

University of Zabol Management of graduate education Faculty of Veterinary Medicine Department of Pathology

Dissertation to obtain a master's degree in bacteriology

Title:

Investigation of Proteus and Enterobacter contamination in broiler chickens with septicemia in broiler breeding centers of Zahedan city, Iran.

Supervisors: Dr. Mohsen Najimi Dr. Ahmed Rashki

Advisor:

Dr .Saeed Salari

By:

**Emad Poyafar** 

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## Abstract:

Poultry breeding, which are bred in large numbers and in a dense manner, makes it impossible to check and deal with the condition of each of them, therefore, when a disease breaks out in the flock, the possibility of treating and controlling it, especially if the disease is contagious, is negligible, and can destroy the entire herd in a short period of time. Various bacteria such as E. coli, Bacillus cereus, Clostridia, Staphylococcus and Proteus can cause yolk sac infection in chickens. In this research, broiler chickens with septicemia from 10 active poultry farms around Zahedan were studied. 11 chickens under 10 days of age were selected from each chicken farm for cultivation. The heart was sampled and the samples of each poultry farm were cultured in the important and nutritious medium of McConkey and Salmonella-Shigella agar (solid medium). Finally, from the cultured yolk sac samples, only 4 Proteus positive samples were detected, but all the liver and heart tissue samples of 10-day-old chickens were negative for Enterobacter and Proteus contamination. given was obtained. After determining and confirming the identity of bacteria by specific and differential cultures, 3 Proteus isolates were subjected to PCR test for molecular evaluation of the presence of *blaCTX*-M (forward-reverse) gene. And the investigated bacteria were identified by molecular method in 3 Proteus positive samples.

key words: yolk sac –Proteus- Enterobacter- PCR- poultry farm- Zahedan