Abstract
The resurgence of tuberculosis around the world has renewed interest in understanding the epidemiology and pathogenesis of this disease. A revolutionary advance in the field of tuberculosis research has been the development of molecular techniques that permit identification and tracking of individual strains of Mycobacterium tuberculosis. With these techniques, molecular epidemiology has been established as a new discipline that adds another dimension to the classical epidemiology of tuberculosis and has increased our understanding of the transmission dynamics of M. tuberculosis. The increased epidemiological knowledge has led to discovery of inadequacies in tuberculosis control programs; this information has helped garner resources for program improvement and has highlighted the need for the continuous surveillance of tuberculosis. Additional genetic methods are being developed based on the knowledge of the genome sequence of M. tuberculosis. These simpler and less costly genotyping techniques promise to expand the application of molecular epidemiology to developing nations (where 90% of the disease burden occurs) in support of national tuberculosis programs. Further more, these tools permit ever more effective probes into the dynamics of transmission, the population structure, evolution and pathogenesis of M. tuberculosis.

Keywords
tuberculosis, Mycobacterium tuberculosis, Mycobacterium tuberculosis, molecular epidemiology, genotype, DNA fingerprinting, restriction fragment length polymorphins