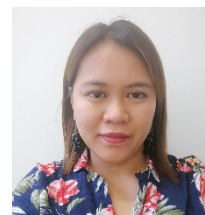


MICHELLE ONG SOLLEZA-GUERRERO
CURRICULUM VITAE



AFFILIATION & POSITION

University Researcher

National Crop Protection Center
College of Agriculture and Food Science
University of the Philippines, Los Baños

PhD in Ecology with PhD Research on Diversity of Entomopathogenic Fungi (EPF) in New Zealand and its association with arthropod hosts
Zoology and Ecology, School of Natural Sciences
Massey University, New Zealand

EDUCATION

2015, Master of Science in Entomology (Minor in Insect Pathology and Insect Molecular Biology)

University of the Philippines, Los Baños, College, Laguna

2008, Bachelor of Science in Agriculture (Major in Entomology)

University of the Philippines Los Baños, College, Laguna
Graduated *cum laude*

RESEARCH PROJECT INVOLVEMENT IN THE PHILIPPINES:

2018- Feb. 2019- Utilization of entomopathogens against re-emerging insect pests of rice, Brown planthopper, *Nilaparvata lugens* Stal, White-backed planthopper, *Sogatella furcifera* Horvath (Delphacidae: Hemiptera) and Yellow stemborer, *Scirpophaga incertulas* Walker (Pyralidae: Lepidoptera). As Project Leader.

2017-2018. Molecular Diagnostics and Taxonomy of Cassava Pests and their Natural Enemies. As Study Leader

2017-2019. Efficacy Test of Biopesticides and Microbials against onion armyworm, *Spodoptera exigua* (Hubner). As Study leader.

2016-2018. Identification of migratory locust, *Locusta migratoria* manilensis through DNA Barcoding and Biometrics. As Project leader

2015- 2017. Development of Molecular Diagnostic Tools for Armored Scale Insects (Hemiptera: Diaspididae) and their Natural Enemies on Coconut and Associated Crops. As Project Staff

RESEARCH PROJECT INVOLVEMENT NEW ZEALAND

2021-2023- Cordyceps and Ophiocordyceps of New Zealand. Research project member

2022-2023- Entomopathogenic Fungi in New Zealand Vineyard. Research project member

RESEARCH INTEREST

- DNA Barcoding and Molecular Diagnostics of Insects and entomopathogens
- Utilization of entomopathogens including Entomopathogenic Fungi (EPF) and Nucleopolyhedrovirus (NPV), among others, against major insect pests/ Microbials against Insect Pests
- Crop Protection Entomology
- Molecular Ecology
- Molecular Entomology

IMPORTANT POSITION HELD IN THE ORGANIZATION: (Prior to Study leave)

- Section head/ Coordinator of the Biotechnology Section under the Pest Management Division
- Laboratory Head of the Molecular Biology and Biotechnology (MBB) Laboratory of NCPC, CAFS, UPLB
- Member of the Academic Personnel Committee (APC), NCPC, CAFS, UPLB

OTHER INVOLVEMENT ON A NATIONAL LEVEL (Philippines)

2016- Present: Member/ Evaluator. Bureau of Agriculture and Fisheries Standards (BAFS) Pool of Evaluators for the registration of organic input producers and Resource speaker to various BAFS training including capacity building of BASF Technical personnel and accreditation training of researchers for Organic Biocontrol agents (OBCA)

2017-2018: Secretary of the Philippine Association of Entomologists, Inc. (PAE)

2017-2018: Council Member of the Pest Management Council of the Philippines, Inc. (PMCP)

PROFESSIONAL EXPERIENCE

University Researcher

National Crop Protection Center (NCPC)

College of Agriculture and Food Science

University of the Philippines Los Baños, College, Laguna

Date of original appointment: 15 July 2016 - present

- **FUNCTIONS:**

- Write research proposals
- Implement research, development and extension project on crop protection, pest management, food security and food safety

University Researcher 1

Office of the Vice Chancellor for Research and Extension (OVCRE)

University of the Philippines Los Baños, College, Laguna

Date of original appointment: 25 May 2015 to 14 July 2016

- **Functions:**

- Write research proposals
- Implement research, development and extension project
- Assist in monitoring and evaluation of on-going research projects.
- Assist in program packaging and development
- Prepare and draft incoming and outgoing OVCRE related communications

Research Project Involvement:

- 2015-2016. Development of Web-Based Breeding Resource and ECO-TILLING towards insect resistance breeding in coconut, as Project Staff Level 1 on the Study entitled "CSI Coconut Scale Insect (CSI) Genomics Characterization".

