Editor’s Choice September 2009

This is a special theme issue on Epidemiology in leprosy. In this issue we focus on two important developments in this area: molecular epidemiology and spatial-temporal analysis of leprosy. Developments in the area of leprosy molecular epidemiology have been both difficult and exciting over the past years, since the complete genome sequence of *M. leprae* became available 10 years ago. Within the IDEAL consortium much work has been done on characterising short tandem repeats as a basis for strain typing the *M. leprae*, in order to develop a practical tool to establish linkages between leprosy cases within geographical areas and thereby enhance our understanding of transmission of the bacterium. The series of articles on molecular epidemiology in this issue is situated around the paper by Gillis *et al.*, in which targets for strain typing of *M. leprae* are tested and a battery of stable targets proposed for further evaluation at field level. This field testing was performed in Asia (China, Philippines, Thailand, and India) and South America (Brazil, Colombia, and Mexico) and reported in short communications. Together it represents a very unique volume of pioneering work. The articles are accompanied by editorials from Patrick Brennan, who gives an insightful historic perspective of the IDEAL consortium and the development of molecular epidemiological tools, and from Barry Hall, who comments in depth on the articles.

The second topic is spatial-temporal analysis of leprosy incidence and prevalence. With the rise of geographic information system (GIS) technology, it is increasingly being applied to infectious disease epidemiology, including leprosy. This issue contains a very interesting article by Penna *et al.* from Brazil, analysing the spatial distribution of leprosy in the country over the past years, and describing time trends in detection rates of leprosy patients. GIS is not just a scientific tool, but also very useful in routine control activities. In a separate editorial Bakker *et al.* describe practical applications for GIS in leprosy control. They conclude that GIS has become an essential tool to establish burden of disease, indentify risk factors, and to plan, monitor and evaluate control interventions.

*Jan Hendrik Richardus*

*Guest Editor*