THE ROLE OF IMMUNITY: UNDERSTANDING THE DATA

N. Nagelkerke[†]

United Arab Emirates University, Al Ain, UA Emirates

 † E-mail: nico.nagelkerke@uaeu.ac.ae

Immunity is key to (understanding) the epidemiology of infectious diseases. For many infections, including many sexually transmitted infections, immunity is only partial due to, inter alia, antigenic diversity of the pathogen. Unfortunately, the degree of immunity afforded by previous exposure is difficult to establish, and available data often open to different interpretations. It has long been believed that latent tuberculous infection affords partial protection (approximately 70%)against disease from re-infection on the basis of old studies on the risk of tuberculosis in skin test positive and negative highly exposed nurses. Recent studies from South Africa, using molecular fingerprinting techniques, however, show that previous disease (tuberculosis), rather than affording protection, is a risk factor for disease from re-infection. We believe that this apparent contradiction is due to historical misinterpretation of the nurses studies. We show that the apparent protection inferred from the nurses studies is due to selection mechanisms, and is consistent with a different interpretation in which tuberculosis is construed as an opportunistic infection probably caused by an as yet unidentified viral co-infection.