

CURRICULUM VITAE

Personal Information

- Name: Luquet, Melisa Luciana
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- ORCID: <https://orcid.org/0009-0009-5003-9783>

Lines of research

Mineral nutrition, phosphorus, nitric oxide, signaling, plant physiology, molecular plant biology, abiotic stress.

Expertise and skills

Laboratory: Experience in plant physiology, hydroponic culture, molecular biology techniques and biochemical determinations, such as enzymatic measurements, gene expression analysis using qPCR, high performance liquid chromatography (HPLC), fluorescence microscopy.

Informatics: Experience in web-based bioinformatics tools. Experience in the use of statistical analysis and graphic programs.

Teaching: Teaching Assistant 2022-2023. BSc, Applied concepts of physics, chemistry and mathematics, Agroecology, Faculty of Agronomy and Forestal Science, National University of La Plata (UNLP), Argentina.

Languages: Native in Spanish and fluent in English and French.

Fellowships

2023-Present **Ph.D. Completion Fellowship.** Plant Physiology Institute (**INFIVE-UNLP-CONICET**)-La Plata National University. La Plata, Argentina. Supervisor: Ph.D. Andrea Galatro. Co-supervisor: Ph.D. Agustina Buet.

2019-2023 **Initial Ph.D. Fellowship (ANPCyT).** Plant Physiology Institute (**INFIVE-UNLP-CONICET**)-La Plata National University. La Plata, Argentina. Supervisor: Ph.D. Andrea Galatro. Co-supervisor: Ph.D. Agustina Buet.

Education

2014-2018 **Bachelor's degree in biotechnology and molecular biology.** Faculty of Exact Sciences, **University of La Plata (UNLP), Argentina.**
Grade Point Average: 8.30/10.

2014-2016 **Technical degree in Chemistry.** Faculty of Exact Sciences, **University of La Plata (UNLP), Argentina.** Grade Point Average: 8.47/10.

Research supervision

2021-2024 **Project student.** Emilia Andrade. La Plata National University, Faculty of Exact Science. **La Plata, Argentina.**

Internship and collaborations

2023 **Plant Physiology group,** Technological Institute of Chascomús (**IIB-INTECH/UNSAM-CONICET**), Chascomús, **Argentina.** Supervisor: Ph.D. Guillermo Santa-María. 2023-2024

Publications in International Scientific Journals

1. A Galatro, F Ramos-Artuso, **M Luquet**, A Buet, M Simontacchi. An update on nitric oxide production and role under phosphorus scarcity in plants. **Frontiers in Plant Science, section Plant Nutrition, 2020, 11:413. doi: 10.3389/fpls.2020.00413.**
2. A Buet, **M Luquet**, GE Santa-María, A Galatro. Can NO Signaling and Its Metabolism Be Used to Improve Nutrient Use Efficiency? Toward a Research Agenda. **Frontiers in plant science, 2022, 13: 787594. doi: 10.3389/fpls.2022.787594.**
3. A Galatro, A Lucini Mas, M Luquet, CG Fraga, M Galleano. Plants as a source of dietary bioactives: flavonoids and basis for their health benefits. **Aspects of Molecular Medicine, 2024, 100048. doi: 10.1016/J.AMOLM.2024.100048.**
4. **M Luquet**, C Antonelli, GE Gergoff Grozeff, A Buet, A Galatro. Involvement of nitrate reductase in nitric oxide generation and in the induction of acclimation responses to phosphorus restriction in soybean plants. **2024. Plant Science (Submitted, PSL-D-24-01340).**
5. A Nejamkin, C Decima Oneto, Y Zhang, **M Luquet**, A Galatro, F Del Castello, G Massa, S Feingold, AR Fernie, L Lamattina, N Correa-Aragunde, N Foresi. Metabolic profiling reveals increased nitrogen remobilization in potato plants that express a cyanobacterial NO/NO₃-producing enzyme" **2024. Planta (Submitted, PLAA-D-24-00665).**

Involvement in Research Projects

- 2019-2023 **PICT-2017-2492.** Participation of nitric oxide, and its interaction with ethylene, in acclimation responses to phosphorus restriction in maize and soybeans. Director: Dr. Marcela Simontacchi (2019-2020). Director: Dr. Andrea Galatro (2020-2023). Plant Physiology Institute (**INFIVE-UNLP-CONICET**)-La Plata National University. La Plata, Argentina. **Ph.D. researcher.**
- 2017-2019 **PIP 2017-2019.** Nitric oxide-ethylene interaction during P deficiency in higher plants. Code 11220170100629C. RESOL-2018-8-APN. Plant Physiology Institute (**INFIVE-UNLP-CONICET**)-La Plata National University. La Plata, Argentina. **Collaborator.**
- 2023-2026 **National University of La Plata Grant.** Redox metabolism in fruit, horticultural and industrial crops: endogenous and exogenous factors that determine it. Code A371. Director: Dr. Gergoff Grozeff Gustavo Esteban. Co-director: Dr. Bartoli Carlos Guillermo. Plant Physiology Institute (**INFIVE-UNLP-CONICET**)-La Plata National University. La Plata, Argentina. **Collaborator.**
- 2022-2024 **PICT-2021-APLICADOS- CAT -II-00036.** Scientific and Technological Research Projects of Institutional Leap. Application of new transcriptomics and gene editing tools to improve the health, production and nutritional quality of vegetables. Director: Dr. Carlos Bartoli. Plant Physiology Institute (**INFIVE-UNLP-CONICET**)-La Plata National University. La Plata, Argentina. **Collaborator.**

