



University of Zabol  
Graduate School  
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The Thesis Submitted for the Degree of DVM

**Title: Evaluation of the biochemical and hematologic factors of  
the Sistan racerunner(Eremias fasciata Blanford)**

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## **Abstract:**

**Introduction:** Lizards are a group of animals with about 6000 species spreading in different parts of the world. Lizards are categorized as the class Reptilia and the suborder Lepidosauria as well as the order Squamata. *Ermias Sistani* with the scientific name *Ermias fasciata* Blanford is a species of Reptilia and Squamata order belonging to the Lacertidae family, *Eremias* genus and *Eremias fasciata* Blanford species respectively. Identification of native species in different regions of Iran and the world can be a big step in for making the necessary arrangements and identify physical characteristics of them. Also, identification of biochemical and hematological parameters of different animal species, can help in the diagnosis of diseases leading to the prevention of extinction of these species. This study was aimed on the detection of biochemical and hematological parameters of *Ermias Sistani*, including glucose, blood urea nitrogen, creatinine, cholesterol, triglyceride, albumin, aspartate aminotransferase, and total protein.

**Material and methods:** In this study, 20 *Ermias Sistani* lizards (10 males and 10 females) were collected from Sistan region. After sedation, blood samples were taken and the blood samples were kept in the freezer until the tests were performed. Afterward the hemoglobin, PCV, the number of white blood cells, the number of red blood cells, the number of heterophil globules, eosinophil, basophil, lymphocyte, monocyte, AST, glucose, total protein, cholesterol, uric acid, albumin, globulin, triglyceride, the ratio of albumin to globulin was determined. The statistical analyzes have been performed using SPSS ver22. the results generally showed no significant difference between the male and female samples. Although the amount of heterophils, eosinophils, lymphocytes, and monocytes were higher in the female samples, but no statistically significant difference was observed. Additionally, basophil counts and PCV levels were higher in male samples.

**CONCLUSION:** In the analysis of biochemical factors, no statistically significant difference was observed between relative factors. Although AST, globulin and triglyceride levels were higher in female samples and cholesterol and glucose levels were higher in male samples.

Keyword: *Ermias Sistani*, hematological, biochemical factors