

NADINE ADELLIA LEDESMA, PhD

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SUMMARY

- PhD in Agricultural and Environmental Biology from the University of Tokyo, Japan
- Dynamic plant scientist with 30 years of expertise in addressing environmental challenges in crop production and enhancing fruit quality through innovative research and field trials.
- Published author in prestigious journals, driving impactful findings in plant physiology and climate resilience.
- Proven track record in research development and fostering collaboration across multidisciplinary teams to optimize crop production.
- Proven track record in teaching, including instructional materials development, innovative instructional techniques, and thesis advising at the undergraduate and graduate levels.

SKILLS

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| • Horticulture | • Geographic Information Systems |
| • Molecular biology techniques | • Intellectual Property Rights (Patent Drafting) |
| • Project Management | • Languages: Filipino, English, Japanese |
| • Climate Change Resilience in Agriculture | |

WORK EXPERIENCE

Associate Professor

June 2018 – Current, University of Rizal System, Rizal, Philippines

- Selection of courses taught: Basic Biotechnology, Biochemistry, Genetics, Organic Chemistry, Precision Agriculture, Crop Science major courses
- Led and executed research trials focusing on abiotic stress impacts and plant physiology for optimal crop production.
- Developed and authored online modules on chemistry, plant physiology crop protection, and biopesticides, enhancing knowledge in plant management practices.
- Collaborated with cross-functional teams to establish research goals addressing climate resilience, publishing findings in peer-reviewed journals.

Associate Professor

January 2017 – April 2018, De La Salle Araneta University, Malabon City, Philippines

- Selection of courses taught: Agroecology, General Biology, Botany, Seed Science and Technology
- Developed and implemented field trials of strawberry varieties to evaluate plant responses to heat stress, optimizing management practices for improved yield.

Assistant Professor

January 2014 – December 2016, De La Salle University, Manila, Philippines

- Selection of courses taught: Environmental Science, Botany, Biotechnology, and Agroecology
- Led a research project focusing on molecular techniques of strawberry variety verification to ensure authenticity in marketability of fruit quality and flavor, publishing findings in a peer-reviewed journal.

Instructor of English

February 2005 – July 2010, Berlitz Japan, Inc., Tokyo, Japan

- Led English instruction for diverse learners, enhancing critical thinking and communication skills through innovative teaching methods.
- Collaborated with a multinational and multicultural faculty to integrate interdisciplinary approaches, fostering a cohesive learning environment.
- Developed curriculum and assessment tools to improve student engagement and performance.

SELECTED SCHOLARLY PUBLICATIONS

1. **NA Ledesma**, JM Matulac, JE Sevilleja, ML Enriquez. 2023. Detecting misidentifications of strawberry cultivars in the Philippines using single nucleotide polymorphism markers. *Journal of Horticultural Science and Biotechnology*. <https://doi.org/10.1080/14620316.2022.2162444>
2. J Chua, JM Banua, I Arcilla, A Orbecido, ME de Castro, **N Ledesma**, C Deocarís, C Madrazo, L Belo. 2019. Phytoremediation potential and copper uptake kinetics of Philippine bamboo species in copper contaminated substrate. *Heliyon*, 5: e02440. <https://doi.org/10.1016/j.heliyon.2019.e02440>
3. **NA Ledesma**, CS Ragay, JC Delgado, DP Padua. 2017. Chilling differentially affects strawberries grown under high temperature stress. *Philippine Agricultural Scientist*. 100(2): 211–221. <https://pas.cafs.uplb.edu.ph/download/chilling-differentially-affects-strawberries-grown-under-high-temperature-conditions/>
4. **NA Ledesma** and S Kawabata. 2016. Responses of two strawberry cultivars to severe high temperature stress at different flower development stages. *Scientia Horticulturae*. <https://doi.org/10.1016/j.scienta.2016.09.007>
5. **NA Ledesma** and N Sugiyama. 2008. Effect of high temperature stress on the reproductive growth of strawberry cvs. ‘Nyoho’ and ‘Toyonoka’. *Scientia Horticulturae*. <https://doi.org/10.1016/j.scienta.2007.12.010>
6. **N Ledesma** and N Sugiyama. 2005. Pollen quality and performance in strawberry plants exposed to high temperature stress. *Journal of the American Society for Horticultural Science*. <https://doi.org/10.21273/JASHS.130.3.341>
7. **NA Ledesma**, N Sugiyama, S Kawabata. 2004. Effect of high temperature on protein expression in strawberry plants. *Biologia Plantarum*, 48(1): 73–79. <https://doi.org/10.1023/b:biop.0000024278.62419.ee>

EDUCATION

- [2001 – 2004] **PhD Agricultural and Environmental Biology**, University of Tokyo, Japan
Dissertation: A comparative study on the effects of high temperature stress on the reproductive growth in two main strawberry cultivars.
- [1999 – 2001] **MS Agricultural and Environmental Biology**, University of Tokyo, Japan
Thesis: Effects of high temperature on fruit growth and protein expression in strawberry plants
- [1991 – 1996] **BS Agriculture (major in Horticulture)**, University of the Philippines Los Baños

RELEVANT TRAININGS AND WORKSHOPS

1. **SEARCA Agri-Innovator Program**, SEAMEO SEARCA, February 10 to 14, 25 to 27, 2025.
2. **Basic Research Ethics**, Philippine Health Research Ethics Board, May 11 to 12, 2023.
3. **Advanced International Certificate Course on Intellectual Property (IP Panorama)**, KIPO, WIPO, KAIST, KIPA, April to June 2021,
4. **Advanced Course on Basics of Patent Drafting**, WIPO Academy, April 8 to July 11, 2021
5. **Geospatial and Environmental Analysis**, University of California, Davis through Coursera, March to May 2021
6. **GIS Data Formats, Design and Quality**, University of California, Davis through Coursera, December to February 2021
7. **Fundamentals of GIS**, University of California, Davis through Coursera, October to November 2020
8. **General Course on Intellectual Property**, WIPO Academy, August 2 to September 14, 2019
9. **Localising Strategies in Making Cities Resilient to Disasters**, De La Salle University and University of Huddersfield (UK) with funding from DOST-PCIEERD and The British Council Newton Fund, January 22 to 26, 2018.
10. **National Adaptation Plans: Building Climate Resilience in Agriculture**, UNITAR, FAO, UNDP, UNCC:Learn, November 13 to December 22, 2017.