- 2015-2016. Development of Molecular Diagnostic Tools for Armored Scale Insects (Hemiptera: Diaspididae) and their Natural Enemies on Coconut and Associated Crops (Phase 1). As Project Staff Level 2

University Research Associate II

University of the Philippines Los Baños, College, Laguna

March 2014- May 2015

Immediate Superior: Dr. Barbara L. Caoili

Title of the Study: Coconut Scale Insect (CSI) Genomics Characterization

Project Title: Development of web-based breeding resource and Eco-TILLING towards insect resistance breeding in coconut

Program Title: Improvement of Coconut Varieties through Genomics, Genetics, and Molecular Breeding for a Competitive and Sustainable Philippine Coconut Industry (Genomics-Assisted Molecular Breeding)

Detailed Tasks:

- Collection of different CSI populations
- Performed molecular biological experiments including DNA extractions, PCR amplification, gel electrophoresis, sequence analysis
- Coordination and sending of samples to sequencing service provider
- Data collection and analysis of sequence result
- Assist in report preparation

Jr. Technology Transfer Specialist

East-West Seed Philippines

Technology Transfer Department

May 2008- May 2011

- Established and maintained demonstration farms in selected areas of the project
- Conducted crop and subject specific trainings
- Provided technical assistance and intensive supervision to all key farmers
- Recommended appropriate control measure action to monitored problems like insect pests and diseases

PUBLICATION:

Latina, DS Lantican, **MS Guerrero**, EC Rubico, JF Laquinta and BL Caoili. Species-specific PCR-based marker for rapid detection of *Aspidiotus rigidus* Reyn (Hemiptera: Diaspididae). Journal of Asia-Pacific Entomology, Volume 25 (2022)101848. ISSN 1226-8615, <https://doi.org/10.1016/j.aspen.2021.101848>

Guerrero, M.S., Javier P.A, Laude, R.P., and Caoili, B.L. 2019. Genetic Diversity of coconut scale insect, *Aspidiotus* spp., from outbreak and non-outbreak areas in the Philippines using Internal Transcribed Spacer 2 (ITS2). Philipp Agric Scientist Vol. 102 (Special Issue No. 1): 81-90 2019.

Solleza, Michelle O. and Pio A. Javier. 2009. Ovipositional Preference of *Trathala flavaorbitalis* Cameron (Hymenoptera: Ichneumonidae), a larval parasitoid of Eggplant Fruit and Shoot Borer, *Leucinodes orbonalis* Guenee. The Philippine Entomologist. 23(2): 131-148.

SCHOLARSHIPS and AWARDS:

- Recipient of the Georg Mason Sustainable Land Use Research Award, Massey University, May 2021
- Recipient of the KJ Fox Award conferred by the Entomological Society of New Zealand. March 2021
- Recipient of the Kathleen Spragg Agricultural Research Trust Award, New Zealand. Dec. 2019
- Recipient of the New Zealand Scholarship. 2019 to 2023.
- Awarded 2nd place Best poster for the poster entitled “ DNA Barcoding of Onion Armyworm, *Spodoptera exigua*, in Nueva Ecija and Benguet. Poster paper presented at the 51st Pest Mgt. Council of the Phil. Anniv. And Annual Convention held at Coron Westown Resort in Coron, Palawan, 02-05 July 2019.
- Recipient of the Netherlands Fellowship Programme (NFP) now Orange Knowledge Programme (OKP) (June 2017, April 2018, July 2018) organized by the Center for Development Innovation (CDI)-Wageningen University and Research (WUR), Wageningen, The Netherlands.
- Recipient of DOST-SEI ASTHRDP Scholarship for the Master Study. (2011- Summer A.Y 2012-2013)
- Pest Management Council of the Philippines (PMCP)- Bayer Crop Science Best Undergraduate Thesis in Entomology awardee (May, 2009)
- Recipient of the CA Deans medal for academic excellence (April, 2008)
- Recipient of the Agricultural and Rural Development Scholarship's certificate for Academic Excellence (April, 2008)
- Recipient of the University of the Philippines Centennial *cum laude* medal (April, 2008)
- Recipient of the Agricultural and Rural Development Scholarship (ARDS) (2004-2008)

