

Dr. César Marín

Date: 2 June 2019.

Date and place of birth: 7 February 1991, Popayán, Colombia.

Profile on: [Google Scholar](#) - [ResearchID](#) - [Publons](#) - [ResearchGate](#)

Founder of the [South American Mycorrhizal Research Network](#)

Collaborator on: [Skype a Scientist](#) and [Chile hace Ciencia](#)

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Research: plant-soil-ecosystems continuum; soil fungal ecology; multilevel selection; crops/weeds dynamics; science history, sociology, and philosophy.

Positions

- April 2019 – *present*. Professor. Open University of Recoleta, Santiago, Chile.
- November 2018 – *present*. Posdoctoral Researcher. Institute of Agricultural and Veterinary Sciences, University of O'Higgins, Rancagua, Chile. Department of Ecosystems and Environment, Agronomy and Forestry Engineering Faculty, Pontifical Catholic University of Chile, Santiago, Chile.
- March 2014 – August 2018. Doctoral student, professor and researcher. Biogeochemistry Laboratory, Environmental and Evolutionary Sciences Institute, Austral University of Chile, Valdivia, Chile.
- September 2015 - December 2015. Invited researcher. Plant Ecology Laboratory, University of Tartu, Tartu, Estonia.
- January 2015 - August 2017. Invited researcher (3 times: 2015: January – March; 2016: May – December; 2017: May - August). Institute of Soil Science, University of Hannover, Hannover, Germany.
- November 2011 - October 2014. Bachelor student in thesis and researcher. Plant Ecology Research Group, University of Copenhagen, Copenhagen, Denmark.
- May 2010 - August 2013. Reviewer. National Short Stories Contest, Colombian Society of Universities, Bogotá, Colombia.
- August 2008 - March 2013. Bachelor student. Biological and Environmental Sciences Department, Jorge Tadeo Lozano University, Bogotá, Colombia.

Academic formation

- March 2014- August 2018. **Doctorate, Dr.** Doctor in Sciences mention Ecology and Evolution. Austral University of Chile. Ending: 3 August 2018. Supervisor: Prof. Dr. Roberto Godoy (Austral University of Chile). Thesis: "Fungal biodiversity associated to bioweathering processes in a chronosequence of temperate rainforests in southern Chile".
- August 2008 – March 2013. **Bachelor of Sciences, B.Sc.** Environmental Biologist. Jorge Tadeo Lozano University. Degree on: 31 Mar 2013. Supervisor: Prof. Dr. Jacob Weiner (University of Copenhagen). Co-supervisor: Prof. M.Sc. Luz Stella Fuentes Quintero (Jorge Tadeo Lozano University). Thesis: "Density and sowing pattern effects in yield and weed suppression on three maize (*Zea mays*) varieties".

Complementary formation

- 2018. II Workshop on Systems Biology Chile-France. **Advanced graduate course.** Instituto de Sistemas Complejos de Valparaíso, Valparaíso, Chile.
- 2018. Workshop from the laboratory to the parliament: the political role of scientific knowledge. **Short course.** Environmental and Evolutionary Sciences Institute, Austral University of Chile, Valdivia, Chile.
- 2017. Training Course in University Teaching. **Advanced graduate course.** Austral University of Chile, Valdivia, Chile.
- 2017. Science and Society: Tools to Communicate Science. **Advanced graduate course.** Faculty of Philosophy and Humanities, Austral University of Chile, Valdivia, Chile.
- 2017. Workshop Truffles and trufficulture – between myths and reality. **Short course.** Laboratório de Micologia, Universidade Federal de Santa Catarina, Florianópolis, Brazil.
- 2017. Environmental Geosciences – concepts to manage the pollution of air, soils, and water. **Short course.** Volcanic Soils Research Center, Austral University of Chile, Valdivia, Chile.
- 2017. Workshop Writing a Scientific Paper in English. **Advanced graduate course.** Environmental and Evolutionary Sciences Institute, Austral University of Chile, Valdivia, Chile.
- 2017. Tell me about science: Scientific communication workshop. **Short course.** Sciences Faculty, Austral University of Chile, Valdivia, Chile.
- 2016. Workshop on Bioinformatic Tools, 3rd Thünen Symposium on Soil Metagenomics. **Advanced graduate course.** Thünen Institute, Braunschweig, Germany.

