JONATHAN S. CONCEPCION

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EDUCATION

05/02/2025 **Ph.D. in Plant Breeding, Genetics and Biotechnology**, Michigan State University, East Lansing, 48824, MI, USA.
Dissertation: **Integrating Phenomics and Genomics Towards Accelerating Genetic Gain in Soft Winter Wheat**

04/10/2015 **B.S. Biology**, Central Luzon State University, Science City of Muñoz, Nueva Ecija, 3119, Philippines.
Undergraduate Thesis: **Phenotypic and Genotypic Variability Analysis of Pokkali Rice Variety-Derived Mutant Lines**

RESEARCH AND PROFESSIONAL EXPERIENCE

05/2025 – Present **Postdoctoral Research Associate** – Department of Plant Biology, Michigan State University, East Lansing, MI, USA

- Lead statistical analysis of multi-environment and high-dimensional datasets in switchgrass.
- Oversee UAV and satellite-based evaluations inlcuding processing, and data gathering and analysis; oversee field trial (MSU) for the switchgrass variety evaluation.
- Collaborate across teams to advance genomics-assisted breeding and imaging-based field trait evaluations in switchgrass.

08/2021 – 05/2025 **Graduate Research Assistant** – Department of Plant, Soil, and Microbial Science, Michigan State University, East Lansing, MI, USA

- Explored and initiated integrative research combining phenomics and genomics for genetic improvement of soft winter wheat.
- Led genome-wide association studies (GWAS), hyperspectral and multispectral phenomic prediction, infrared thermal imaging, and genomic selection for grain yield and Fusarium Head Blight resistance.
- Assisted the breeding program in breeding line development, trait evaluations, and field performance trials.

01/2023 – 05/2023 **Graduate Teaching Assistant** – CSS 350 – Introduction to Plant Genetics, Michigan State University

07/2019 – 06/2021 **Research Associate Specialist** – School of Plant, Soil, and Microbial Sciences, Louisiana State University, Baton Rouge, LA, USA

- Conducted genetic and physiological studies on flowering time in weedy rice, and salinity and nitrate stress tolerance.
- Managed greenhouse trials; performed genotyping, phenotyping, and molecular data analysis to dissect complex traits.

07/2016 – 06/2019 **Science Research Analyst** – Plant Breeding and Biotechnology Division, Philippine Rice Research Institute, Science City of Muñoz, Nueva Ecija, Philippines

- Oversee breeding activities for submergence and combined submergence–salinity stress tolerance in rice including:
  - Leading activities on marker assisted selection for presence of *Sub1* and *SalTol* QTLs in F_2 population
  - Submergence tolerance evaluation and selection at F_4 – F_5 generation, as well as mutation derived breeding lines.
  - Conducting comparative field performance of advanced breeding lines, including mutation-derived breeding lines, under favorable and submergence conditions including field design, establishment and

maintenance, data gathering, analyses, and nominating breeding lines for commercial yield trial.
- Conducted genetic diversity analysis of mutation-derived rice breeding lines.
- Served as laboratory manager, overseeing day-to-day operations, coordinating activities, and ensuring adherence to health and safety standards and timely calibration and maintenance of laboratory equipment.
- Supervised undergraduate interns and served as adviser and co-adviser to high school and undergraduate student researchers, guiding them through independent projects, data analysis, scientific writing, and presentation.

05/2015 – 06/2016 **Science Research Assistant** – Plant Breeding and Biotechnology Division, Philippine Rice Research Institute, Science City of Muñoz, Nueva Ecija, Philippines
- Conducted independent MAS and diversity studies in rice breeding populations.
- Supported the integration of molecular data into breeding pipelines and trait selection strategies.