TRAININGS and SEMINARS ATTENDED (selected):

- Webinar on Soil Microbiome: Helathy Soils, Healthy Plants Towards Sustainable Farming conducted by The Philippine Phytopathological Society, Inc.- Southern Mindanao Division (PPS- SMD). Feb. 19, 2021.
- Introduction to R Workshop. School of Fundamental Sciences, Massey, University, New Zealand. February 3-4, 2020.
- Stakeholders Forum on Pesticides and Its Contribution to Food Security and Safety organized by NCPC and CropLife Philippines, Inc. Feb., 12, 2019. (Attendee and part of the organizing committee)
- Seminar-Workshop on Principles Biopesticide Regulation and Use organized by NCPC and CropLife Philippines, Inc. Nov. 6-7, 2018. (Attendee and part of the organizing committee)
- **ASEAN Harmonization of Technical Guidelines for Pesticide Registration Management-Implementation Phase II toxicology Workshop** organized by CropLife Asia and ASEAN Economic Community (AEC) Dept. New World Makati Hotel, Makati City, Philippines. 8-12 October 2018.
- Capacity Building and Workshop on Insect/Insecticide Resistance Management in Corn, Cabbage, Eggplant and Mango organized by NCPC and CropLife Philippines, Inc. June 13-15, 2018. (Attendee and part of the organizing committee).
- **International Course on Rural Entrepreneurship** conducted by the Center for Development Innovation (CDI)-Wageningen University and Research (WUR). Held at Ho Chi Min and Can tho City, **Vietnam**. July 9 to 20, 2018.
- **International Course on Climate change adaptation in food security and natural resource management** conducted by the Center for Development Innovation (CDI)-Wageningen University and Research (WUR). Held at Kampala, **Uganda**, April 16 to 27, 2018.
- **4th Global Science Conference On Climate Smart Agriculture. Johannesburg, Gauteng, South Africa.** 28-30 November 2017.
- **International Course on Integrated Pest Management and Food Safety** conducted by the Center for Development Innovation (CDI)-Wageningen University and Research (WUR). Held at Hof Van Wageningen, Wageningen, **The Netherlands**. June 5- 23, 2017.

- Ethical Issues in Academic Research with Human Subjects conducted by the National Institutes of Health, UP Manila at the Institute of Plant Breeding, Crop Science Cluster, UPLB, College, Laguna, 4-6 April 2016.
- Scientific Paper Writing Workshop Series conducted by the Office of the Vice Chancellor for Research and Extension held at Tagaytay City, 22-23 February 2016.
- Bioinformatics Workshop Series 3: Genome Database and Mining conducted by the Boyce Thompson Institute, Cornell University held at Institute of Computer Science. 14-15 January 2016.
- Introduction to Next Generation Sequencing Data Analysis conducted by Philippine Genome Center Core Facility for Bioinformatics. Held at IPB Seminar room. 23 October 2015.
- Bioinformatics Training Workshop on Variant Calling with Next generation Sequencing Data.
- Resource speakers are Dr. Lukas Mueller and Dr. Suzy Strickler of Boyce Thompson Institute, Cornell University. Held at Institute of Computer Science, College of Arts and Sciences, UPLB, College, Laguna. October 15, 2014
- Agribiotechnology Seminar conducted by Golden Bat (Far East), Inc. at Drilon Hall, SEARCA, UP Los Banos, Laguna. August 26, 2014
- Training on Coconut Scale Insect Biology and Coconut Host Resistance Screening (CSI 101) conducted by the Institute of Plant Breeding, Crop Science Cluster, UPLB, College, Laguna. July 11, 2014
- Linux and Perl Training (Bioinformatics Tools) conducted by the Institute of Computer Science, College of Arts and Sciences, UPLB, College, Laguna. May 20-22, 2014.

POSTER AND ORAL PAPERS PRESENTED TO CONFERENCES: (selected)

Guerrero, MS, S. Trewick, T. Glare and M. Minor. Diversity of entomopathogenic fungi in New Zealand and their potential for pest management. An oral presentation presented at the 69th New Zealand Entomological Society Conference held in Otago Museum, Dunedin. April 7-9, 2021.

