

***IN VITRO* ANTIMICROBIAL ACTIVITY OF CRUDE EXTRACT OF FECAL  
BACTERIA FROM PHILIPPINE NATIVE PIG (*Sus scrofa*) AGAINST  
BACTERIA ISOLATED FROM DIARRHEIC PIGLET**

**PATRICIA ECLARINAL MORILLO**

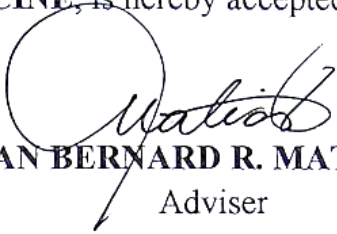
An Undergraduate Thesis Submitted to the Faculty of the College of Veterinary  
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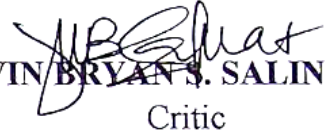
**ACCEPTANCE SHEET**

This undergraduate thesis entitled “*IN VITRO* ANTIMICROBIAL ACTIVITY OF CRUDE EXTRACTS OF FECAL BACTERIA FROM PHILIPPINE NATIVE PIGS (*Sus scrofa*) AGAINST BACTERIA ISOLATED FROM DIARRHEIC PIGLETS,” prepared and submitted by **PATRICIA ECLARINAL MORILLO**, in partial fulfillment of the requirements for the degree **DOCTOR OF VETERINARY MEDICINE**, is hereby accepted:



**FROILAN BERNARD R. MATIAS, DVM, MSc**  
Adviser

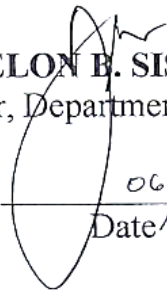
06/24/19  
Date Signed



**MARVIN BRYAN S. SALINAS, DVM**  
Critic

06/24/19  
Date Signed

Accepted as partial fulfillment of the requirements for the degree of **DOCTOR OF VETERINARY MEDICINE**:



**FREDELON B. SISON, DVM, MVPH**  
Chair, Department of Pathobiology

06/24/19  
Date Signed



**FREDELON B. SISON, DVM, MVPH**  
College Research Coordinator

06/24/19  
Date Signed



**VIRGINIA M. VENTURINA, DVSM, Ph.D.**  
Dean, College of Veterinary Science and Medicine

06/24/19  
Date Signed

## **BIOGRAPHICAL SKETCH**

The author, Patricia Eclarinal Morillo, was born on October 23, 1996 in Iba, Zambales. She is the only child of Teofilo Mercurio Morillo, Jr. and Marilou Eclarinal Morillo.

She went to St. Michael School (A.Y. 2002 - 2009) for her primary education where she graduated as salutatorian. She finished her secondary education at Zambales National High School (A.Y. 2009 - 2013), and tertiary education at Central Luzon State University for the degree Bachelor of Science in Animal Husbandry (A.Y. 2013 - 2017) and Doctor of Veterinary Medicine (A.Y. 2017 - 2019). During her tertiary education, she was awarded College Scholar for the second semester of A.Y. 2013 – 2014. She became the president of the Christian Brotherhood International, a campus ministry organization, from A.Y. 2018 – 2019.

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## ABSTRACT

**MORILLO, PATRICIA E.**, Department of Pathobiology, College of Veterinary Science and Medicine, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, **June 2019**, ***IN VITRO* ANTIMICROBIAL ACTIVITY OF CRUDE EXTRACT OF FECAL BACTERIA FROM PHILIPPINE NATIVE PIG (*Sus scrofa*) AGAINST BACTERIA ISOLATED FROM DIARRHEIC PIGLET.**

Adviser: FROILAN BERNARD R. MATIAS, DVM, MSc

Crude extracts of fecal bacteria from Philippine native pigs were evaluated for in vitro antimicrobial activity against bacteria from diarrheic piglets. This study measured and compared zones of inhibition from crude extracts produced at different incubation periods (6, 12, 18 and 24h) and from commercially produced antimicrobials.

A 100 $\mu$ l fecal solution were placed on nutrient agar plate then incubated for 24 hours at 37°C. 12 isolates were produced and characterized morphologically based on colony morphology and Gram stain. Two distinct colony morphologies were formed, raised and wrinkle-patterned surface and flat and mucoid surface. Gram staining showed all isolates are positive and rod-shaped. Two isolates (S1-1 and S2-3) with different colony morphology were randomly selected as test bacteria A and test bacteria B for antimicrobial activity. Filter paper discs, impregnated with previously prepared 30 $\mu$ l of crude extracts, and antimicrobial discs were evenly placed on Mueller-Hinton agar plate inoculated with the test bacteria, then incubated for 18h at 37°C. Zones of inhibition were measured. Three zones of inhibition were produced against test bacteria A, and six against test bacteria B. Both test bacteria are resistant to ampicillin and TMPS, but susceptible to chloramphenicol, ciprofloxacin, clindamycin, enrofloxacin, erythromycin, and gentamicin.

Zones of inhibition produced by the crude extracts are statistically insignificant with one another, but significantly higher than ampicillin and TMPS.

Keywords: Philippine native pig; antimicrobial activity; diarrheic piglets; crude extracts

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