

## **Serological Survey of Rift Valley Fever in Jazan Region, Saudi Arabia**

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### **Abstract**

A serological survey was carried out in Jazan region, Saudi Arabia during the period from September the 1<sup>st</sup> to November the 30<sup>th</sup>, 2003 in an attempt to diagnose recent Rift Valley fever (RVF) infection and to determine the level of herd immunity. A total of 3680 serum samples were collected and tested for IgM and IgG antibodies to RVF virus using the capture and sandwich ELISA techniques, respectively. No IgM antibodies were detected in any of these serum samples. These results indicate that Jazan region, for the time being, is free from recent RVF infection. The level of herd immunity, estimated by the percentage of IgG antibodies positive samples, ranged from 16% in Jizan district to 30% in Alarda district. The overall level of herd immunity in Jazan region was 25%. Also, the overall level of herd immunity in sheep and goats was 28% and 22%, respectively. The mean titer of IgG antibodies ranged from 0.65 in Sabya district to 0.77 in each of Jizan and Ayban district. No significant difference was observed between sheep and goats regarding the titer of IgG antibodies in the serum ( $p$ -value > 0.05).