a broad range of major research projects, such as those that test the feasibility of interrupting the transmission of soil-transmitted helminths and schistosomiasis (the Geshiyaro Project and DeWorm3).

Speaking at the opening of the event, LCNTDR Director, Joanne Webster, stated "This 10th anniversary comes at a particularly exciting time for the Centre, as we welcome new members from both the UK and disease-endemic settings, a new and expanded Executive Board, and our broader focus across the neglected tropical and zoonotic diseases. It also comes at an exciting time amidst several key international developments within the NTD sphere, notably the call for continued research to support implementation of cost-effective interventions to both consolidate the hard-won gains of recent years and to accelerate progress toward the 2030 targets. Such efforts should help to ultimately reduce the burden of disease for millions of people and their animals worldwide".

A keynote address was delivered by Giulio De Leo, Professor of Biology, Stanford University, who acknowledged the disruption to NTD programmes caused by the COVID-19 pandemic, and spoke about further threats to the achievement of global NTD targets. De Leo spoke about the impact of climate change on NTD programmes, and in particular, the effect of increased temperatures on the lifecycles of NTD transmitting insects, including mosquitoes and ticks, which will benefit from anthropogenic changes and will increase their geographical range and abundance as temperatures increase.

Reflecting the wide range of research undertaken across LCNTDR members, the conference included presentations on Chagas disease, dengue, toxoplasmosis, schistosomiasis, soil-transmitted helminths, and skin NTDs, in addition to crosscutting presentations including diagnostics and socio-economics.

Examples from the nine presentations given at the event included: Hugo Turner, Imperial College London, presented an economic evaluation of *Wolbachia* deployments for dengue control. The bacterium *Wolbachia pipientis* has been used by researchers since 2011 to block the ability of mosquitoes to spread dengue, in addition to other viruses such as Zika, and chikungunya. This is achieved by injecting Wolbachia into the eggs of *Aedes aegypti* mosquitoes. The study found that targeting high burden cities with *Wolbachia* deployments to control dengue would be cost-saving from a societal perspective and cost-effective from a health sector perspective in Vietnam.

Michael Marks, London School of Hygiene and Tropical Medicine, presented the work of the Skin Health Africa Research Programme (SHARP), to generate evidence on integrated skin NTD programmes. Skin NTDs, including Buruli ulcer, mycetoma, onchocerciasis, yaws, lymphatic filariasis, leishmaniasis, scabies and leprosy are the 18th leading cause of ill health globally and one of the top 10 causes of non-fatal disability. Through SHARP, researchers are developing and evaluating tailored, integrated strategies for early diagnosis, adherence support and stigma reduction, which can be scaled up and implemented by health ministries. This work aims to overcome limited community awareness of skin NTDs, increase capacity of healthcare workers to make accurate diagnoses, and ensure that individuals complete effective treatment by making medicines, dressing and wound care available and accessible to affected populations.

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At the closing of the event, LCNTDR Deputy Director, Timothy Littlewood, acknowledged the tremendous progress made against NTDs, and the significance of LCNTDR efforts to achieve global NTD targets, as included in the WHO 2030 road map for NTDs. In particular, the importance of One Health was acknowledged, with almost 50% of NTDs having a zoonotic component to their lifecycle. Going forward, the Centre will continue to foster cross-sectoral and cross-disciplinary collaboration to better understand human, environmental and animal health and translate these findings into policy and programmatic solutions to achieve a world free of NTDs.

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