PUBLICATIONS

1. **Blended Genomic and Hyperspectral Imaging-Based Predictions Enable Selection for Reduced Deoxynivalenol Content in Wheat Grains.** *Jonathan S. Concepcion*, Amanda D. Noble, Yanhong Dong, Addie M. Thompson, and Eric L. Olson. *G3:Genes|Genome|Genetics https://doi.org/10.1093/g3journal/jkaf176.*
2. **Genomic Regions Influencing the Hyperspectral Phenome of Deoxynivalenol Infected Wheat Kernels**. *Jonathan S. Concepcion*, Amanda D. Noble, Yanhong Dong, Addie M. Thompson, and Eric L. Olson. *Scientific Reports. 14:19340; https://doi.org/10.1038/s41598-024-69830-5*
3. **Infrared Thermal Imaging Enhanced Selection Intensity for Fusarium Head Blight Resistance in Soft Winter Wheat.** *Jonathan S. Concepcion*, Amanda D. Noble, and Eric L. Olson. *Plant Breeding https://doi.org/10.1111/pbr.70054*
4. **Incorporating phenomic information from vegetative indices in genomic prediction models improved forward prediction of soft winter wheat grain yield.** *Jonathan S. Concepcion*, Amanda D. Noble, and Eric L. Olson. *In preparation for The Plant Phenome Journal*
5. **Whole Genome Sequencing and RNA-Seq Reveal Differences in Genetic Mechanism for Flowering Response Between Weedy Rice and Cultivated Rice.** Richard Garcia, Sapphire Coronejo, *Jonathan S. Concepcion*, and Prasanta K. Subudhi. *International Journal of Molecular Science*. 2022. 23(3), 1608; https://doi.org/10.3390/ijms23031608
6. **Genetic Variation among the Salinity Tolerant Breeding Lines Identified from Two Multi-Parent Advanced Generation Introgression Line Populations in Rice *(Oryza sativa).*** Sandeep Chapagain, *Jonathan S. Concepcion*, Rajat Pruthi, Lovepreet Singh, Adam Famoso and Prasanta Subudhi. 2022. *Journal of Agronomy and Crop Science*. DOI: 10.1111/jac.12581.
7. **New Rainfed-Drought Rice Variety Developed through *In Vitro* Mutagenesis.** Christopher C. Cabusora, Tahere A. Sigari, Jonathan M. Niones, Martha V. Chico, Henry T. Ticman, Marie Antoinette B. Orbase, Kimberly Rose P. Balmeo, *Jonathan S. Concepcion*, and Nenita V. Desamero. 2022. *Mindanao Journal of Science and Technology. 20: 1-24.*
8. **Molecular Breeding for Improving Salinity Tolerance in Rice: Recent Progress and Future Prospects** (Book Chapter). Sandeep Chapagain, Lovepreet Singh, Richard Garcia, Rajat Pruthi, *Jonathan Concepcion*, Sapphire Coronejo, and Prasanta Subudhi. 2020. *Molecular Breeding for Rice Abiotic Stress Tolerance and Nutritional Quality. John Wiley & Sons Ltd.*
9. **Field Performance of Improved Somaclones from *In vitro* Culture Rice Variety PSB Rc68 under Complete Submergence.** Christopher C. Cabusora, Josielyn C. Bagarra, *Jonathan S. Concepcion* and Nenita V. Desamero. 2021. *Rice Based-Biosystems Journal.*
10. **Enhancing Phenotypic and Genetic Variability in Drought Tolerant Traditional Rice Variety Salumpikit through *In vitro* Mutagenesis.** Chrisopher C. Cabusora, RJ D. Buluran, *Jonathan S. Concepcion*, Gelyn D. Valida, John Oliver V. Orpila, and Nenita V. Desamero. 2020. *Rice Based-Biosystems Journal 6:1-11.*

VARIETIES RELEASED (as part of the breeding team)

1. **NSIC 2022 Rc 686: Salinas 39 -** Rice variety for irrigated lowland, saline-prone environment developed using *In vitro* mutagenesis.
2. **NSIC 2019 Rc 572: Sahod Ulan 28 –** Rice variety for rainfed, drought-prone environment developed using *In vitro* mutagenesis.
3. **NSIC Rc 346: Sahod Ulan 11 –** Rice variety for rainfed, drought-prone environment developed using gamma irradiation.
4. **NSIC Rc 272: Sahod Ulan 2 –** Rice variety for rainfed, drought-prone environment developed using gamma irradiation.

