Cairo University
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Some Epidemiological Studies on Sheep and Goats Brucellosis in Egypt

A thesis submitted by

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For The Degree of Ph.D.
Veterinary Medicine Sciences
(Infectious Diseases)

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2019

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ABSTRACT

This study was carried out for evaluation of the diagnostic performance of different serological tests; tube agglutination test (TAT) , buffered acidified plate antigen test (BAPAT), rose bengal plate test (RBPT), immunochromatographic assay (ICA), rivanol test (RivT), indirect ELISA (iELISA) using two types of coating antigens(smooth lipopolysaccharide; S-LPS) and (N-lauroylsarcosine-extracted antigens; SE) and complement
fixation test (CFT). Sensitivity and Specificity of various techniques were estimated. The traditional serological tests failed to distinguish the vaccinated from naturally infected animals or from animals infected with *yersinia*. Using iELISA with extracted antigens (SE) as a coating antigen was a more accurate test to differentiate the naturally infected animals from vaccinated animals and may differentiate between infected animals and false positive reactors. Application of restriction fragment length polymorphism polymerase chain reaction (RFLP-PCR) on sera samples from seropositive animals, Rev-1 vaccinated sheep and *Brucella* field strain infected sheep and goats revealed that there were samples were identified as *B. melitensis* biovar 3 field strain and other samples were identified as *B. melitensis* Rev-1 vaccinal strain. The obtained results established that restriction fragment length polymorphism-polymerase chain reaction can differentiate between animals infected with *Brucella* field strains from animals vaccinated with the Rev-1 vaccine .isolation of *brucella* organism from seropositive animals revealed that the isolated strain was *Br. melitensis* biovar 3.

Key words: *B. melitensis* Rev-1 vaccine, iELISA, RFLP-PCR, sarcosine, serological tests**.**

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