

ISOLATION AND IDENTIFICATION OF DERMATOPHYTIC FUNGI FROM CATS IN NATHA SATWA NUSANTARA SHELTER, BOGOR, INDONESIA

NICOLE TING QIAN WEN



**STUDY PROGRAMME OF VETERINARY MEDICINE
SCHOOL OF VETERINARY MEDICINE AND
BIOMEDICAL SCIENCES
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Nicole Ting Qian Wen
B0401211813



ABSTRACT

NICOLE TING QIAN WEN. Isolation and Identification of Dermatophytic Fungi from Cats in Natha Satwa Nusantara Shelter, Bogor, Indonesia. Supervised by NOVERICKO GINGER BUDIONO and AGUS WIJAYA.

Dermatophytosis is a common zoonotic skin infection caused by dermatophytic fungi in humans and animals including cats. No research has been conducted on dermatophytic fungi in shelter cats within Indonesia. This study determined the prevalence of dermatophytosis in 20 shelter cats from Natha Satwa Nusantara Shelter. All cats were sampled using the MacKenzie toothbrush technique. Additional samples from 14 symptomatic cats were collected via hair plucking (15) and skin scraping (12), total of 27 lesion samples, which were used for direct microscopic examination. Lesions of cats were scored. Wood's lamp test and direct microscopy served as screening tools, while fungal culture on Sabouraud Dextrose Agar (SDA) and Potato Dextrose Agar (PDA), both supplemented with 0.0125% chloramphenicol and 0.04% cycloheximide, act as a diagnostic gold standard. All symptomatic cats showed alopecia (14/14), crusting (8/14), and erythema (3/14). Wood's lamp test was positive in 11/20 cats (55%). All 27 lesion samples revealed fungal elements under microscope. Fungal culture identified *Microsporum canis* (1/20; 5%) and *Trichophyton verrucosum* (1/20; 5%), with a total 10% dermatophytosis prevalence. Both positive cats were symptomatic, indicating potential transmission to other animals, humans, and the environment. To reduce the risk of dermatophyte transmission, early detection, isolation of infected animals, environmental disinfection, and routine screening should be implemented as preventive measures.

Keywords: animal shelter, cats, feline dermatophytosis, *M. canis*, *T. verrucosum*



ABSTRAK

NICOLE TING QIAN WEN. Isolasi dan Identifikasi Jamur Dermatofit dari Kucing di Natha Satwa Nusantara Shelter, Bogor, Indonesia. Di bawah bimbingan NOVERICKO GINGER BUDIONO dan AGUS WIJAYA.

Dermatofitosis adalah infeksi kulit zoonosis umum yang disebabkan oleh jamur dermatofit pada manusia dan hewan, termasuk kucing. Belum ada penelitian tentang jamur dermatofit pada kucing di selter Indonesia. Penelitian ini menentukan prevalensi dermatofitosis pada 20 kucing di Natha Satwa Nusantara Shelter. Semua kucing diambil sampelnya menggunakan teknik MacKenzie. Sampel tambahan dari 14 kucing bergejala diambil melalui pencabutan rambut (15) dan kerokan kulit (12), total 27 sampel lesi, untuk pemeriksaan mikroskopis langsung. Lesi pada kucing dinilai. Uji Lampu Wood dan mikroskopi langsung berfungsi sebagai alat skrining, dan kultur jamur pada Sabouraud Dextrose Agar (SDA) dan Potato Dextrose Agar (PDA), disuplementasi dengan 0,0125% kloramfenikol dan 0,04% sikloheksimid, digunakan sebagai standar emas diagnostik. Semua kucing bergejala alopesia (14/14), berkerak (8/14), dan eritema (3/14). Uji Lampu Wood positif pada 11/20 kucing (55%). Semua (27 sampel) lesi menunjukkan adanya elemen jamur di bawah mikroskop. Kultur jamur mengidentifikasi *Microsporum canis* (1/20; 5%) dan *Trichophyton verrucosum* (1/20; 5%), menghasilkan prevalensi dermatofitosis sebesar 10% (2/20). Kedua kucing yang positif menunjukkan gejala, yang mengindikasikan potensi penularan ke hewan lain, manusia, dan lingkungan. Untuk mengurangi risiko penularan dermatofit, deteksi dini, isolasi hewan yang terinfeksi, desinfeksi lingkungan, dan skrining rutin harus dilakukan sebagai tindakan pencegahan.

Kata kunci: dermatofitosis kucing, kucing, *M. canis*, selter, *T. verrucosum*



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ISOLATION AND IDENTIFICATION OF DERMATOPHYTIC FUNGI FROM CATS IN NATHA SATWA NUSANTARA SHELTER, BOGOR, INDONESIA

NICOLE TING QIAN WEN

Undergraduate thesis
As one of the requirements to obtain a Bachelor's degree
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**STUDY PROGRAMME OF VETERINARY MEDICINE
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Title : Isolation and Identification of Dermatophytic Fungi from Cats in Natha Satwa Nusantara Shelter, Bogor, Indonesia.

Name : Nicole Ting Qian Wen

NIM : B0401211813

Approved by

1st Supervisor:

Dr. drh. Novericko Ginger Budiono, M.Si.

2nd Supervisor:

drh. Agus Wijaya M.Sc., Ph.D



Acknowledged by

Head of Veterinary Medicine Undergraduate
Study Programme:

Dr. drh. Wahono Esthi Prasetyaningtyas, M.Si

NIP. 19800618200642026



Digitally signed by:
Wahono Esthi Prasetyaningtyas

Date: 12 Jul 2025 09:28:17 WIB
Verify at design.ipb.ac.id

Vice Dean of Academic and Student Affairs of
School of Veterinary Medicine and Biomedical
Sciences:

Prof. drh. Ni Wayan Kurniani Karja, M.P, Ph.D

NIP. 196902071996012001



Date of Exam:

(10 July 2025)

Date of graduation:

14 JUL 2025



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Bogor, July 2025

Nicole Ting Qian Wen



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