CONFERENCE POSTERS PRESENTED

1. **Genetic Dissection of Biomass Stability and Adaptability in Switchgrass (*Panicum virgatum* L.).** *Jonathan S. Concepcion, et al.* Plant and Animal Genome (PAG 33) Conference, Jan. 2026, San Diego, California, USA.
2. **UAV-Guided Genetic Dissection and Genomic Prediction of Grain Yield in Soft Winter Wheat.** *Jonathan S. Concepcion, et al.* Plant and Animal Genome (PAG 32) Conference, Jan. 2025, San Diego, California, USA.
3. **Ensembles of Genomic and Hyperspectral Imaging-Based Predictions Enable Selection for Reduced Deoxynivalenol Content in Wheat Grains.** *Jonathan S. Concepcion*, *et al*. National US Wheat and Barley Scab Initiative (USWBSI) Forum, Dec. 2024, Austin, Texas, USA
4. **UAV-Guided Genomic Prediction of Grain Yield in Soft Winter Wheat. *Jonathan S. Concepcion*,** *et al*. National Association for Plant Breeding Annual Meeting, Jul. 2024, St. Louis, Missouri, USA.
5. **Hyperspectral Imaging-Based Phenomic Prediction and Selection for Deoxynivalenol Accumulation in Soft Winter Wheat.** *Jonathan S. Concepcion*, *et al*. North American Plant Phenotyping Network (NAPPN) Annual Conference, Feb. 2024, West Lafayette, Indiana, USA; Plant and Animal Genome (PAG 31) Conference, Jan. 2024, San Diego, California, USA; ASA-CSSA-SSA Annual International Annual Meeting, Nov. 2023, St. Louis, Missouri, USA.
6. **Application of Hyperspectral Imaging for Predicting Deoxynivalenol Accumulation in Soft Winter Wheat and its Integration with Genome Wide Association.** *Jonathan S. Concepcion*, *et al*. University of Illinois Plant Science Symposium, Sep. 2023, Urbana-Champaign, Illinois, USA
7. **Infrared Thermal Imaging-Based Selection and Genome Wide Association for Fusarium Head Blight Resistance in Soft Winter Wheat.** *Jonathan S. Concepcion*, *et al*. National US Wheat and Barley Scab Initiative (USWBSI) Forum, Dec. 2023, Cincinnati, Ohio, USA; National Association of Plant Breeders (NAPB) Annual Meeting, Jul. 2023, Greenville, South Carolina, USA
8. **Genome Wide Association Mapping of Genomic Regions Associated with Deoxynivalenol Concentration in Wheat using Spectral Reflectance Values.** *Jonathan S. Concepcion, et al.* Plant and Animal Genome (PAG) Conference, Jan. 2022, San Diego, CA, USA
9. **High Throughput Deoxynivalenol Concentration Detection and Prediction in Fusarium-Damaged Wheat Kernels using Handheld Hyperspectral Imaging Platform.** *Jonathan S. Concepcion, et al.* National US Wheat and Barley Scab Initiative (USWBSI) Forum, Dec. 2022, Tampa Bay, Florida, USA
10. **Infrared Thermal Imaging-Based Detection and Selection for Fusarium Head Blight Resistance in Wheat.** *Jonathan S. Concepcion, et al*. ASA-CSSA-SSA Annual International Annual Meeting, Nov. 2022, Baltimore, Maryland, USA.
11. **Comparative Genomic Analysis Reveals Hidden Genetic Variation for Heading Date in Weedy Rice.** *Prasanta K. Subudhi, Sapphire Coronejo, Richard Garcia, Jonathan S. Concepcion.* ASA-CSSA-SSA Annual International Annual Meeting, Nov. 2022, Baltimore, Maryland, USA.
12. **QTL-Seq Based Identification of Genomic Regions and Candidate Genes for Nitrogen Uptake in Rice.** *Prasanta K. Subudhi, Jonathan S. Concepcion, et al.* ASA-CSSA-SSA Annual International Annual Meeting, Nov. 2021, Salt Lake City, Utah, USA.
13. **Characterization and Identification of Salt Tolerant Breeding Lines from Several Mini MAGIC Populations in Rice.** *Sandeep Chapagain, **Jonathan Concepcion**, et al.* Rice Technical Working Group (RTWG) Scientific Convention, Feb. 2020, Alabama, USA