Presentations in recent Conferences, Symposiums and Workshops

- 2023 **Luquet M,** Antonelli C, Gergoff Grozeff GE, Buet A, Galatro A. Exploring early signaling events under phosphorus restriction in soybean plants. XXXIV Argentinian Meeting of Plant Physiology. Conference **2023**, Rosario, Argentina. **Poster presentation.**
- 2022 **Luquet M,** Buet A, Galatro A. Soybean says *NO* to phosphorus deficiency. 2° ARG Plant Women Symposium "Plants and plant nutrition" **Symposium 2022.** APW, ARG Plant Women Network for Argentine women researchers. **Oral presentation.**
- 2022 **Luquet M,** Antonelli C, Gergoff Grozeff GE, Buet A, Galatro A. Endogenous nitric oxide influences acclimation responses to phosphorus restriction in soybean

plants. 58° SAIB Argentinian Society of Biochemistry and Molecular Biology Research. Conference **2022**, Mendoza, Argentina. **Poster presentation.**

2021 **Luquet M**, Buet A, Gergoff Grozeff GE, Galatro A. Phosphorus deprivation in soybean plants induces early acclimation responses and affects endogenous nitric oxide levels. XXXIII Argentinian meeting of plant physiology. Conference **2021**, Argentina. **Poster presentation.**

2020 **Luquet M**, Galatro A, Buet A. Participation of nitric oxide in acclimation responses to phosphorus restriction in cultivated plants. EBEC 2020, UNLP Ph.D. Student's Meeting. Conference **2020**, La Plata, Argentina. **Poster and oral presentation.**

Post-graduate Courses

2024 **“R, RStudio and Linear Regression Models”**. Prof. Leonardo Gualano, Argentine Society of Biology (SAB), Argentina. Duration 25 hs.

2024 **“Gene expression analysis by RT-qPCR”**. Ph.D. Silvina Quintana, Applied Molecular Biology Institute, Mar del Plata, Argentina. Duration 35 hs.

2023 **“Adobe Photoshop for scientific figures”**. Ph.D. Carlos Mas, National University of Córdoba, Argentina. Duration 32 hs.

2022 **“Foundations of Agroecology and sustainable Agriculture”**. Ing. Agr. Santiago J. Sarandon. National University of La Plata, Argentina. Duration 45 hs.

2020 **“Genetic and genomic improvement of plant species”**. Ph.D. Esteban Hopp University of Buenos Aires, Argentina. Duration 60 hs.

2020 **“University and Social Commitment”**. Prof. Ph.D. Alberto F. Pasquevich. Faculty of Exact Science, University of La Plata, Argentina. Duration 45 hs.

2020 **“Plant Biochemistry”**. Ph.D. Susana Mabel Gallego. University of Buenos Aires. Duration 60 hs.

2020 **“Statistical methods applied to Biological Sciences”**. Prof. Ph.D. María Esperanza Ruiz & Prof. Ph.D. Pablo Martín Demetrio. National University of La Plata, Argentina. Duration 60 hs.

University Outreach activities

- 2024 **Outreach activity. “I choose to grow” Festival of science.** National University of La Plata, La Plata, Argentina. April 2024.
- 2024 **Exposition at XX Latin-American Free Software Installation Festival (FLISOL 2024).** “Open Science: A new participatory research approach” National University of La Plata, La Plata, Argentina. April 2024.
- 2022 **Outreach activity. “Science Week 2021”.** “Pollination and reproduction of plants” National University of La Plata, La Plata, Argentina. October 2022.
- 2021 **Outreach activity. “Science flourishes”.** Audiovisual production: “Vitamins defend plants: vitamin C in response to environmental stress.” National University of La Plata, La Plata, Argentina. January 2021.

References:

1. **Ph.D. Andrea Galatro (Ph.D. Supervisor)**

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Physical Chemistry, School of Pharmacy and Biochemistry, University of Buenos Aires.

2. **Ph.D. Agustina Buet (Ph.D. Co-supervisor)**

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3. **Ph.D. Carlos Bartoli (Lab’s Leader)**

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4. **Ph.D. Guillermo Santa-María (Collaboration supervisor)**

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