- 2016. Metagenomics Bioinformatics course. **Advanced graduate course.** European Bioinformatics Institute (EMBL-EBI), Hinxton, United Kingdom.
- 2016. EarthShape student statistics workshop. **Advanced graduate course.** Department of Geosciences, University of Tübingen, Tübingen, Germany.
- 2015. Soil-plant interactions: ecophysiology of the rhizosphere. **Advanced graduate course.** Environmental and Evolutionary Sciences Institute, Austral University of Chile, Valdivia, Chile
- 2015. IV Latin American School of Evolution. **Advanced graduate course.** Quindío University, Armenia, Colombia.
- 2015. Soil interface processes (Grenzflächenprozesse in Böden 16632). **Advanced graduate course.** Institute of Soil Science, University of Hannover, Hannover, Germany.
- 2015. Methods of soil research (Bodenuntersuchungsverfahren WS 2014/15 B GW-6). **Short course.** Institute of Soil Science, University of Hannover, Hannover, Germany.
- 2014. Biological Adaptation: Theoretical and Practical approaches. **Advanced graduate course.** Environmental and Evolutionary Sciences Institute, Austral University of Chile, Valdivia, Chile
- 2014. Human genetics, from association studies to forensic applications. **Advanced graduate course.** Environmental and Evolutionary Sciences Institute, Austral University of Chile, Valdivia, Chile
- 2013. Scientific illustration as a tool for the study of plant material. **Short course.** Tolima University, Ibagué, Colombia.
- 2011. Ethnobotany: traditional knowledge associated with the conservation of plant diversity. **Short course.** Valle University, Cali, Colombia.

Academic experience

- 2017 - 2019. **Full professor.** Corporación para Investigaciones Biológicas, Medellín, Colombia: Metagenomics course (2017-I, graduate). Faculdade Evangélica de Goianésia, Goianésia, Brazil: Soil Fungal Ecology course (2017-II, graduate). Open University of Recoleta, Santiago, Chile: Soils, Ecosystems, and Climate Change (2019-I, undergraduate).
- 2016 - 2019. **Associate professor.** University of O'Higgins, Rancagua, Chile: Edaphology (2019-I, undergraduate); Introduction to Agronomy I (2019-I; undergraduate). Pontifical Catholic University of Chile, Santiago, Chile: Forest soil and hidrology (2019-I, undergraduate). Austral University of Chile, Valdivia, Chile: Biodiversity (2016-I - 2019-I, undergraduate), Molecular analysis of terrestrial and freshwater cyanobacterial/algal communities in pristine temperate rainforests, Southern Chile (2019-I, graduate); Forest Ecology (2017-II, graduate), Professional practice (2017-I, undergraduate), Molecular community ecology of arbuscular mycorrhizal fungi (2016-I, graduate), Research seminary (2016-I, undergraduate). La Frontera University, Temuco, Chile: Natural resources management (2017-I, graduate).
- 2014 - 2016. **Professor assistant.** Austral University of Chile, Valdivia, Chile: Basic botany (2014-I), Organic evolution (2014-II and 2015-I). University of Hannover, Hannover, Germany: Soil interface processes (2016-II).

Research stays

- 2015 - 2017. Four research stays summing 16 months in total. Stays on: Institute of Soil Science, University of Hannover, Hannover, Germany (3 stays on 2015, 2016 and 2017, 13 months); Plant Ecology Laboratory, University of Tartu, Tartu, Estonia (1 stay on 2015, 3 months).