14. **Germination and Early Morphogenesis of Rice as Influenced by Increasing Levels of Salinity and Drought Stresses.** *Jonathan S. Concepcion, et al.* Federation of Plant Science Societies of the Philippines (FPSAP) / Federation of Crop Science Societies of the Philippines (FCSSP) Scientific Conference, Sep. 2019, Davao City, Philippines
15. **Exploiting Traditional Rice Varieties in Developing Climate Smart-Ready Breeding Lines.** *Nenita V. Desamero, **Jonathan S. Concepcion**, et al.* Federation of Plant Science Societies of the Philippines (FPSAP) / Federation of Crop Science Societies of the Philippines (FCSSP) Scientific Conference, Sep. 2019, Davao City, Philippines
16. **Improved Tolerance of Elite Mutation-Derived Rice Breeding Lines to Vegetative Stage Submergence Stress under Field Conditions.** RJ D. Buluran, ***Jonathan S. Concepcion*** *et al*. Federation of Plant Science Societies of the Philippines (FPSAP) / Federation of Crop Science Societies of the Philippines (FCSSP) Scientific Conference, Sep. 2019, Davao City, Philippines
17. **Comparative Field Performance of Recombinant Inbred Lines with Pyramided Saline-Submergence Tolerance under Flooding Conditions.** *Raña Mae A. Sumabat, **Jonathan S. Concepcion** et al.* Federation of Plant Science Societies of the Philippines (FPSAP) / Federation of Crop Science Societies of the Philippines (FCSSP) Scientific Conference, Sep. 2019, Davao City, Philippines
18. **Gamma Irradiation-Induced Molecular and Agro-Morphological Variability in Saline-Tolerant Traditional Rice Variety Pokkali.** *Jonathan S. Concepcion, et al.* Philippine Society of Biochemistry and Molecular Biology (PSBMB) National Scientific Convention, Nov. 2018, Iloilo City, Philippines
19. **Recovery and Agronomic Performance of Recombinant Inbred Lines under Flash-Flooding Condition as Affected by Cropping Seasons.** *Jonathan S. Concepcion and Nenita V. Desamero.* National Rice R4D Conference, Sep. 2018, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines
20. **Mitigating Risks of Flash-Flooding in Saline-Prone Areas: Developing Rice Breeding Lines with Combined Submergence and Salinity Stress Tolerance.** *Jonathan S. Concepcion, et al.* National Rice R4D Conference, Sep. 2018, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines
21. **Multi-Environment Field Performance and Molecular Variability Assessment on *In vitro* Mutagenesis-Derived Elite Lines from Rice Variety NSIC Rc9 (Apo).** *Jonathan S. Concepcion, et al.* Philippine Association for Plant Tissue Culture and Biotechnology (PAPTCB) Inc. Scientific Convention, Jul. 2018. Panglao, Bohol Philippines
22. **Field Performance of *In vitro* Culture-derived Lines from Rice Cultivar Jepun under Managed Drought and Submerged Conditions.** *Raña Mae A. Sumabat, **Jonathan S. Concepcion**, et al.* Philippine Association for Plant Tissue Culture and Biotechnology (PAPTCB) Inc. Scientific Convention, Jul. 2018, Panglao, Bohol Philippines
23. **Assessing Response Variation of Selected Rice Genotyped under Waterlogged Condition.** *Jonathan S. Concepcion and Nenita V. Desamero.* Crop Science Society of the Philippines (CSSP) Conference, Jul. 2018, Legazpi City, Albay, Philippines.
24. **Developing Next Generation Submergence Tolerant Rice Breeding Lines from Single Cross PSB Rc10 x NSIC Rc194 (IR64-Sub1).** *Jonathan S. Concepcion, et al.* Crop Science Society of the Philippines (CSSP) Conference, Jul. 2018, Legazpi City, Albay, Philippines.
25. **Increasing Efficiency and Precision in Developing Rice Breeding Lines with Combined Submergence and Salinity Tolerance using Molecular Markers.** *Jonathan S. Concepcion and Nenita V. Desamero.* Philippine Society of Biochemistry and Molecular Biology (PSBMB) National Scientific Convention, Nov. 2017. Tagaytay City, Philippines.
26. **Assessing Effectiveness of Sea Water in Imposing Salt Stress for Tolerant Rice Selection.** ***Jonathan S. Concepcion**, et al.* National Rice R4D Conference. Sep. 2017, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines
27. **Multi-Environmental Performance of Submergence-Drought Tolerant Elite Rice Breeding Lines from Cross PSB Rc14 x PSB Rc68.** *Jonathan S. Concepcion, et al*. National Rice R4D Conference, Sep. 2017, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines
28. **Molecular Variability Analysis of Seed Mutation-Derived Lines from Eggplant Variety Dumaguete Long Purple.** *Jonathan S. Concepcion and Nenita V. Desamero.* Philippine Society of Biochemistry and Molecular Biology (PSBMB) – Central Luzon Chapter Symposium, Aug. 2017, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines.

