Pathogenic mechanisms of leptospirosis

Leptospirosis is considered to be an emerging, re-emerging and neglected disease of global significance. It is a notifiable disease in Brazil; from 2007-2011, there were a total of 19,442 confirmed cases and 2,371 deaths. Due to inherent difficulties in the diagnosis of leptospirosis, these numbers are considered to be underestimates. Human patients suffering from leptospirosis present with a diverse array of clinical manifestations, including the more severe and often fatal pulmonary form of the disease. The aetiology of pulmonary haemorrhage is unclear. Results to date confirm that pathogenic mechanisms of infection are due in part to the host immune response. Further, it is clear that leptospires regulate gene and protein expression during infection. The goal of this research project is to advance these results to provide novel insights into pathogenic mechanism of leptospirosis and facilitate efficacious diagnostics and therapies.

Selected references:

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