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EXPERIMENTAL PREPARATION OF *PASTEURELLA MALTOCIDA* AUTO- GENUS VACCINE AND RELATED IMMUNE POTENTIAL

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ABSTRACT

Pasteurella multocida, a common pathogen in rabbits, is usually associated with upper respiratory disease. So, the aim of the present study was to isolate *Pasteurella* from clinical specimens from rabbits and to select strains for the preparation of an inactivated vaccine for active immunization of rabbits in the same area.

A total of 150 nasal swab samples were collected from diseased rabbits (Seforabbit farm) from Giza Government showing symptoms typical for pasteurellosis and from dead rabbits showing lesions of lung congestion and pneumonia

Blood agar (BA) and MacConkey agar were used as primary culture media for isolation of organisms from the samples according to methods described by Cruickshank *et al.* (1975) and Quinn *et al.* (1994). The collected samples were inoculated into tryptic soy broth medium for 24 h at 37°C and inoculated onto the following solid plate media containing 7 % Sheep blood agar medium or Das medium.

The bacteriological investigation revealed eight isolates of *P. multocida* isolates, four isolates *Staphylococcus* spp, two isolates *E. coli*, one isolate *Streptococcus* spp and one isolate *Proteus* spp. were estimated

A total of 36 Swiss mice were used for pathogenicity testing of the *P. multocida* isolates Mice died between 24 h and 48 h after exposure. To confirm *P. multocida* isolates, heart blood smears from dead mice were stained with Leishman's stain revealed the bipolar staining. The heart blood and lung samples were inoculated onto blood agar plates.

The two virulent *Pasteurella multocida* isolates used in the preparation of the intended vaccine were identified by capsular PCR technique and they were found to be of capsular type A.

Non immunized, challenged rabbits (n=3) became dyspneic, depressed, anorectic and feverish. None of the immunized rabbits (n=4) died or showed any clinical signs. However, the non-immunized rabbits died 4 days post challenge.

Key words: Auto-genus vaccine, immune *Pasteurella multocida*, upper respiratory disease, rabbits