29. **Phenotype *cum* Genotype Evaluation of *In vitro* Mutagenesis-Derived Lines from Traditional Rice Variety Salumpikit for Abiotic Stress Tolerance.** *Jonathan S. Concepcion, et al.* Federation of Crop Science Societies of the Philippines (FCSSP) Scientific Conference, Jun. 2017, Iloilo City, Philippines
30. **Comparative Performance of Inflorescence Culture-Derived Lines from Rice Variety PSB Rc68 under Managed Submergence Stress and Non- Stress Condition** ***Jonathan S. Concepcion****, et al.* Philippine Association of Plant Tissue Culture and Biotechnology (PAPTCB) Scientific Conference, Sep. 2016, Laoag City, Ilocos Norte, Philippines
31. **Field Performance Evaluation of In vitro Culture Derived Lines of Samba Mahsuri-Sub1 under Submergence Stress and Non-Stress Condition.** *RJ D. Buluran, **Jonathan S. Concepcion**, et al.* Philippine Association of Plant Tissue Culture and Biotechnology (PAPTCB) Scientific Conference, Sep. 2016, Laoag City, Ilocos Norte, Philippines
32. **Robust Simple Sequence Repeat Markers Identified for Salt Tolerant Line Selection** *Jonathan S. Concepcion and Nenita V. Desamero.* National Rice R4D Conference, Sep. 2016, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines
33. **Phenotype *cum* Genotype Validation and Agronomic Trait Evaluation of Elite Breeding lines Under Managed Submergence Stress and Non-Stress Conditions.** *Nenita V. Desamero, **Jonathan S. Concepion**, et al.* National Rice R4D Conference, Sep. 2016, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines
34. **Genetic Diversity Analysis of *In vitro* Culture Derived-Lines from Eggplant Cultivar Dumaguete Long Purple.** *Nenita V. Desamero and Jonathan S. Concepcion.* Crop Science Society of the Philippines (CSSP) Scientific Convention, Jun. 2016, General Santos City, Philippines
35. **Molecular Characterization of Elite Pokkali-Derived Mutant Lines.** *Jonathan S. Concepcion and Nenita V. Desamero.* Philippine Society of Biochemistry and Molecular Biology (PSBMB) National Scientific Convention.
36. **Phenotypic and Genotypic Variability Analysis of Traditional Pokkali Rice Variety-Derived Mutant Lines.** ***Jonathan S. Concepcion****, et al.* National Rice R4D Conference, Sep. 2015, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines

