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Response of bronchus-associated lymphoid tissue (Balt) of prin white rats challenged with live Pasteurella Multocida B:2 / Rawaidah Anas.

Lihat sebelah

RESPONSE OF BRONCHUS-ASSOCIATED LYMPHOID TISSUE (BALT) OF PRIME WHITE RATS CHALLENGED WITH LIVE *PASTEURELLA MULTOCIDA* B: 2

By

Rawaidah Binti Anas

Research Report submitted in partial fulfillment
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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk 'RESPONSES OF BRONCHUS-ASSOCIATED LYMPHOID TISSUE (BALT) OF PRIME RATS CHALLENGED WITH LIVE *Pasteurella multocida* B: 2' oleh Rawaidah Binti Anas no. matrik UK 7949 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains (Sains Biologi), Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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%	Percent
BALT	Bronchus-associated Lymphoid Tissue
µm	Micron meter
°c	Degree Celsius
mm	Millimeter
GALT	Gut-associated Lymphoid Tissue
NALT	Nasopharyngeal-associated Lymphoid Tissue
VALT	Vagina-associated Lymphoid Tissue
g	Gram
ml	Milliliter
rpm	Rotation per Minute
mg	milligram
<	Less than
>	More than
SD	Standard deviation
MHC	Major Histocompatibility Complex

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ABSTRACT

This study was proposed to determine the response of BALT on prime white rats after challenged with live *Pasteurella multocida* B: 2 and the appropriated regime of lyophilized dust crude administration of organism in white rats. The experiment was used three groups of rats for every group of treatment, control positive and control negative. The booster was given into intranasal of white rats on treatment group for twice in 2, 3 and 4 week intervals. Then, they were challenged seven days from their second booster with live *Pasteurella multocida* B: 2 into the intraperitoneal. After that, they were observed with any lesion of *P. multocida* B: 2 infection and immediately slaughtered if they die. After seven days from challenged, all rats which are still alive were slaughtered. Liver, lung, kidney and heart blood were collected from the all slaughtered rats for microbiological isolation of *P. multocida* B: 2 infections and the lung was taken for histological process to observe Bronchus-associated Lymphoid Tissue (BALT). At the end of the experiment, by using T-test One Sample Variable with test value, $p = 0.05$, we know that the average areas of BALT and the total number of lymphocytes have highly significant ($p < 0.01$) different between group and week interval. *P. multocida* B: 2 were found in four selective organs which are lung, kidney, liver and heart. We can conclude that the different areas of BALT and number of lymphocytes on control and treatment group in each interval were caused by difference reaction of immunity to encounter the *P. multocida* B: 2.

TINDAK BALAS BRONCHUS-ASSOCIATED LYMPHOID TISSUE (BALT) PADA TIKUS YANG TELAH BERSEDIA PADA WAKTU KEMUNCAK UNTUK MELAWAN *Pasteurella multocida* B: 2 YANG HIDUP

ABSTRAK

Kajian ini bertujuan untuk menentukan tindak balas BALT pada tikus putih yang telah dirawat selepas diuji dengan *Pasteurella multocida* B: 2 dan jarak masa yang sesuai untuk pemberian serbuk *Pasteurella multocida* B: 2 yang tidak ditapis kepada tikus putih. Eksperimen ini menggunakan tiga kumpulan tikus-tikus untuk setiap kumpulan kawalan negatif, kawalan positif dan kumpulan rawatan. Serbuk *Pasteurella multocida* B: 2 diberi dua kali melalui hidung tikus putih pada kumpulan rawatan pada jarak masa dua, tiga dan empat minggu. Kemudian tikus-tikus diberi *Pasteurella multocida* B: 2 hidup kepada tikus selepas tujuh hari dari minggu pemberian serbuk *P. multocida* B: 2 pada ruang antara kulit dan organ di bahagian abdomen (intraperitoneal). Selepas itu, tikus dilihat samada berlaku sebarang perubahan hasil daripada jangkitan *P. multocida* B: 2 dan dibedah dengan cepat jika berlaku kematian. Selepas tujuh hari selepas melawan bakteria, tikus yang masih hidup akan dibunuh semuanya. Hati, jantung, peparu dan ginjal diambil untuk proses histologi untuk melihat kesan kepada BALT. Pada akhir eksperimen, dengan menggunakan ujian-T dengan satu sampel pelbagai dan $p = 0.05$, kami tahu wujud perbezaan bilangan limfosit dan keluasan BALT antara kumpulan dan antara eksperimen. *P. multocida* B: 2 juga dapat dijumpai pada empat organ terpilih iaitu peparu, ginjal, hati dan jantung. Dapat disimpulkan bahawa, perbezaan keluasan BALT

dan bilangan limfosit pada kumpulan rawatan dalam setiap kumpulan rawatan dan kumpulan kawalan adalah disebabkan perbezaan tindakan sistem keimunan melawan *P. multocida* B: 2