

# 仔豬下痢之大腸桿菌診斷與參加國際水生動物健康

## 研討會報告

生物研究組

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### 摘要

大腸桿菌感染是初生小豬下痢的一個重要病原，本研究之目的為調查細菌室收到之初生小豬下痢病例中分離出大腸桿菌情形。本年度至今共有 47 例送檢病例，其中 12 例為豬隻下痢，除 1 例只要求檢菌分離外，其餘檢體均分離出大腸桿菌。以分子生物學方法檢測腸毒素基因，7 例大腸桿菌分離株為毒素基因陰性，2 例為忌熱腸毒素 (heat labile enterotoxin, LT) 基因陽性，1 例為耐熱腸毒素 (heat stable enterotoxin, ST) 基因陽性，1 例為同時具有忌熱腸毒素、耐熱腸毒素與類志賀氏毒素基因 (Shiga like enterotoxin, STx)。該忌熱腸毒素、耐熱腸毒素與類志賀氏毒素基因陽性分離株之藥物敏感性試驗結果顯示對 beta-lactam 類藥物、第三代頭孢子素、喹諾酮類 (quinolone) 藥物、四環黴素與磺胺劑等無感受性。本研究結果顯示本年度爆發小豬下痢病例中可分離出帶有腸毒素基因之大腸桿菌，對於大腸桿菌症之預防治療方式需重新評估，與需要監控具有腸毒素基因之大腸桿菌對公共衛生的影響。

本年 8 月 31 日至 9 月 6 日赴美國參加國際水生動物健康研討會 (7<sup>th</sup> International Symposium on Aquatic Animal Health)，並由黃淑敏助理研究員壁報發表「Development of an immunochromatographic test kit for rapid detection of fish iridovirus」。

# **Diagnosis of *Escherichia coli* in Postweaning Diarrhea in Pigs and Meeting Report: 7<sup>th</sup> International Symposium on Aquatic Animal Health**

Tzu-Ming Huang

## **Abstract**

*Escherichia coli* is one of the most important causes of postweaning diarrhea in piglets. The objective of the present study was to investigate the *E. coli* isolated from the piglet diarrhea cases submitted to Bacteriology laboratory. Up to date, 47 cases were submitted to Bacteriol. lab. in 2014. Among them, the complaint of 12 cases was piglet diarrhea. *E. coli* was isolated from all cases, except one case only requested for *Clostridium* isolation. By molecular detection for enterotoxin gene, the *E. coli* isolates from 7 cases were negative, 2 cases were positive for heat labile enterotoxin (LT), 1 case was positive for heat stable enterotoxin (ST), and 1 case was positive for LT, ST, and Shiga like enterotoxin (STx). The antimicrobial susceptibility of the LT/ST/STx *E. coli* isolate showed no sensitivity to beta-lactam drugs, 3<sup>rd</sup> cephalosporins, quinolones, tetracycline and sulfonamides. The results of the present study revealed that enterotoxin producing *E. coli* could be isolated from the piglet diarrhea outbreaks in 2014. It was suggested to review the treatment and control policy of neonatal colibacillosis, and to monitor the enterotoxin producing *E. coli* distribution for public health protection.

Ms. SM Huang and I attended the 7<sup>th</sup> International Symposium on Aquatic Animal Health in Portland, OR, USA in August 31 to September 6. SM Huang presented a poster titled “Development of an immunochromatographic test kit for rapid detection of fish iridovirus”