CONFERENCE AND SYMPOSIUM PAPERS AND ORAL PRESENTATIONS PRESENTED

1. **Discriminating Nitrogen Responses and Biofuel Cropping Systems using Pleiades-Neo Satellite Imagery.** *Jonathan S. Concepcion*. North American Plant Phenotyping Network (NAPPN) Annual Conference. Feb. 2026. East Lansing, MI, USA.
2. **Exploring Phenomic and Genomic Data Integration in Predicting and Breeding for Economically Important Traits in Soft Winter Wheat** (Concurrent Session). *Jonathan S. Concepcion*. American Society of Plant Biologists Annual Meeting, Jul. 2025, Milwaukee, WI, USA.
3. **UAV-Derived Information and Genomic Data Integration for Improved Grain Yield Predictions in Soft Winter Wheat** (Graduate Student Presentation). *Jonathan S. Concepcion*, *et al*. MSU Plant Science Graduate Student Research Symposium, Apr. 2024, MSU, East Lansing, Michigan, USA; Texas A&M Plant Breeding Symposium, Feb. 2025, TAMU, College Station, Texas, USA.
4. **UAV-Guided Genetic Dissection and Genomic Prediction of Grain Yield in Soft Winter Wheat** *(Graduate Student Presentation Competition). Jonathan S. Concepcion*, *et al*. MSU Plant Science Graduate Student Research Symposium, Apr. 2024, MSU, East Lansing, Michigan, USA.
5. **Integration of Hyperspectral Imaging for Genome Wide Association of Deoxynivalenol Accumulation in Soft Winter Wheat** *(Concurrent Session). Jonathan S. Concepcion*, *et al*. ASA-CSSA-SSA Annual International Annual Meeting, Nov. 2023, St. Louis, Missouri, USA.
6. **Hyperspectral Imaging-Based Phenomic Prediction and Selection for Deoxynivalenol Accumulation in Soft Winter Wheat** *(5-Minute Rapid Presentation / Graduate Student Competition). Jonathan S. Concepcion*, *et al.* ASA-CSSA-SSA Annual International Annual Meeting, Nov. 2023, St. Louis, Missouri, USA.
7. **High Throughput Deoxynivalenol Concentration Detection and Prediction in Fusarium-Damaged Wheat Kernels using Handheld Hyperspectral Imaging Platform** *(3-Minute Flash and Dash Presentation / Graduate Student Presentation). Jonathan S. Concepcion, et al.* National US Wheat and Barley Scab Initiative (USWBSI) Forum, Dec. 2022, Tampa Bay, Florida, USA

8. **Infrared Thermal Imaging-Based Detection and Selection for Fusarium Head Blight Resistance in Wheat** *(5-Minute Rapid Presentation / Graduate Student Competition). Jonathan S. Concepcion, et al*. ASA-CSSA-SSA Annual International Annual Meeting, Nov. 2022, Baltimore, Maryland, USA.
9. **Developing Submergence Tolerant Rice for Flash Flood-Prone Areas: Status and Prospects** *(Concurrent Session). Jonathan S. Concepcion, et al*. National Rice R4D Conference. Sep. 2017, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines
10. **High Yielding Multi-Stress Tolerant Rice Breeding Line Development from Single Cross PSB Rc14 x PSB Rc68** *(Plenary Presentation / Best Paper Competition). Jonathan S. Concepcion, et al*. Federation of Crop Science Societies of the Philippines (FCSSP) Scientific Conference. Jun. 2017. Iloilo City, Philippines
11. **Diversity Analysis of Mutants from Gamma-Irradiated Seeds of Anther Culture-Derived Line from Traditional Rice Variety Pokkali** *(Concurrent Session). Jonathan S. Concepcion, et al*. Crop Science Society of the Philippines (CSSP) Scientific Convention. Jun. 2016. General Santos City, Philippines
12. **Genetic Diversity Analysis of Seed Mutation-Derived Eggplant Lines using EST-SSR Markers** *(Student Oral Presentation Competition). Jonathan S. Concepcion*. CLSU Graduate Student Research Colloquium. May 2016. College of Arts and Sciences, Central Luzon State University, Science City of Muñoz, Nueva Ecija.