Guerrero, MS, S. Trewick, T. Glare and M. Minor. Molecular identification of Entomopathogenic Fungi (EPF) in Cultivated and non-cultivated soil in New Zealand using isolation-based and metagenomic approach. An oral presentation presented at the 22nd Molecular Ecology conference held at Paekakariki, Kapiti Coast. Nov 29- Dec 1, 2019

Guerrero, MS, S. Trewick, T. Glare and M. Minor. Diversity of Entomopathogenic Fungi (EPF) in New Zealand and their utility for pest management. A poster paper presented during the “Pathways to the Future”, a School of Agriculture and Environment’s Symposium 2019. AgHort B, SAE, Massey University. Nov 14-15, 2019

Cayabyab BF, **Guerrero, MS**., L.M. Alforja, A.G. Aquino, E.A. Perez, M.P. Gaylon, R.J. L. Oboza, M.J. B. Perfecto and R. Ramos. 2019. Some Botanicals and Microbials against Onion Armyworm, *Spodoptera exigua* Hübner (Lepidoptera: Noctuidae) at Sto. Domingo, Nueva Ecija. Poster paper presented at the 51st Pest Mgt. Council of the Phil. Anniv. And Annual Convention held at Coron Westown Resort in Coron, Palawan, 02-05 July 2019.

Laquinta J.F., K.P. Ardez, **MS. Guerrero**, B.L. Caoili and M.V. Navasero. 2019. Preliminary Findings of Molecular Variations in Brown Planthopper, *Nilaparvata lugens* Stal, among Populations from Isabela and Laguna. Poster paper presented at the 51st Pest Mgt. Council of the Phil. Anniv. And Annual Convention held at Coron Westown Resort in Coron, Palawan, 02-05 July 2019.

MS Guerrero, JF Laquinta, LM Alforja, EA Perez, AG Aquino, WS Sagado, RV Valdez and BF Cayabyab. 2019. DNA Barcoding of Onion Armyworm, *Spodoptera exigua*, in Nueva Ecija and Benguet. Poster

paper presented at the 51st Pest Mgt. Council of the Phil. Anniv. And Annual Convention held at Coron Westown Resort in Coron, Palawan, 02-05 July 2019. (2nd Place Best Poster)

BF Cayabyab, **MS Guerrero**, MCdL de Roxas, KP Ardez, CA Kahayon and JF Laquinta. Development of DNA Barcoding Protocol for Cassava Arthropod Pests. A Poster paper presented during the 2019 NRCP Annual Scientific Conference and 86th General Membership Assembly. PICC, Roxas Blvd, Pasay City. 11 March 2019

BF Cayabyab, **MS Guerrero**, MCdL de Roxas, CA Kahayon JF Laquinta and KP Ardez. Updated Geographical Distribution of Natural Enemies and its associated Cassava Arthropod Pests in Selected Regions in the Philippines and the role of cassava variety to its susceptibility to arthropod pests. A Poster paper presented during the 2019 NRCP Annual Scientific Conference and 86th General Membership Assembly. PICC, Roxas Blvd, Pasay City. 11 March 2019.

MS Guerrero, BF Cayabyab, LM Alforja, EA Perez, AG Aquino, WS Sagado and RV Valdez. The potential of *Spodoptera exigua* Nucleopolyhedrovirus (NPV) against onion armyworm, *Spodoptera exigua* (Hubner). Poster paper presented at the 4th Global Science Conference on Climate Smart Agriculture. Birchwood Hotel and Conference Venue, Boksburg, Johannesburg, South Africa. 28- 30 November 2017.

JF Laquinta, EC Rubico, RA Latina, GD Sapin, **MS Guerrero** and BL Caoili. Haplotype Diversity of *Aspidiotus* species in Philippines using the 28s rRNA Gene Region. Oral paper presented at the 49th Pest Mgt. Council of the Phil. Anniv. And Annual Convention. Crown Regency Resort and Convention Center, Boracay Island (Station 2), Malay, Aklan. 10-12 May 2017.

JF Laquinta, EC Rubico, RA Latina, GD Sapin, **MS Guerrero** and BL Caoili. Characterizations of 28s ribosomal RNA Region of Insect Parasitoids and Predators Associated with Armored Scale Insects. Oral paper presented at the 49th Pest Mgt. Council of the Phil. Anniv. And Annual Convention. Crown Regency Resort and Convention Center, Boracay Island (Station 2), Malay, Aklan. 10-12 May 2017.