Indexed articles

- Bonilla-Muñoz, V.H., **Marín, C.** 2018. Shading light into the elephant: The case of the Chilean bread-wheat eco-agrifood system. *Agro Sur*. 46 (2): 7-9. DOI: <http://dx.doi.org/10.4206/agrosur.2018.v46n2-03>
- **Marín, C.**, Torres, D., Furci, G., Godoy, R., Palfner, G. 2018. Estado del arte de la conservación del reino Fungi en Chile. *Biodiversidata*. 7: 98-115. ISSN: 0719-4846.
- **Marín, C.** 2018. Delirios y estereotipos racionalistas en ciencia: cómo combatirlos desde la consiliencia. *Konvergencias, filosofía y culturas en diálogo*. 27: 59-75. ISSN: 1669-9092.
- **Marín, C.** 2018. Conceptos fundamentales en ecología de hongos del suelo: una propuesta pedagógica y de divulgación. *Boletín Micológico*. 33 (1): 32-56. DOI: <http://dx.doi.org/10.22370/bolmicol.2018.33.1.1168>
- **Marín, C.**, Valenzuela, E., Godoy, R., Palfner, G. 2018. Diversity and growth-effects of ectomycorrhizal fungi of a *Nothofagus pumilio* forest in the Andes of Southern Chile. *Boletín Micológico*. 33 (1): 9-20. DOI: <http://dx.doi.org/10.22370/bolmicol.2018.33.1.1164>
- **Marín, C.** 2018. Astronomy was his undoing: why a Colombian pioneer got shot. *Nature*. 558 (7708): 30. DOI: <http://dx.doi.org/10.1038/d41586-018-05341-4>
- **Marín, C.**, Godoy, R., Valenzuela, E., Schloter, M., Wubet, T., Boy, J., Gschwendtner, S. 2017. Functional land-use change effects on soil fungal communities on Chilean temperate rainforests. *Journal of Soil Science and Plant Nutrition*. 17 (4): 985-1002. DOI: <http://dx.doi.org/10.4067/S0718-95162017000400011>

- **Marín, C.**, Aguilera, P., Oehl, F., Godoy, R. 2017. Factors affecting arbuscular mycorrhizal fungi of Chilean temperate rainforests. *Journal of Soil Science and Plant Nutrition*. 17 (4): 966-984. DOI: <http://dx.doi.org/10.4067/S0718-95162017000400010>
- Godoy, R., Silva-Flores, P., Aguilera, P., **Marín, C.** 2017. Microbial Interactions in the plant-soil continuum: Research results presented at the Workshop "Mycorrhizal Symbiosis in the Southern Cone of South America". *Journal of Soil Science and Plant Nutrition*. 17 (4): 1-3.
- Bueno, C.G., **Marín, C.**, Silva-Flores, P., Aguilera, P., Godoy, R. 2017. Think globally, research locally: contrasting patterns of mycorrhizal symbiosis in South America. *New Phytologist*. 215 (4): 1306-1309. DOI: <https://doi.org/10.1111/nph.14709>
- Aguilera, P., **Marín, C.**, Oehl, F., Godoy, R., Borie, F., Cornejo, P.E. 2017. Selection of aluminum tolerant cereal genotypes strongly influences the arbuscular mycorrhizal fungal communities in an acidic Andosol. *Agriculture, Ecosystems and Environment*. 246: 86-93. DOI: <https://doi.org/10.1016/j.agee.2017.05.031>
- **Marín, C.**, Aguilera, P., Cornejo, P., Godoy, R., Oehl, F., Palfner, G., Boy, J. 2016. Arbuscular mycorrhizal assemblages along contrasting Andean forests of southern Chile. *Journal of Soil Science and Plant Nutrition*. 16 (4): 916-929. DOI: <http://dx.doi.org/10.4067/S0718-95162016005000065>
- **Marín, C.** 2016. The levels of selection debate: taking into account existing empirical evidence. *Acta Biológica Colombiana*. 21 (3): 467-472. ISSN: 0120-548X. DOI: <http://dx.doi.org/10.15446/abc.v21n3.54596>
- **Marín, C.**, D'Elía, G. 2016. Academic Degree and Discipline Affect Religious Beliefs and Evolution Acceptance: Survey at a Chilean University. *Zygon: Journal of Religion and Science*. 51 (2): 277-292. DOI: <http://dx.doi.org/10.1111/zygo.12258>
- **Marín, C.** 2015. Selección Multinivel: historia, modelos, debates, y principalmente, evidencias empíricas. *eVOLUCIÓN: Revista de la Sociedad Española de Biología Evolutiva*. 10 (2): 51-70. ISSN: 1989-046X.
- **Marín, C.**, Weiner, J. 2014. Effects of density and sowing pattern on weed suppression and grain yield in three varieties of maize under high weed pressure. *Weed Research*. 54 (5): 467-474. DOI: <http://dx.doi.org/10.1111/wre.12101>

