



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

The Thesis Submitted for the Degree of DVM

**Investigating the potential protective effects of
simultaneous administration of L-carnitine and
acetylcysteine on liver damage caused by high-
fat diet in broilers.**

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2024

abstract

This thesis investigates the potential protective effects of co-administration of L-carnitine and acetylcysteine on liver damage caused by high-fat diet in broilers. This study examines the effect of these supplements on various biochemical, histological and molecular markers related to liver health. The aim of this research is to contribute to our understanding of nutritional strategies to reduce the adverse effects of high-fat diets on poultry liver health. And for this purpose, fifty one-day-old broiler chickens were randomly purchased from five meat farms located in Zabul city and were kept for six weeks in the covered hall (rooftop room of Zabul University Faculty of Veterinary Medicine) with normal ration and then From these six weeks, chickens were fed with high-fat diet and L-carnitine and acetylcysteine for four weeks, and blood was taken from the wing vein of the chickens after the first six weeks, and at the end of the experiment, blood was taken to measure and compare the blood findings. At the end of the experiment, the chickens were euthanized and samples were taken from the liver, kidney, and heart to identify tissue damage.

Keywords: Protective effects, L-carnitine, acetylcysteine, broilers