

Letters to the Editors

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Dear Sirs,

We agree with the research issues raised by Ejara *et al.* (2010) in their letter concerning our paper 'Challenges in HIV and Visceral *Leishmania* Co-Infection: Future Research Directions' (Hurissa *et al.* 2010). Clinical trials to optimize the treatment of visceral leishmaniasis (VL) with or without HIV co-infection in East Africa are underway through the Leishmaniasis East African Platform (LEAP), a regional network supported by the Drugs for Neglected Diseases initiative (DNDi). However, we agree that further and a larger pool of studies and an increased concerted effort of scientists and research funders at regional and global level are needed to answer the questions raised. Indeed, new interventions and novel approaches are needed to tackle the problem of relapse and to achieve immune reconstitution in a more effective way than could be achieved by antiretroviral therapy alone. A better understanding of the immunopathogenic mechanisms of the co-infection is crucial to explicate the underlying causes of chronicity and relapses, and unresponsiveness to antileishmanial treatment. These issues call for enhancing basic research. On the other hand, efforts to reduce the incidence of HIV and VL co-infection should be a top priority.

Visceral leishmaniasis remains a disease of poor and disadvantaged populations with limited access to health care services (Alvar *et al.* 2006). The social and economic conditions that favour HIV and VL infections in northeast Ethiopia are complex. Many co-infected patients are seasonal workers who often do not have access to basic needs such as shelter while in the farms, and spend several months in precarious working conditions, and often

predisposed to casual encounters with commercial sex workers. Effective health education, methods and tools to prevent exposure to *Leishmania* infection, and improved working conditions in the farms are vital. Research efforts are needed for a better understanding of risk behaviours. Many of the patients cannot afford the cost of diagnosis and treatment. The development of diagnostic, treatment and monitoring services that address the specific needs of patients with co-infection is necessary.

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Reducing the joint burden of disease from diabetes mellitus and tuberculosis: missing research priorities

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Dear Sirs,

We commend Harries *et al.* (2010) for highlighting in their recently published research agenda the threat which the steadily growing epidemic of diabetes mellitus (DM)

poses for global tuberculosis (TB) control, and identifying key research questions that are critical for reducing the impact of the joint burden of these diseases. We particularly support the need for research centred in and relevant to low-income countries, where currently the evidence base is minimal, but are surprised to see a lack

Letters to the Editors

of focus on primary epidemiology of the dual pathologies in this setting. What is the risk of TB in those with DM compared to those without DM in sub-Saharan Africa? Is glucose control related to TB risk in sub-Saharan Africa? What is the effect of DM on the different types of TB in sub-Saharan Africa: does DM increase the risk of smear-positive pulmonary TB more than that of smear-negative pulmonary TB and/or extra-pulmonary TB? Harries *et al.* rightly highlighted that the available evidence relating to the association between TB and DM originates largely from industrialised countries, yet the global burden of both pathologies falls to developing countries. We advocate that addressing the basic epidemiology in low-income countries such as within

sub-Saharan Africa should be a high priority prior to – or at least alongside – addressing questions relating to screening and management.

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Reference

Harries AD, Murray MB, Jeon CY *et al.* (2010) Defining the research agenda to reduce the joint burden of disease from diabetes mellitus and tuberculosis. *Tropical Medicine & International Health* 15, 659–663.

Response to letter from Sarah Bailey and Peter Godfrey-Faussett

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Dear Sirs,

We thank Bailey and Godfrey-Faussett for their thoughtful comments to our paper on defining the research agenda to reduce the joint burden of disease from diabetes mellitus and tuberculosis (Harries *et al.* 2010). We agree that there is a need to better understand the primary epidemiology of these two pathologies, especially in sub-Saharan Africa and other high TB-burden, low- and middle-income countries where the evidence base is minimal to non-existent, and we thank the two authors for pointing this out.

The prime purpose of the expert meeting in November 2009 was to identify research that, if carried out, would assist in reducing the joint burden of disease. For this reason, what emerged from the meeting was an action-orientated research agenda: our top priorities being how best to undertake bi-directional screening, understanding the effect of diabetes and its control on tuberculosis treatment outcomes, evaluating the tuberculosis 'DOTS' model for managing a chronic disease like diabetes, and the development and evaluation of a better point-of-care diagnostic test for diabetes. One of our medium priority objectives was to model the effect of the diabetes epidemic on the tuberculosis epidemic, and we pointed

out in the table in our paper that ideally this modelling is best informed by higher quality studies of the association between the two diseases, especially in low-income settings, and these would be of the type described by Bailey and Godfrey-Faussett. Several members of the expert group are already carrying out such primary epidemiology research in various parts of the developing world.

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Harries AD, Murray MB, Jeon CY *et al.* (2010) Defining the research agenda to reduce the joint burden of disease from diabetes mellitus and tuberculosis. *Tropical Medicine and International Health* 15, 659–663.