INVITED PRESENTATIONS AND TALKS

- **From Passion to Practice: A Multifaceted Journey in Plant Breeding and Genomic Innovation.** National Association for Plant Breeding (NAPB) Breeding Bites (Podcast: Spotify, YouTube)
- **Phenomics and its Application in Accelerating Genetic Gain**
  Life-Long Learning Webinar Series. Philippine Rice Research Institute
- **Phenomics in Soft Winter Wheat Breeding: Evaluating and Predicting Fusarium Head Blight Resistance and Grain Yield**
  Plant Breeding, Genetics, and Biotechnology Research Retreat. Michigan State University
- **Making Better Crops using Images**
  Biology on Tap. Michigan Wildlife Conservancy, Michigan
- **Plant Breeding and Biotechnology: As a Career, As a Science**
  National Biotechnology Week Celebration. Crop Biotechnology Center, Philippine Rice Research Institute, Philippines
- **How Do I Apply to Grad School in the US**
  GradMAP Philippines (*via Zoom)*
- **Experimental Design for Research**
  Science Integrated Direction for High School Investigators (SIDHI), Philippines
- **Single Nucleotide Polymorphism (SNPs) and Its Application in Plant Breeding**
  Department of Biological Sciences, Central Luzon State University, Science City of Muñoz, Nueva Ecija
- **Writing Research Paper and Submission for Publication**
  Polytechnic University of the Philippines (PUP) Mycology Laboratory, PUP, Sta. Mesa, Manila, Philippines

AWARDS AND RECOGNITIONS RECEIVED

- **1st Place** – MSU Plant Breeding Symposium (Lightning Talk), December 2024
- **2nd Place** – MSU Plant Breeding Symposium (Poster Presentation), December 2024
- **2nd Place** – MSU Plant Science Graduate Student Research Symposium, April 2024
- **1st Place** – University of Minnesota Plant Science Symposium Graduate Student Competition, St. Paul Minnesota, February 2024
- **3rd Place** – University of Illinois Plant Science Symposium, University of Illinois – Urbana-Champaign, September 2023
- **2nd Place** – Crop Science Society of America – C01 Crop Breeding and Biotechnology Division Poster and 5-Minute Rapid Presentation (Student Competition) ASA, CSSA, SSSA International Annual Meeting. November 6-9, 2022, Baltimore, MD, USA
- **Best Paper** – 11th Philippine Association for Plant Tissue Culture and Biotechnology (PAPTCB) Inc. Scientific Convention. July 9 – 12, 2018. Bohol Bee Farm, Panglao, Bohol Philippines

- **Best Paper** – 10th Philippine Association of Plant Tissue Culture and Biotechnology (PAPTCB) Scientific Conference. September 19 – 24, 2016. Plaza Del Norte Hotel and Convention Center, Laoag City, Ilocos Norte.
- **Finalist – Best Paper Competition** – Downstream (Applied) Research Category - 24th Federation of Crop Science Societies of the Philippines (FCSSP) Scientific Conference. June 13 – 17, 2017. Diversion 21 Hotel, Iloilo City, Philippines
- **1st Best Poster** – 30th National Rice R4D Conference. September 5 – 6, 2017. PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines.
- **2nd Best Poster** – 11th Philippine Association for Plant Tissue Culture and Biotechnology (PAPTCB) Inc. Scientific Convention. July 9 – 12, 2018. Bohol Bee Farm, Panglao, Bohol Philippines
- **3rd Best Poster** – 30th National Rice R4D Conference. September 5 – 6, 2017. PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines.
- **Scientific Productivity Award** – Dangal ng PhilRice 2018, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines.
- **Scientific Productivity Award** – Dangal ng PhilRice 2017, PhilRice – CES, Science City of Muñoz, Nueva Ecija, Philippines.

GRANTS AND SCHOLARSHIPS RECEIVED

- **NAPB Borlaug Scholarship** (2023) – Awarded by the National Association of Plant Breeders
- **Elmer C. Rossman Graduate Student Support Award** (2024) - *$3300*
- **Everett and Jane Everson Grad Fellowship in Plant Breeding** (2024) - *$3500*
- **Everett and Jane Everson Grad Fellowship in Plant Breeding** (2022) - *$2500*
- **Jason and Dana Lilly (Tatman) Plant Breeding/Genetics & Biotechnology Fund for Graduate Student Enhancement** (2023) - *$3150*
- **Encompass Scholarship** (2023) **–** (Bayer – ASA-CSSA-SSA)
- **Travel Grant** (2025) – Texas A&M University Plant Breeding Symposium
- **Travel Grant** (2024) – University of Minnesota Plant Science Symposium
- **Travel Grant** (2023) - University of Illinois Plant Science Symposium

