CENTRAL LUZON STATE UNIVERSITY

IDENTIFICATION AND CHARACTERIZATION OF FUNGI PRESENT IN THE DIGESTIVE TRACT FLUID OF WATER BUFFALO CALVES (*Bubalus bubalis*) FED WITH TWO DIETS

ANGELLI MIRANDA LLORANDO

An Undergraduate Thesis Submitted to the Faculty of the Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Muñoz, Nueva ecija, Philippines in Partial Fulfilment of the Requirements for the Degree

BACHELOR OF SCIENCE IN BIOLOGY

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COLLEGE OF ARTS AND SCIENCES
Department of Biological Sciences

APPROVAL SHEET

The Undergraduate Thesis entitled: **IDENTIFICATION AND CHARACTERIZATION OF FUNGI PRESENT IN THE DIGESTIVE TRACT FLUID OF WATER BUFFALO CALVES (*Bubalus bubalis*) FED WITH TWO DIETS** prepared and submitted by **ANGELLI M. LLORANDO** in partial fulfilment of the requirements for the degree of **BACHELOR OF SCIENCE IN BIOLOGY** is hereby approved and accepted.

CYNTHIA C. DIVINA, Ph. D.
Adviser
6 JUNE 2017
Date Signed

DANIEL L. AQUINO, Ph. D.
Co-Adviser
07 JUNE 2017
Date Signed

KHRISTINA JUDAN- CRUZ, M.Sc.
Critic
07 JUNE 2017
Date Signed

RICH MILTON R. DULAY, M.Sc.
Department Research Coordinator
06/9/17
Date Signed

Accepted in partial fulfilment of the requirements for the degree of **BACHELOR OF SCIENCE IN BIOLOGY.**

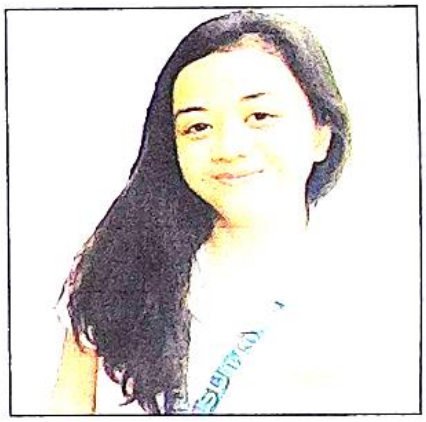
EVARISTO A. ABELLA, Ph. D.
Department Chair
13 JUNE 2017
Date Signed

ANNA MARIA LOURDES S. LATONIO, Ph. D.
College Research Coordinator
6-13-2017
Date Signed

MYRNA R. UMAGAT, Ph. D.
Dean

Date Signedp

BIOGRAPHICAL SKETCH



PERSONAL INFORMATION

Name : ANGELLI MIRANDA LLORANDO
Date of Birth : April 29, 1997
Place of Birth : Cabanatuan City, Nueva Ecija
Address : La Torre, Talavera,Nueva Ecija
Religion : Roman Catholic
Civil Status : Single
Parents : Mr. Angelito D. Llorando
: Mrs. Olivia M. Llorando

EDUCATIONAL BACKGROUND

TERTIARY : Central Luzon State University
(A.Y. 2013 – 2017) Science City of Muñoz, Nueva Ecija
Bachelor of Science in Biology

SECONDARY : Cabanatuan City Science High School
(A.Y. 2009 – 2013) Mabini Extension, Cabanatuan City, Nueva Ecija

ELEMENTARY : Mary's Little Angels Academy
(A.Y. 2003 – 2009) Andal Alinio, Talavera, Nueva Ecija

ON THE JOB TRAINING

Bureau of Plant Industry – Baguio National Crop Research, Development and Production Support Center (BPI-BNCRDPSC)
Guisad Valley, Baguio City
June 21 – July 21 2016

SEMINARS ATTENDED

Philippine Carabao Center, In-house Review 2016
Philippine Carabao Center National Headquarters and Gene pool, Science City of Muñoz, Nueva Ecija
March 29, 2017

2017 PCC R4D Pre-In House Review
Philippine Carabao Center National Headquarters and Gene pool, Science City of Muñoz, Nueva Ecija
March 24, 2017

Animal Genetic Resources in Japan and an International Collaboration (A SATREPS PROJECT)
Philippine Carabao Center National Gene Pool Headquarters, Science City of Muñoz, Nueva Ecija
February 15, 2017

The 5th International conference on Integration of Science and Technology for Sustainable Development (ICIST 2016)
Inle, Cherry Queen Hotel, Southern Shan State, Myanmar
November 26-27, 2016

Role of Biologists in the Environmental Impact Assessment and Management Projects
University Auditorium, CLSU, Science City of Muñoz, Nueva Ecija
November 22, 2016

Symposium on Philippine Biodiversity and the National Museum
University Auditorium, CLSU, Science City of Muñoz, Nueva Ecija
March 22, 2016

Symposium on HIV: AIDS "Survival of the fittest. The Human Culture Media"
University Auditorium, CLSU, Science City of Muñoz, Nueva Ecija
November 21, 2015

Symposium on Current Trends in Food Safety and Quality Assurance
CLSU Gymnatorium, Science City of Muñoz, Nueva Ecija
August 30, 2014

Symposium on Rice Biotechnology
"Direct Seeding: A response to economical and technological challenges in Rice Farming"
University Auditorium, CLSU, Science City of Muñoz, Nueva Ecija
September 7, 2013

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ANGELLI M. LLORANDO

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ABSTRACT

LLORANDO, ANGELLI MIRANDA, Bachelor of Science in Biology, Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, June 2017. **IDENTIFICATION AND CHARACTERIZATION OF FUNGI PRESENT IN THE DIGESTIVE TRACT FLUID OF WATER BUFFALO CALVES (*Bubalus bubalis*) FED WITH TWO DIETS**

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Adviser: Cynthia C. Divina, Ph. D.
Co – Adviser: Daniel L. Aquino, Ph. D.

The study was conducted to identify and characterize the fungi present in the digestive tract fluid of water buffalo calves from birth to 30 days of weaning fed with two diets through morphological and cultural analysis. As a result, a total of four (4) anaerobic fungi namely: *Piromyces sp., Neocallimastix sp., Caecomyces sp.* and *Orpinomyces sp.* were identified by using modified Orpin's media and the Hungate roll tube method which involved a series of sub-culturing of fungal sections on solid media and subsequent culturing in broth and a thorough observation on the morphological and cultural characteristics of the obtained isolates. Consequently, the presence of fungal colonies, gradually increased and was directly proportional to the calf's age in days. This increasing trend was observed regardless of the given feeding treatment. Comparison between the two diets given revealed that the fungal populations did not have any significant difference with respect to the given diets.

In conclusion, the population of anaerobic fungi was not affected by the feeding treatments whether milk, feeds and grass or milk and grass only. The survival of the anaerobic fungi is dependent on the fiber content of the diets given which was analysed through proximate analysis.

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