

UNIVERSITI TEKNOLOGI MARA

**Incident of Gram-Negative Microorganism from
the Anal Specimen of Norway Rat (*Rattus
Norvegicus*) And Roof Rat (*Rattus Rattus*)
Trapped From Four Areas In Kuala Lumpur**

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requirements
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Declaration by student

Project entitled "Incident of Gram-Negative Microorganism from the Anal Specimen of Norway Rat (*Rattus Norvegicus*) And Roof Rat (*Rattus Rattus*) Trapped From Four Areas In Kuala Lumpur" is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Miss Siti Rohana Bt. Mohd Yatim as Project Supervisor and Mr. Abd Rahim B. Dal as co-supervisor. It has been submitted to the Faculty of Health sciences in partial fulfilment of the requirement of Degree of Bachelor in Environmental Health and Safety (Hons).

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Abstract

Incident of Gram-Negative Microorganism from the Anal Specimen of Norway Rat (*Rattus Norvegicus*) And Roof Rat (*Rattus Rattus*) Trapped From Four Areas In Kuala Lumpur

Nurizzati Binti Mohammad Amir

A cross-sectional study was carried out among the rodents in Kuala Lumpur. The objective of this study was to study the prevalence species of rodents in Kuala Lumpur, to identify the presence of pathogens, to determine the rodent and flea index, and to identify the factors contribute to rodent infestation. Two-hundred forty of rodents were trapped in this study and randomized eighty rodents were chosen for further microbiology study. All trapped rodents were identified its species origins. The study was conducted in Kuala Lumpur area (Cheras, Chow Kitt, Setapak, and Dato' Keramat). A statistical analysis that was statistical package for the social science (SPSS) version 17.0 was used in this study. This study used rodent trap measuring 29x22x50cm. Respondents (n=80) among hawker/market seller in Kuala Lumpur were randomly selected for questionnaire on knowledge, attitude, and practice. The microbiological study found that there were absence of pathogens in the rodents, *Salmonella spp.* show a significance association with rodents where $p < 0.05$. Other pathogens such as *Klebsiella spp.*, *Yersinia Enterocolitica*, and *E.coli* showed non-significant result ($p > 0.05$). For flea index, both four zones has $RI < 1$. Fleas found in Setapak and Chow Kit had shown a significance association with the number of rodent trapped ($p < 0.05$). In contrast, fleas found in Cheras and Dato' Keramat showed no association with the number of trapped rodents ($p > 0.05$). High factors contribute to rodent infestation were the presence of food stall and restaurants (90%), migration of rodents to new area (90%), followed by dirty area and lot of waste (80%). Other factors contribute were like lack of control and monitoring (69%), behavioural attitude of human (75%), defective drainage system (58%), lowest factor was poor infrastructural maintenance (38%). In conclusion, some action on rat control strategies should be done by local authority to control the rodent population so as to reduce the transmission of disease to human.