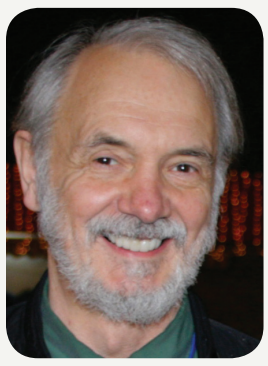
CIHR **STAGE**

Strategic Training for Advanced Genetic Epidemiology



Erwin Schurr, PhD

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Genetic dissection of complex infection phenotypes

Friday
January 31, 2014
1:00 – 2:00 pm

The Daniels Hollywood Theatre, Main Auditorium, Room 1246, Black Wing, 1st Floor, The Hospital for Sick Children, 555 University Avenue

Abstract: Mycobacteria are among the most medically important human pathogens. Susceptibility to mycobacterial disease and immune responses to mycobacterial infection are strongly heritable human traits. Yet, the genetic underpinnings of variability of the immune response and of variation in susceptibility to mycobacterial disease have been poorly investigated compared to non-infectious diseases of more limited global health importance. Here, I will review part of the genetic epidemiological studies that have been done to address the problem of susceptibility to infection with Mycobacterium tuberculosis, drawing in particular on our studies in high transmission settings for M. tuberculosis. Using the example of our studies, I will discuss the complexity of phenotype definition for M. tuberculosis infection. By extension to our genetic studies of the mycobacterial diseases tuberculosis and leprosy, I will discuss for two examples, age-at-onset and endo-phenotypes, how proper definition of phenotype has been key for the successful identification of disease susceptibility genes.

Profile: Dr. Erwin Schurr is a James McGill Professor of Human Genetics and Experimental Medicine at McGill University, Montreal, and a Medical Scientist at the Research Institute of the McGill University Health Centre (RI-MUHC). Dr. Schurr is a recognized pioneer in the field of global health and genetic susceptibility to infection and leads the multi-disciplinary program on “Infection and Immunity in Global Health” at the RI-MUHC. Through multiple large scale genetic epidemiology studies in endemic countries of tuberculosis and leprosy, Dr. Schurr’s research team has identified major genes, proteins and biochemical pathways that determine susceptibility to common human infectious diseases. Dr. Schurr has served on numerous national and international advisory and grant review panels in the field of infection research, and he is one of the organizers of the Annual Canadian Human and Statistical Genetics Meeting.

Housed at the University of Toronto Dalla Lana School of Public Health, CIHR **STAGE** is a training program in genetic epidemiology and statistical genetics funded by the Canadian Institutes of Health Research through the Strategic Training Initiative in Health Research program. Seminars are sponsored by The Hospital for Sick Children, the Samuel Lunenfeld Research Institute of Mount Sinai Hospital, the Ontario Institute for Cancer Research, the Department of Statistics of the University of Toronto, the Ontario Cancer Institute of the University Health Network, and the CIHR Institute of Genetics.

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