



**Report of the HIV/TB Research meeting held in conjunction with the  
18<sup>th</sup> Conference on Retroviruses and Opportunistic Infections (CROI 2011)  
27 February 2011, Boston, USA**

The Stop TB Department of the World Health Organization and the Consortium to Respond Effectively to the AIDS/TB Epidemic (CREATE) organized an HIV/TB research frontiers meeting on behalf of the TB/HIV Working Group of the Stop TB Partnership affiliated with the 18th Conference on Retroviruses and Opportunistic Infections (CROI 2011) in Boston, USA on 27 February, 2011. This was the fifth in a series of annual meetings organized by WHO and CREATE in conjunction with CROI. The meeting was co-chaired by Dr Diane Havlir, the chair of the TB/HIV Working Group and Dr Richard Chaisson from Johns Hopkins University and CREATE, and was attended by about 80 HIV researchers and policy makers, including Ambassador Eric Goosby, the United States Global AIDS Coordinator.

The main objective of the meeting was to discuss emerging and unpublished data about the new Xpert MTB/RIF diagnostic tool and explore its implication in the diagnosis of TB among people living with HIV. The meeting also discussed the implication of the mouse model for the development of new TB drugs and explored its implication for people living with HIV. [Dr Catharina Boehme](#) from the Foundation for Innovative New Diagnostics (FIND) presented previously published and unpublished data on Xpert MTB/RIF, which has the sensitivity of a single Xpert test under routine conditions of 99% and 80% in smear positive culture positive and in smear negative culture positive specimens respectively. The performance of the test was not affected by HIV status. The use of Xpert resulted in shortening of time to case detection and treatment, and improved reporting of results as compared to routine practices. Preliminary results also showed that Xpert MTB/RIF perform better in those children living with HIV compared to HIV negative children. Results from preliminary studies also showed that Xpert performance is higher when used on extrapulmonary specimens except for cerebrospinal fluid. (See also a poster presented at the main conference describing the performance of Xpert MTB/RIF on fine-needle aspiration specimens with a sensitivity and specificity of 100% and 93.8% respectively (Van Rie, abstract 879, CROI 2011). Dr David Katzenstein of Stanford University, USA commented on Dr Boehme's presentation and underlined the role of the test in preventing the loss to follow up of patients after the first sputum test. He also urged on the importance of including INH resistance detection in the Xpert test.

[Dr Eric Nuermberger](#) of Johns Hopkins University presented data on the use of mouse model to develop new TB drugs and regimens and discussed its implication for people living with HIV. He described that the pathological differences between mice and humans have raised concerns about the "predictiveness" of mouse models in the development of new TB drugs. Nonetheless, mouse models represent the activity of existing TB drugs well and their careful use can inform TB drug development. [Dr Annie](#)

[Luetkemeyer](#) from the University of California, San Francisco commented on the need to include people living with HIV in clinical trials and to improve surrogate markers to better predict the potency of new drugs and regimens.

The results of two randomized control trials on when to start ART in TB patients living with HIV were presented at the main conference. The [STRIDE](#) study compared immediate ART (2 weeks after TB treatment initiation) to early ART (within 8 to 12 weeks) among 806 people living with HIV with CD4 count <250 cells/mm<sup>3</sup> recruited from study sites in Africa, Asia, Latin America and North America. The [SAPIT trial](#) compared two integrated arms of early (ART initiated within 4 weeks of TB treatment initiation) and late therapy (ART initiated within the first 4 weeks of the completion of TB treatment continuation phase i.e. at 12 weeks). Both studies showed that combined and earlier ART and TB treatment reduces death and AIDS related events with more pronounced effect among those people with CD4 count less than 50 cells/mm<sup>3</sup>. Death and AIDS events were significantly reduced in the immediate than the early arm in those with CD4 count <50 cells/mm<sup>3</sup> by 42% and 68% in the STRIDE and SAPIT trials respectively. TB IRIS was significantly higher with immediate ART than early ART but no deaths were attributed to IRIS. A symposium entitled "Colliding epidemics: Controlling HIV-related TB" and co-convened by Drs Haileyesus Getahun of the Stop TB Department of WHO and Connie Benson of University of San Diego reviewed the [management of patients requiring treatment for both TB and HIV diseases](#), [advances in TB diagnostics among people living with HIV](#), the [use of preventive TB therapy](#), and the challenges and progress in understanding the immune response to TB infection for vaccine development.