Latina, DS Lantican, **MS Guerrero** and BL Caoili. Development Of A Rapid Multiplex-Based PCR Protocol for *Aspidiotus rigidus* Reyna Detection. Poster paper presented at the 25th Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB) International Conference and the 43rd Philippine Society for Biochemistry and Molecular Biology (PSBMB, Inc.), Annual Convention. Philippine International Convention Center, Manila, Philippines. December 5-7, 2016.

EC Rubico, JF Laquinta, RA Latina, GD Sapin, **MS Guerrero** and BL Caoili. Identification of parasitoid associated with coconut scale insects from Basilan and Zamboanga based on 28S rDNA. Poster paper presented at the 47th Pest Mgt. Council of the Phil. Anniv. And Annual Convention. Villa Caceres, Naga City. 8-11 March 2016.

JF Laquinta, EC Rubico, RA Latina, GD Sapin, **MS Guerrero** and BL Caoili. Identification of Scale Insects on coconut and Associated Crops Using 28S gene. Poster paper presented at the 47th Pest Mgt. Council of the Phil. Anniv. And Annual Convention, Villa Caceres, Naga City. 8-11 March 2016

MSGuerrero and BL Caoili. Genetic Structure of *Aspidiotus* spp. (Hemiptera: Diaspididae) from Outbreak and Non-Outbreak Areas in the Philippines using Cytochrome C Oxidase (Col gene). Poster paper presented during the Annual Scientific meeting of the Pest Management Council of the Philippines. May 5-8, 2015.

BL Caoili, II Lit Jr., SA Yap, **MS Guerrero**, GD Sapin, RFC Sandoval, JM Belen, RA Latina and N

Barbecho. 2014. Identification of the Philippine Outbreak Populations of the Coconut Scale Insects Using Molecular Markers with Morphological Confirmation. Oral paper presented during the Annual Scientific Meeting of Pest Management Council of the Philippines, May 6-9, Mandarin Hotel, Cebu City.

MO Solleza and PA Javier. Ovipositional Preference of *Trathala flavaorbitalis* Cameron (Hymenoptera: Ichneumonidae), a larval parasitoid of Eggplant Fruit and Shoot Borer, *Leucinodes orbonalis* Guenee. 2009. Oral paper presented during the Annual Scientific Meeting of the Pest Management Council of the Philippines, May 5-8, Hotel Supreme, Baguio City.

MO Solleza and PA Javier. Ovipositional Preference of *Trathala flavaorbitalis* Cameron (Hymenoptera: Ichneumonidae) a larval parasitoid of Eggplant Fruit and Shoot Borer, *Leucinodes orbonalis* Guenee. 2008. Poster paper presented during the Annual Scientific Meeting of the Pest Management Council of the Philippines, May 5-10, Asturias Hotel, Puerto Princesa City, Palawan.

GenBank Submissions: Presented as GenBank Accession numbers (selected)

GenBank submissions published as co-author:

- MK204613, MK204614,
- MK213555-MK213583
- MK059391-MK059394
- MK012356- MK012366
- MK624969-MK624981
- MK630221-MK630227
- MK032474-MK032477
- MK636544- MK636568

GenBank Submission published as the **main author (selected)**

- MH825656, MH825657, MH825658, MH825659, MH825660, MH825661

SKILLS:

- Basic and advanced skills on Insect Pathology and Insect Molecular Biology
- Competent on Molecular Biology and Biotechnology (MBB) Techniques
- Competent in using R including R Studio
- Competent in softwares used in bioinformatic and metagenomic analysis
- Competent in using molecular softwares such as BioEdit, MEGA, Arlequin, DNASP, among others)
- Computer literate and proficient in MS Office application (MS Word, Excel, PowerPoint, Access, Project, Outlook) and other programs
- Competent on Technical, Publishable Writing
- Competent on Research, Training and Extension
- Proficient in the English and Filipino languages
- Competent and experienced in organizing technical events (Coordinator on trainings, seminars and workshops)
- Can drive four-wheeled vehicles

REFERENCES:

DR. BARBARA L. CAOILI

Director

NCPC,CAFS, UPLB

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DR. MARIA MINOR

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DR. STEVEN TREWICK

Professor

Evolutionary Ecology

Zoology and Ecology

School of Natural Sciences

Massey University, New Zealand

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