Book chapters

- Godoy, R., Matus, F., **Marín, C.**, Aguilera, P., Martínez, O. 2019. Ciclos de nutrientes en el suelo y los efectos de la ganadería y la agricultura. In: Morales, A., Werner, M. (eds.). *Introducción a la Ciencia Animal*. (Accepted). Valdivia: Ediciones Universidad Austral de Chile.
- Alomonacid, L., Godoy, R., Salgado, M., **Marín, C.**, Valenzuela, E. 2019. Sustentabilidad y calidad del agua en sitios agrícola-ganaderos. In: Morales, A., Werner, M. (eds.). *Introducción a la Ciencia Animal*. (Accepted). Valdivia: Ediciones Universidad Austral de Chile.
- Godoy, R., **Marín, C.** 2019. Mycorrhizal studies in temperate rainforests of Southern Chile. In: Pagano, M., Lugo, M. (eds.). *Mycorrhizal Fungi in South America* (ISBN 978-3-030-15227-7). Springer, Fungal Biology Series. In press. DOI: 10.1007/978-3-030-15228-4_16
- **Marín, C.**, Bueno, C.G. 2019. A systematic review on South American and European mycorrhizal research: is there a need for scientific symbiosis? In: Pagano, M., Lugo, M. (eds.). *Mycorrhizal Fungi in South America*. (ISBN 978-3-030-15227-7). Springer, Fungal Biology Series. In press. DOI: 10.1007/978-3-030-15228-4_5

Science outreach articles

- **Marín, C.** 2018. La ciencia ha sido mi terapia ante la violencia en Colombia. Revista Digital Fulica, Edición Especial No. 1. ISSN 2382-4743. [Online](#).
- **Marín, C.** 2018. Monitoreando la biodiversidad global del suelo. Postgrados Facultad de Ciencias UACH. [Online](#).
- **Marín, C.** 2018. Los gonfoterios alteraron la vegetación chilena del Pleistoceno tardío. Facultad de Ciencias UACH. [Online](#).
- **Marín, C.** 2018. Entendiendo el origen de las especies (y de la cerveza) en un tubo de ensayo. Postgrados Facultad de Ciencias UACH. [Online](#).
- **Marín, C.** 2018. Understanding the evolution of the mycorrhizal symbioses: a matter of phylogenetics or paleontology? Beneath our Feet. [Online](#).
- **Marín, C.** 2018. One year Networking South American mycorrhizal research. Beneath our Feet. [Online](#).
- **Marín, C.** 2018. What we are reading in November-December, 2017. South American Mycorrhizal Research Network. [Online](#).
- **Marín, C.** 2018. Evolución experimental con levaduras: entendiendo El Origen de las Especies (y de la cerveza) en un tubo de ensayo. Chile Hace Ciencia. [Online](#).
- **Marín, C.** 2017. Leandro Paulino, proyecto EarthShape: cómo se origina el suelo. Chile Hace Ciencia. [Online](#).
- **Marín, C.** 2017. Natali Hurtado, Taxónoma. Chile Hace Ciencia. [Online](#).

