

Summary of the MS.C thesis No., **17949**.

Bacteriology, Faculty of Veterinary Medicine, Urmia University.

The academic year: 2023-2024

Author: Maryam Babaei Khamarki

Title: Molecular identification of *Salmonella* Genus in ticks isolated from domestic's animal in Khodabandeh region of Zanzan

Abstract:

Salmonella is a Gram-negative Bacteria that is commonly found in most environments and organisms and is a causative agent of disease. Salmonella spp. is one of the most common foodborne illnesses. Salmonellosis is a common infectious disease in humans and animals that manifests with gastrointestinal or hepatic symptoms and can lead to various clinical symptoms such as diarrhea in infants, fetal abortion, orchitis, pneumonia, and septicemia. In the current study, 412 hard ticks were classified and identified to investigate Salmonella spp. based on diagnostic keys. In total, 412 hard ticks, including 208 Hyalomma species and 204 Rhipicephalus species, were identified. The samples were divided into 82 pools according to the tick genus, and DNA was extracted from the ticks. Pathogens transmitted by ticks were diagnosed using PCR, and In this study, specific primers for the 16SrRNA gene were used and samples were examined for the presence of Salmonella spp. bacteria. In the study, a total of 208 Hyalomma tick samples and 204 Rhipicephalus tick samples were collected and were separated by gender in pools of five. Out of these, 51 male pools and 30 female pools were identified. Rhipicephalus ticks had 27 male and 14 female pools, while Hyalomma ticks had 24 males and 16 female pools. The study found that 8 out of 40 (20%; 95% CI: 10.5%-34.76%) Hyalomma ticks, and 12 out of 41 (29.27%; 95% CI:17.61%-44.48%)Rhipicephalus ticks were carriers of the pathogens, indicating that these pathogens can be transmitted by different species of hard ticks. Ticks and tick-borne diseases are a significant public health concern worldwide.

Keywords: *Salmonella*, tick, domestic Animals, Khodabandeh region.