

**ISOLATION AND IDENTIFICATION OF BACTERIA FROM
SKIN AND GILL LESIONS OF GOLD FISH**

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KUSTEM**

2003

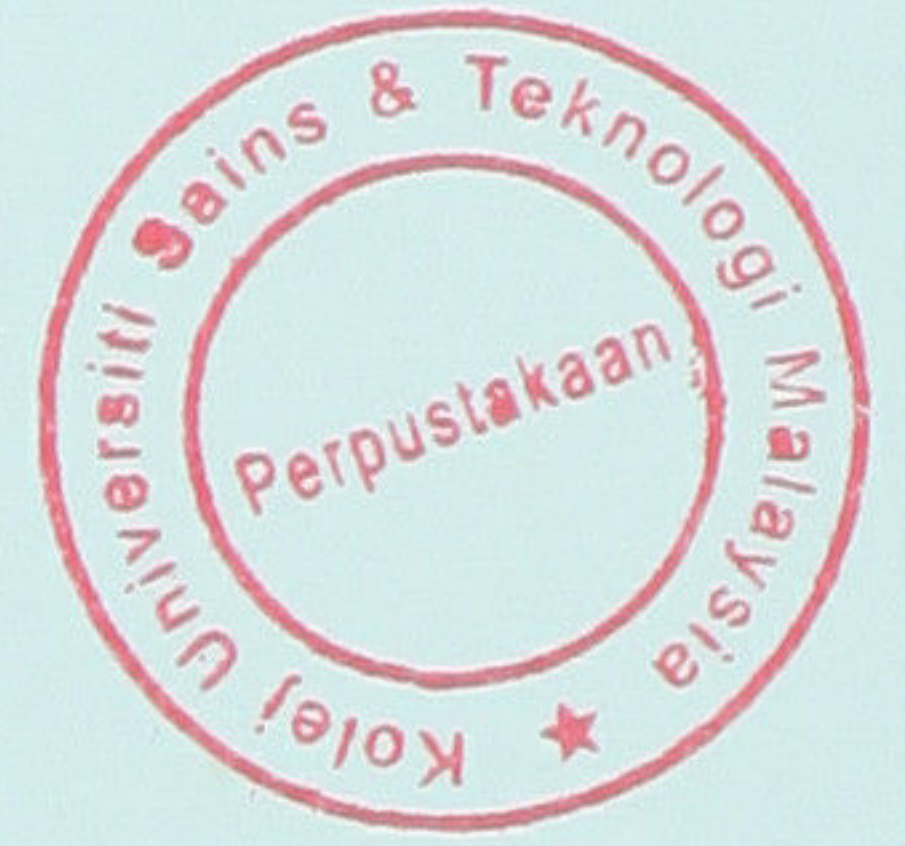
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Isolation and identification of bacteria from skin and gill lesions of gold fish / Richard Hii Ding Yin.



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ISOLATION AND IDENTIFICATION OF BACTERIA FROM SKIN AND GILL LESIONS OF GOLD FISH

BY
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This project report is submitted in partial fulfillment of the requirements for the
Bachelor of Applied Science (Biodiversity Conservation and Management)

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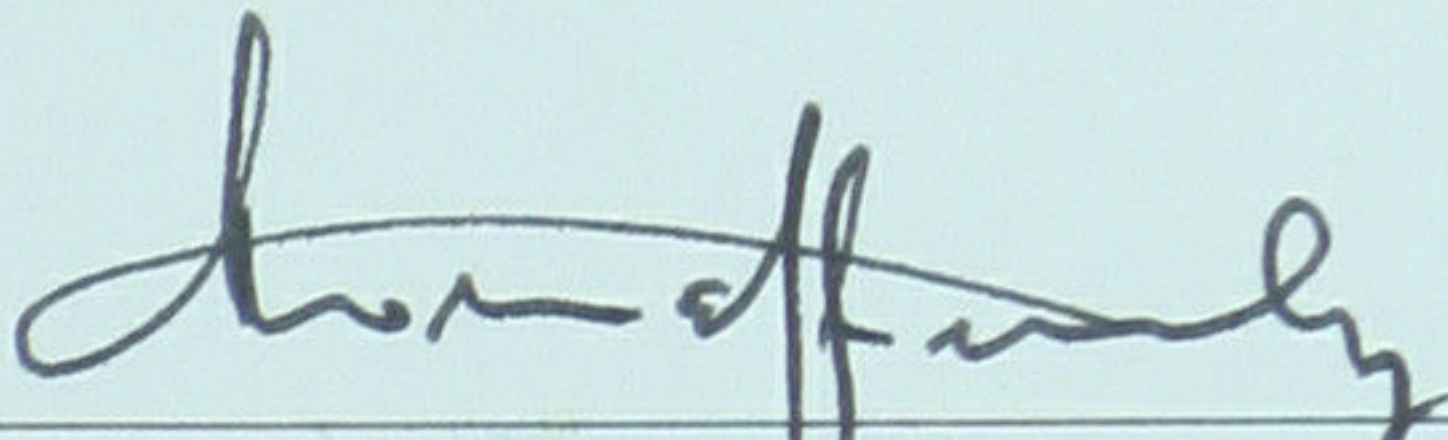
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

