

CROSS-IMMUNITY BETWEEN ISOLATES OF *COWDRIA RUMINANTIUM*

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ABSTRACT

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Cross-immunity studies in goats and mice using 4 isolates of *Cowdria ruminantium*, 2 from the Republic of South Africa (Kwanyanga and Kümme), 1 from the Republic of Mali (Mali 1), and 1 from Guadeloupe (Gardel), demonstrated antigenic variation among these isolates of heartwater. These studies suggest that the Mali isolate will protect goats against challenge with the Gardel isolate, and that the Gardel isolate will protect goats against challenge with the Kwanyanga isolate. The Kwanyanga isolate did not completely protect goats to challenge with the Gardel isolate. The Gardel, Kwanyanga and Mali isolates, or combinations of these 3, did not protect goats from challenge with the Kümme isolate. The Kwanyanga and Kümme isolates were compared with both homologous and heterologous challenges in Swiss mice. The mice resisted homologous challenges, but heterologous challenge resulted in 100 % death. The Gardel and Mali isolates could not be passaged in or adapted to Swiss mice.

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