MENTORING EXPERIENCE

- Bourlaug Scholarship Mentor: Brandon Trout (National Association for Plant Breeders)
- Undergraduate Research Adviser: Thanyarat Reungran (Khon Kaen University, Thailand)
- Undergraduate Research Adviser: Phaerphan Noybat (Khon Kaen University, Thailand)
- Undergraduate Research Adviser: Nonthanan Muangbangyun (Khon Kaen University, Thailand)
- Undergraduate Research Adviser: Natthaphatsorn Sitharam (Khon Kaen University, Thailand)
- Undergraduate Thesis Co-Adviser: Dhanlie Janin Castro, Grace Cardona (Pangasinan State University, Philippines)
- Undergraduate Internship Adviser: Beverly Rivera (Polytechnic University of the Philippines)
- High School Research Adviser: Paul John Balosbalos (Muñoz National High School, Philippines)
- High School Research Adviser: Mary Jane Manuel (Talavera National High School, Philipines)
- High School Research Adviser: Karl Aurvin Salvador (Talavera National High School, Philippines)
- High School Research Adviser: Kaye Angelyn Villaflor, Anne Jersey Magisa (Talavera National High School, Philippines)
- High School Research Adviser: Carl Bulalayao Keana Keith Rinosos, Kayser Clyde Rinosos, Lei Ann Pumaras, Jennylyn Salvador (Nueva Ecija High School, Philippines)
- High School Research Adviser: Janae Faith Weehansuh (Xavier University – Senior High School, Philippines)
- Mentor (Graduate Studies Application): Justin Christian Mulig (Philippine Coconut Authority / North Carolina State University)

POSITIONS HELD IN ORGANIZATIONS

- **Chair** – National Association of Plant Breeders (NAPB) – Graduate Student Working Group (GSWG) (2023 – 2023)
- **Vice Chair** – National Association of Plant Breeders (NAPB) – Graduate Student Working Group (GSWG) (2022 – 2023)
- **Content Planner and Social Media Manager** – Science Integrated Direction for High School Students (SIDHI) (2021 – 2022)
- **Public Relations Officer** – Philippine Society for Biochemistry and Molecular Biology (PSBMB) – Central Luzon Chapter (2018 – 2019)
- **President** – Central Luzon State University (CLSU) Biological Society (2013 – 2014)
- **Public Information Officer (PIO)** – CLSU Biological Society (2012 – 2013)

PROFESSIONAL AND COMMUNITY SERVICE

- Evaluator, NAPB Borlaug Scholarship (2025)
- Organizer (Advertising Committee), PBGB – Corteva Symposium, Fall 2024, MSU
- Organizer (Program Committee), PBGB – Corteva Symposium, Fall 2023, MSU
- Organizer (Lead, Advertising Committee), PBGB – Corteva Symposium, Fall 2022, MSU
- Organizer (Evaluation Committee), Plant Science Symposium, Spring 2022, MSU
- Mentor, GradMap – Philippines *(Non-Government Organization mentoring Filipino students and professionals seeking potential graduate positions abroad)*
- Mentor, Science Integrated Direction for Highschool Investigators (SIDHI) – Philippines *(Non-Government Organization mentoring High School researchers across Philippines)*
- Organizer, 1st PSBMB-Central Luzon Chapter Biotechnology Symposium

AFFILIATIONS AND MEMBERSHIPS

- Sigma Xi – The Scientific Research Honor Society (Full Membership)
- National Association for Plant Breeding (NAPB)
- Crop Science Society of America (CSSA)
- American Society of Agronomy (ASA)
- Crop Science Society of the Philippines (CSSP) (2016 – 2019)
- Philippine Association of Plant Tissue Culture and Biotechnology (PAPTCB) (2016 – 2019)
- Philippine Society for Biochemistry and Molecular Biology (PSBMB) (2015 – 2018)
- Central Luzon State University – Biological Society (CLSU – BioSoc) – Lifetime Member