

JUSTINE CHRISTIAN H. MULIG

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EDUCATION

NORTH CAROLINA STATE UNIVERSITY

MS HORTICULTURAL SCIENCE | MINOR IN BIOTECHNOLOGY

AUGUST 2023-JULY 2025 | 3.917 GPA

- Completed coursework in biotechnology, statistics, genetics, and plant physiology
- Undertook master's research entitled "Developing an Efficient Regeneration and Transformation System in *Tripidium* spp. for Gene Editing" under the supervision of Dr. Wusheng Liu of the Translational Genomics and Plant Bioengineering Lab in the Department of Horticultural Science, College of Agriculture and Life Science

UNIVERSITY OF THE PHILIPPINES LOS BAÑOS

BS AGRICULTURAL BIOTECHNOLOGY | CROP BIOTECHNOLOGY

MAY 2013-JULY 2018 | 1.63 GWA | CUM LAUDE

- Completed coursework in the application of biotechnology, genetic control and environmental manipulation technologies to improve agricultural production and maintain agro-environments
- Undertook gene discovery research for undergraduate thesis entitled "Isolation and Characterization of the Glycerol-3-Phosphate Dehydrogenase (GPDH) gene in Pili (*Canarium ovatum* Engl.) Pulp" under the supervision of Dr. Roberta N. Garcia of the Biochemistry Laboratory in the Institute of Plant Breeding, UPLB

PROFESSIONAL BACKGROUND

PHILIPPINE COCONUT AUTHORITY-ZAMBOANGA RESEARCH CENTER

PLANT GENETIC RESOURCES CONSERVATION AND UTILIZATION DIVISION

SCIENCE RESEARCH SPECIALIST 1 | FEBRUARY 2019-JUNE 2023

- Supervised a team of 11 lab personnel in the daily operations and monitoring of coconut somatic embryos and embryo-cultured makapuno (ECM)
- Performed subculturing and maintenance of somatic embryos, plantlets and embryo-cultured makapuno
- Prepared R&D proposal with Mr. Ramon L. Rivera for the 2-year DA-BIOTECH project on DNA-marker based identification and phylogenetic analysis of 26 outstanding coconut varieties and hybrids amounting PhP 4.9M (~USD 95,000)
- Research team leader of the DA-BIOTECH funded project and performs field collection, freeze-drying of samples, DNA extraction, agarose gel electrophoresis, spectrophotometric analysis, polymerase chain reaction, polyacrylamide gel electrophoresis, gel visualization and SSR marker analysis
- Prepares R&D proposals, technical reports, and administrative documents for funding agencies
- Facilitates trainings on coconut technologies and basic molecular biology techniques

POSTER PRESENTATIONS

41ST ANNUAL SCIENTIFIC MEETING OF THE NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY

Mulig J, Garcia R. Glycerol-3-phosphate dehydrogenase cDNA of Pili (*Canarium ovatum* Engl.)

exhibits high similarity with other dicot species. Poster presented at: Caring for the Country's

Carrying Capacity. 41st Annual Scientific Meeting of the National Academy of Science and

Technology; 2019 July 10-11; Mandaluyong, PH.

12th PHILIPPINE ASSOCIATION FOR PLANT TISSUE CULTURE AND BIOTECHNOLOGY (PAPTCB)
SCIENTIFIC CONFERENCE

Mulig J, Sangalang A, Enriquez V, Emmanuel E, Rivera S, Larupay J, Rivera R. Validation of coconut farms for on-farm hybridization through DNA-marker based identification. Poster presented at: 12th Philippine Association for Plant Tissue Culture and Biotechnology Scientific Conference; 2024 October 15-19; Legazpi City, Albay PH.

79TH ANNUAL MEETING OF THE SOCIETY FOR IN VITRO BIOLOGY

Mulig J, Da K, Ranney T, Huang D, Liu W. Developing an Efficient Regeneration and Transformation System in *Tripidium* spp. for Gene Editing. Poster presented at: 2025 In Vitro Biology Meeting. 79th Annual Meeting of the Society for In Vitro Biology; 2025 June 7-10; Norfolk, VA.

TEACHING EXPERIENCE

HS 301 PLANT PROPAGATION

Teaching Assistant | Fall 2024 | August 2024-December 2025

SCHOLARSHIPS AND AWARDS

FULBRIGHT-PHILIPPINE AGRICULTURE SCHOLARSHIP PROGRAM

Philippine-American Educational Foundation (PAEF) | 2023-2025

FRANK A. AND JOAN APRIL BLAZICH SCHOLARSHIP AWARD

College of Agriculture and Life Sciences, NCSU | 2024

DALE C. BONE AND GENIA TYSON BONE SPECIALTY CROPS PROGRAM ENDOWMENT

Department of Horticultural Science, CALS, NCSU | 2025

GRANTS

NCSU Plant Breeding Research and Equipment Funding. Liu, W. (PI), Jing, H., Huang, D., Nelson, A., **Mulig, J.** \$7,500.

LEADERSHIP AND INVOLVEMENT

GRADUATE STUDENT ASSOCIATION REPRESENTATIVE

Horticultural Science Graduate Student Association | August 2024-July 2025

TREASURER

Fulbright Student Association | August 2024-July 2025

MEMBER

Pi Alpha Xi, Plant Breeding Club | November 2023-July 2025