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Evaluation of Different Brucella Antigens with Special Reference to RB51 Antigen by using the Recent Serological Techniques

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Abstract

The live attenuated *Brucella abortus* SRB51 is a partial O-chain-deprived mutant. The relative lack of the polysaccharide prevents it from inducing antibodies detectable by most of the serological tests used for the diagnosis of bovine brucellosis. The performance of three antigens used in an indirect enzyme-linked immunoassay test for detecting SRB51 antibodies were evaluated, *Brucella abortus* strain RB51 hot saline extract, Rough lipopolysaccharide, and sonicated antigens were used. The buffered acidified plate antigen test, Rose Bengal test, Tube agglutination test and an indirect enzyme-linked immunoassay (I-ELISA) using the smooth LPS (SLPS) antigen from *B. abortus* were used as control tests.
A better antigen might be purified rough lipopolysaccharide (RLPS), as fewer epitopes would be shared although the results of HSE coated ELISA plates which were prepared from RB51 strain showed higher positive percentage than LPS and Sonicated coated ELISA plates by comparing the results of different serological tests including RBPT, BAPAT and Tube agglutination test and by statistical analysis using Annova test show significance at ($P \leq 0.05$).

Dedicated

To:

My father

My mother

My husband

My sister

My brother

And

My daughters.

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