

APPROVAL BY SUPERVISOR

UNIVERSITI TEKNOLOGI MARA

**SEROPREVALENCE OF LEPTOSPIROSIS
INFECTION AMONG WILD RAT AT AMPANG:
A CASE STUDY**

MOHD FARIDZ BIN MOKHTAR

**Project Submitted In Fulfilment Of The Requirements For The
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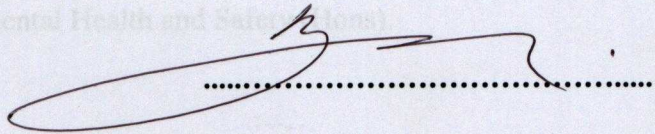
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We hereby declare that this project is from the student's own work and effort, and all other sources of information used were had been acknowledged. This project has been submitted with our approval.

Accepted and evaluated by:



Name: TN HJ MOHD POZI MOHD TAHIR
Ketua

Project Supervisor: Unit Kualiti
Fakulti Sains Kesihatan
UiTM Kampus Puncak Alam,
42300 Puncak Alam

Date: 3/2/15

Student's Signature:

Accepted and evaluated by:

Name:

Co- Supervisor:

Date:

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TABLE OF CONTENTS

CONTENT	PAGE
Approval by Supervisor	ii
Author's Declaration	iii
Acknowledgement	iv
Table of Contents	v
List of Table	viii
List of Figures	ix
List of Plates	x
List of Abbreviations And Glossary	xi
Abstract	xii
Abstrak	xiii
CHAPTER 1	
1. Introduction	1
1.1. Problem Statement	4
1.2. Study Justification	5
1.3. Study Objective	6
1.4. Hypothesis	7
1.5. Limitation	7
1.6. Conceptual Framework	8
CHAPTER 2	
2. Literature review	9
CHAPTER 3	
3. Methodology	15
3.1 Study Location	16
3.2 Study Design	18

ABSTRACT

Leptospirosis is one of a zoonotic disease that caused by infection of the spirochaetes species from pathogenic leptospira genus strain of *Leptospira interrogans*. This disease is highly contagious and causing high morbidity and mortality rate in worldwide affecting both human and animal. The sources of infection are varied but it was well known that rodent species is the main source of leptospirosis transmitted to the humans. A cross-sectional study is done to identify the prevalence of leptospirosis among wild rodent population at the Ampang area. The rationale of this study is to assess the prevalence of pathogenic *leptospira sp.* among the population of wild rat and identify any existence of maintenance host of leptospirosis among wild rat in the Ampang area thus help in establishment of data regarding on percentage of leptospirosis carrier in wild rat at Ampang area.

Simple random sampling is done to obtain the live sample of wild rat for purpose of analysis the seroprevalence of leptospiral infection. Total forty rats had been caught during the period of the study and five species are found being caught comprises of *Rattus rattus* species (n=5/40, 12.5%) while majority of thirty five are found from *Rattus Norvegicus* species (n=35/40, 87.5%). From total of rats trapped, one of the samples (2.5%) is detected to be serum positive for antibodies by using Micro Agglutination Test (MAT) technique against serovar *L. Icterohaemorrhagiae* (n=1/40) . The result is considered the reactive infection found in rat population due to interpretation of the serum positive against *L.icterohaemorrhagiae* of titre 1:160 onwards (\geq :160). The serovar *L.icterohaemorrhagiae* found to have the high titer onward (\geq :160) and was presumed to be the infectious one which have potential to trigger the outbreak of leptospirosis by spreading it to other mammal including human itself by either direct or indirect transmission Based from findings of the study, Ampang area is considered to be exposed to the risk of leptospirosis outbreak due to the detection of active leptospira found among the rodent population in the area. Although the prevalence of leptospira is low (n=1/40, 2.5 %), the probability of leptospirosis outbreak is still exist and effective measures should be done to outcome the potential risk. It is recommended that a rodent control program should be started by relevant authority to minimize the risk of leptospirosis infection that might happen as a preventive measure to minimize the risk of leptospirosis outbreak in the population.