



Technical University of Moldova

ASPECTS OF MACRO- AND MICROSCOPIC HEPATOPATHIES IN CATS

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Scientific supervisor:

Didoruc Sergiu

**PhD in veterinary
medical sciences,
university lector**

**Nafornta Nicolae
university assistant**

Chişinău, 2026



Universitatea Tehnică a Moldovei

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MINISTRY OF EDUCATION AND RESEARCH OF THE REPUBLIC OF
MOLDOVA

Technical University of Moldova

Faculty of Veterinary Medicine

Department of Food Safety and Public Health

Admitted to support

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ASPECTS OF MACRO- AND MICROSCOPIC HEPATOPATHIES IN CATS

Graduation thesis of integrated higher studies

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„08” iunie 2026

ASPECTE MACRO- și MICROSCOPICE ÎN HEPATOPATII LA PISICI

Teză de absolvire al studiilor superioare integrate

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Annotation

Author: Mustafa Ward

Thesis topic: “Macroscopic and Microscopic Aspects of Liver Disease in Cats.”

Degree awarded: Doctor of Veterinary Medicine. Integrated higher education.

Location: Chişinău

Year of writing: 2026.

Structure and purpose of the thesis:

The purpose and objectives of the study focused on performing diagnostic necropsies, through extensive and comprehensive studies and examinations of the morphological condition of the liver in cats of different age groups, to identify the pathological processes developing in the liver. These changes were macroscopic in nature, occurring during various pathological processes of diverse etiology; after selecting and collecting the pathological material, histological preparations were made and examined under a microscope to establish a correct diagnosis.

To achieve this objective, the following *tasks* were established:

- Performing diagnostic necropsies on cat carcasses and studying all anatomopathological changes in the body, with particular attention to the liver.
- Documenting all macroscopic pathological changes in the liver, describing them, and establishing a preliminary morphopathological diagnosis.
- Selection and collection of pathological material and preparation of histological specimens.
- Examination of histological sections under a microscope, refinement, confirmation, and correction of the initial morphopathological diagnosis, with the establishment and confirmation of a diagnosis based on the microscopic pathological changes observed.

The thesis consists of an introduction, 4 chapters: literature review, main body, conclusions and recommendations, bibliography, and 16 subchapters. The main text comprises 48 pages, 66 figures, 1 table and 1 diagram.

Keywords: liver, morphopathological and histopathological changes, cat, liver diseases.

Adnotarea

Autor: Mustafa Ward

Tema tezei: „Aspecte macro- și microscopice în hepatopatii la pisici”.

Grad științific acordat: Doctor, medic veterinar. Învățăământ superior integrat.

Locație: Chișinău

Anul scrierii: 2026.

Structura și scopul tezei:

Scopul și obiectivele studiului s-a axat pe efectuarea unor necropsii diagnostice, prin efectuarea unor studii și examinări extinse și cuprinzătoare a stării morfologice a ficatului la pisici de diferite categorii de vârstă, pentru a identifica procesele patologice care evoluează în ficat. Aceste modificări au fost de ordin macroscopic, care apar în timpul diverselor procese patologice de diversă etiologie, iar după selectarea și colectarea materialului patologic, sau efectuat preparate histologice și care sau examinat la microscop pentru a pune un diagnostic corect.

Pentru atingerea acestui obiectiv, au fost stabilite *următoarele sarcini*:

- Efectuarea necropsiilor diagnostice la cadavrele de pisici și studierea tuturor modificărilor anatomopatologice din organism, acordând atenție specială ficatului.
- Notificarea tuturor modificărilor patologice macroscopice la ficat, descrierea lor și stabilirea unui diagnostic morfopatologic preliminar.
- Selectarea și colectarea materialului patologic și pregătirea preparatelor histologice.
- Examinarea secțiunilor histologice la microscop, concretizarea, confirmarea și corectarea diagnosticului morfopatologic inițial, cu stabilirea și confirmarea unui diagnostic pe baza modificărilor patologice microscopice constatate.

Lucrarea constă din introducere, 4 capitole: revizuirea literaturii, partea specială, concluzii și propuneri, referințe bibliografice, 16 subcapitole. Textul principal este format din 48 de pagini, figuri-66, tabele -1, diagrame-1.

Cuvinte cheie: ficat, modificări morfopatologice și histopatologice, pisica, hepatopatii.

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INTRODUCTION

The liver is an organ that plays an important metabolic role both in normal and pathological conditions, which is why it has been called the 'central laboratory of the body.' The liver is responsible for the energetic and anabolic processes necessary for full cellular life, as well as the catabolic degradation of many structural and functional components of other tissues and organs.

The main functions of the liver are: the capture and distribution of nutrients entering the body; while maintaining their concentration in the blood. The liver carries out carbohydrate, lipid and protein metabolism, which justifies its functional diversity. The liver also supports the excretory function.

These points show that in order to effectively treat diseases of the body, it is necessary to understand all the processes occurring in the affected body, because the main reason why the affected body has difficulty recovering is that profound changes have occurred in the liver. It is known that not only the etiological factor as such is involved in the establishment of these changes, but also a wide range of other factors, among which the allergic reaction of the host organism plays a special role. During the development of the pathological process in chronic changes, progressive fibrosis of the liver parenchyma occurs, which does not disappear even after treatment is prescribed.

Until recently, sclerotic changes in the liver caused by the localization of parasites in this organ were considered incurable, but recent studies indicate the possibility of reversing them by stimulating the resorption of fibrotic areas and the regeneration of the liver parenchyma. These goals can be achieved by two methods: resection of part of the organ and the use of medicinal stimulants.

The *aim and objectives of our study* were to conduct an extensive and comprehensive study and examination of the condition of the liver in cats of different age categories in order to identify pathological processes occurring in the liver, to study all macroscopic changes in this organ during pathological processes of various etiologies, to select pathological material, to prepare histological specimens and examine them under a microscope in order to make a correct diagnosis.

To achieve this goal, the following *tasks were set*:

- To perform autopsies on cat carcasses and study all pathological changes in the body, paying attention to the condition of the liver.
- To note all macroscopic changes in the liver, describe them, and make a preliminary morphopathological diagnosis.
- Select pathological material and prepare histological specimens.

-- Examine histological specimens under a microscope, confirm and correct the initial morphopathological diagnosis, or establish and confirm a new diagnosis based on the microscopic pathological changes found.

The thesis consists of three chapters.

Chapter 1 describes the literature data on hepatopathies, where the importance of the liver for the body, the anatomy and histology of the organ, the main groups of pathological processes of the liver and their classification are described.

Chapter II is intended to determine methods for studying all changes in the liver, which served as material for the study, the place where we performed all the tasks set.

It also lists the morphopathological changes in the liver found during the examination of corpses and describes the microscopic changes found during the study of micro-sections.

Chapter 3 presents an assessment of the research results and the achievement of the goals and objectives proposed in the study.

The **conclusions** and **recommendations** may contribute to improving the treatment of sick animals or improving diagnosis.

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