

**IDENTIFICATION AND DISTRIBUTION OF ANTIMICROBIAL RESISTANCE
IN *E. coli* AND *Salmonella* sp. FROM MEAT (PORK, BEEF, AND CHICKEN)
IN WESTERN VISAYAS (REGION VI)**

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An Undergraduate Thesis Submitted to the Faculty of the College of Veterinary
Science and Medicine, Central Luzon State University,
Science City of Muñoz, Nueva Ecija, Philippines
in Partial Fulfillment of the Requirements
for the Degree

DOCTOR OF VETERINARY MEDICINE

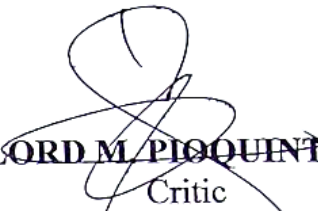
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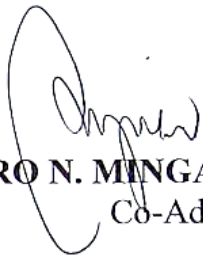
This undergraduate thesis entitled **IDENTIFICATION AND DISTRIBUTION OF ANTIMICROBIAL RESISTANCE IN *E. coli* AND *Salmonella* sp. FROM MEAT (PORK, BEEF, AND CHICKEN) IN WESTERN VISAYAS (REGION VI)** prepared and submitted by **MARA REGINA J. UYEHARA**, in partial fulfillment of the requirements for the degree of **DOCTOR OF VETERINARY MEDICINE**, is hereby accepted:


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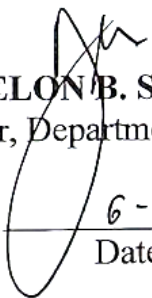

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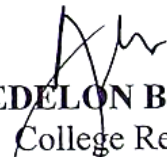

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ABSTRACT

UYEHARA, MARA REGINA J., College of Veterinary Science and Medicine, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, **June 2019**, **IDENTIFICATION AND DISTRIBUTION OF ANTIMICROBIAL RESISTANCE IN *E. coli* AND *Salmonella* sp. FROM MEAT (PORK, BEEF, AND CHICKEN) IN WESTERN VISAYAS (REGION VI)**

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Co-adviser: CLARO N. MINGALA, DVM, Ph.D.

The study was conducted to identify and characterize antimicrobial-resistant *Escherichia coli* and *Salmonella* sp. isolated from meat samples in Western Visayas (Region VI). Specifically, those isolated from pork, chicken and beef samples from supermarkets and wet markets in the region. A total of thirty (30) meat samples were collected from Aklan of Region 6 (Western Visayas). Fifteen (15) samples came from wet markets and fifteen (15) samples came from supermarkets. *E. coli* were initially cultivated in BHI broth and transferred to MacConkey agar. Colonies from *E.coli* plates were transferred in differential and selective media (TSI medium, LIM medium, MR-VP medium and Simmons citrate). *Salmonella* sp. were initially cultivated in BPW broth and Rappaport-Vassidialis broth then transferred to XLD agar. Colonies from *Salmonella* sp. plates were transferred in differential and selective media (TSI medium and LIM medium). Identified colonies *E. coli* and *Salmonella* sp. were then subjected to antimicrobial susceptibility testing. Results reveal that majority of the *E. coli* and *Salmonella* sp. colonies isolated from meat (pork, chicken and beef) samples showed patterns of resistance to antibiotics.

Keywords: *E. coli*, *Salmonella* sp. Antimicrobial resistance

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