**BORANG PENGESAHAN DAN KELULUSAN
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Lesions of Gold Fish

Adalah ini diakui dan disahkan bahawa saya telah memeriksa laporan projek ini dan

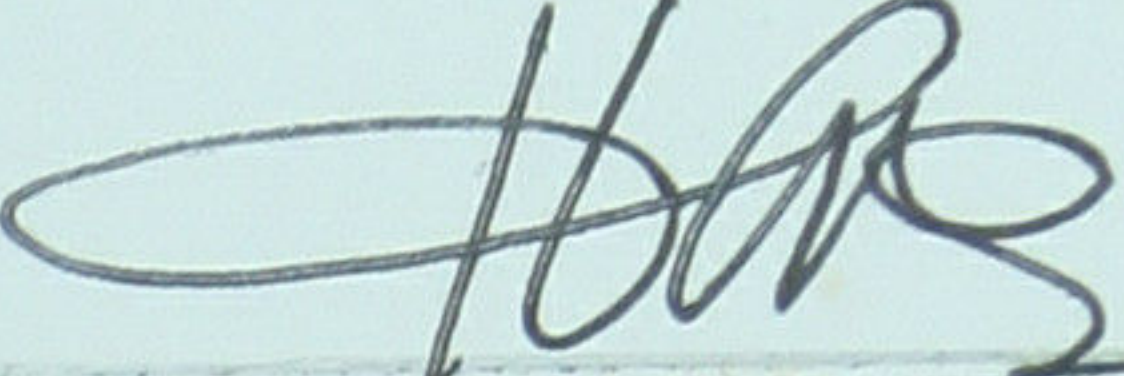
- i. Semua pembetulan yang disarankan telah dilakukan,
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ABSTRACT

A study was done to identify and test anti-microbial sensitivity on bacteria isolated from healthy and diseased gold fish. 26 healthy and 14 diseased gold fishes were sampled from Freshwater Hatchery Unit in KUSTEM. The skin and gill lesions from gold fishes were isolated into three types of media, which is Trypticase Soy Agar (TSA), Mac Conkey agar and Tri-citrate Bile Salt (TCBS). Then the isolates from gold fishes were tested with gram-stain, oxidase test and several biochemical tests, which are triple sugar ion agar (TSI), sulfide indole motility agar (SIM) and Simon Citrate agar to identify the bacteria. Five gram-negative bacteria were chose as the samples in this study, which are *Aeromonas hydrophila*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Vibro parahaemolyticus* and *Serratia sp.* Based on the results, gills were more infected by bacteria than skins. Besides that, diseased gold fishes showed the higher prevalence compared to the healthy gold fishes. However, statistical analysis showed that the bacteria studied did not infected all the gold fishes.

ABSTRAK

Kajian ini adalah mengenai pengasingan dan pengenalpastian terhadap bakteria yang terdapat dalam ikan emas dan juga kepekaan terhadap ujian anti-mikrob. 40 ekor ikan emas telah diperiksa di mana 26 ekor ikan adalah sihat manakala 14 ekor yang lain adalah berpenyakit. Bahagian-bahagian ikan yang dikaji adalah lendir daripada kulit dan insang. Lendir yang diambil dan dikultur pada tiga jenis media yang berlainan iaitu Trypticase Soy Agar (TSA), Mac Conkey agar dan Tri-citrate Bile Salt (TCBS). Bakteria-bakteria yang terasing daripada ikan emas diuji dengan ujian gram-stain, ujian oksida dan ujian biokimia iaitu triple sugar ion agar (TSI), sulfide indole motility agar (SIM) dan Simon Citrate agar untuk mengenalpasti bakteria-bakteria yang terasing. Daripada jumlah bakteria yang terasing, lima bakteria yang gram-negatif dipilih sebagai sampel dalam kajian ini. Kelima-lima bakteria ini adalah *Aeromonas hydrophila*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Vibro parahaemolyticus* dan *Serratia sp.* Berdasarkan keputusan yang didapati, bahagian insang lebih banyak dijangkiti oleh bakteria-bakteria berbanding dengan bahagian kulit. Selain itu, kadar jangkitan pada ikan emas yang berpenyakit adalah lebih tinggi daripada ikan emas yang sihat. Walau bagaimanapun, pengiraan yang didapati daripada penganalisan statistik menunjukkan bahawa bakteria tidak menjangkiti semua ikan emas.