



Report of HIV/TB Research meeting in conjunction with the 6th conference on HIV Pathogenesis, Treatment and Prevention (IAS 2011)

The Stop TB Department of the World Health Organization (<http://www.who.int/tb/en/>) and the Secretariat of the TB/HIV Working Group of the Stop TB Partnership (http://www.stoptb.org/wg/tb_hiv/default.asp) in collaboration with the Consortium to Respond Effectively to the AIDS/TB Epidemic (CREATE) (<http://www.tbhiv-create.org/>) organised a TB/HIV research meeting in conjunction with the 6th Conference on HIV Pathogenesis, Treatment and Prevention on July 17, 2011 in Rome, Italy. The objective of the meeting was to promote high level scientific interchange of ideas and research priorities on new and novel anti-TB drug development with specific issues related to childhood TB and people living with HIV. The meeting was co-chaired by Dr Diane Havlir of University of California, San Francisco (UCSF) and Dr Richard Chaisson of John Hopkins and CREATE and more than 60 participants attended.

Dr Christo van Niekerk of the Global Alliance for TB drug development ([link to presentation](#)) presented on the TB Alliance's pipeline and plans to realize a new eight week short course treatment regimen. It was evident that children had not yet been included in these efforts and he highlighted the key challenges including the lack of funding and variation in country policies on dosage vis-a-vis the recent change in anti-TB drug dosage recommendations for children. Dr Annie Luetkemeyer of UCSF commented on his presentation and outlined the ideal future TB drug regimen for a person living with HIV ([link to presentation](#)). She underlined the importance of better study endpoints and biomarkers including the quantitative use of new molecular TB tests.

Dr. Patrick Phillips from the Medical Research Council of the UK ([link to presentation](#)) presented the role of culture results as a surrogate endpoint to monitor long-term treatment outcomes and the pharmacological and clinical responses to new drugs. He noted that the wide gap that exists between Phase II and phase III trials in the current TB drug development pipeline could be bridged with a well validated surrogate endpoint leading to shorter, smaller and cheaper phase III clinical trials. Dr Connie Benson from the University of California, San Diego commented ([link to presentation](#)) on his presentation and further reiterated the challenges around using culture and called for alternative pathogen or host TB biomarkers to expedite the development of new TB drugs. She also shared the outcomes of a joint CDC/NIH Biomarker Investigators Workshop which was held in April 2010.

Dr. Soumya Swaminathan from the Tuberculosis Research Centre of India (ICMR) presented data from an ongoing study on the influence of HIV infection, age and nutritional status on the pharmacokinetics of anti-TB drugs in children with TB in India. Preliminary findings suggest that children below three years of age, who are stunted or with HIV infection have lower blood levels of anti-TB drugs, highlighting the importance of these factors in developing treatment strategies and policies. She also presented the critical research gaps and called for the development of a rapid test to detect acetylation of TB drugs as soon as possible. Dr Lynne Mofenson from National Institutes of Health (NIH) commented on her presentation ([link to presentation](#)) and described age-related physiological and developmental reasons for drug metabolism in children and further elaborated critical research needs.

The meeting participants reiterated the importance of addressing children in all drug development efforts. The specific needs of pregnant and lactating mothers both in drug safety and penetration of existing drugs into the breast milk need to be urgently addressed as well as for drugs in the research pipeline. The dosing of existing second line TB drugs also requires research to ensure patients are exposed to acceptable drug levels. Operational research efforts are needed to expedite the implementation of the revised dosage of existing TB drugs for children. The use of innovative means such as monitoring the discoloration of body fluids during treatment as a proxy for adequacy of drug dosage was mentioned as possible research question.