Abstract

Galerida Cristata Sistan can be a carrier of human and animal pathogens, one of the most important of these bacteria is *Escherichia coli*. This bacteria is a cause of many diseases in humans. The aim of this study was to determine the prevalence of *Escherichia coli* bacteria in *Galerida Cristata* Sistan and some genes of *stx1, stx2, eae* and *hly* as well as antimicrobial resistance pattern of isolates. A total of 50 swabs were taken from the *Galerida Cristata*. Separation of the bacteria by culture was performed on differential environments. Antibiotic susceptibility testing was carried out for isolates by disc diffusion method. The presence of genes *stx1, stx2, hly* and *eae* in the isolates was evaluated by multiplex PCR method.

The results showed that the isolates were resistant to co-amoxylav antibiotics (100%) and sefetrixone (100%) and they were sensitive to cefixime. The PCR Multiplex method showed that 33 isolates of *Escherichia coli* isolated in one isolate (0.5%) with the *eae* gene showed positive band. The *stx1*, *stx2*, and *hly* genes did not show a positive result.

**Keywords:** Galerida Cristata, Escherichia coli, Virulence Factors, Antibiotic Resistance
The Thesis Submitted for the Degree of Master of Science
(In the field of Veterinary Bacteriology)

Title:
Survey and comparison of \( stx1 \), \( stx2 \), \( hly \) and \( eae \)
frequency in \( E.coli \) isolated from \textit{crested lark} collected in
Sistan, South East of Iran

Supervisor:
Dr. Saeed Salari
Dr. Ahmad Rashki

Advisor:
Dr. Mohsen Najimi
Dr. Reza khaltAbadi Farahani

By:
Zahra Hosseini

Summer 2018