- **Marín, C.** 2017. Hongos micorrízicos para aumentar la producción de cereales en el sur de Chile. Chile Hace Ciencia. [Online](#).
- **Marín, C.** 2015. Hongos que “comen” rocas. *Órbitas Científicas*. 3 (31): 63. ISSN: 2303-999X.
- **Marín, C.** 2014. Docilidad o agresividad en arañas sociales: una evidencia más de selección de grupo. *Órbitas Científicas*. 3 (30): 63. ISSN: 2303-999X.
- **Marín, C.** 2014. Selección natural en múltiples niveles: ¿un debate de nunca acabar? *Órbitas Científicas*. 3 (29): 83. ISSN: 2303-999X.
- **Marín, C.** 2014. Entrevista: el doctor David Sloan Wilson. *Órbitas Científicas*. 3 (29): 74-80. ISSN: 2303-999X.
- **Marín, C.** 2014. Un problema de conceptos y difusión, no de herencia. *Órbitas Científicas*. 3 (28): 57. ISSN: 2303-999X.
- **Marín, C.** 2014. Criminalidad, culpabilidad y biología del castigo. *Órbitas Científicas*. 3 (27): 59. ISSN: 2303-999X.
- **Marín, C.** 2014. Transgénicos: variación, biodiversidad y ecología evolutiva. *Órbitas Científicas*. 3 (26): 61. ISSN: 2303-999X.
- **Marín, C.** 2014. Biodiversidad humana. *Órbitas Científicas*. 3 (25): 59. ISSN: 2303-999X.
- **Marín, C.** 2014. Las mariposas Heliconius y el origen de las especies. *Órbitas Científicas*. 2 (24): 55. ISSN: 2303-999X.
- **Marín, C.** 2014. El gen casi nunca es egoísta: una visión fenotípica de la evolución. *Órbitas Científicas*. 2 (23): 59. ISSN: 2303-999X.
- **Marín, C.** 2013. Estudios evolutivos de la religión. *Órbitas Científicas*. 2 (22): 59. ISSN: 2303-999X.
- **Marín, C.** 2013. Volvox: cooperación y transiciones mayores en la vida. *Órbitas Científicas*. 2 (21): 57. ISSN: 2303-999X.
- **Marín, C.** 2013. Agroecología Evolutiva: Darwin en la finca. *Órbitas Científicas*. 2 (20): 53. ISSN: 2303-999X.

Books editing (Ed.)

- **Marín, C.** 2017. *Abstracts Book Workshop Mycorrhizal symbiosis in the southern cone South America*. Austral University of Chile, Valdivia, Chile. 74 p. (Ed.).

Technical reports

- Food and Agriculture Organization of the United Nations. 2018. Global Forum on Food Security and Nutrition, Report of activity No. 149. 11 p. DOI: 10.13140/RG.2.2.18056.06406

Editor for journals

- 2019. *Revista Digital Fulica*, edición 10, Hongos. ISSN 2382-4743.
- 2019. *Científic@ - Multidisciplinary Journal* 6 (1), special issue Micro-organismos promotores do crescimento de plantas: mecanismos, simbiose, biomas e avanços na pesquisa. ISSN 2358-260X.
- 2017. *Journal of Soil Science and Plant Nutrition* 17 (4), special issue Microbial Interactions in the plant-soil continuum: Research results presented at the Workshop “Mycorrhizal Symbiosis in the Southern Cone of South America”.

Reviewer for journals

- BioScience* (Oxford Academic) (2), *Journal of Soil Science and Plant Nutrition* (4), *Microbiome* (3), *Applied Soil Ecology* (1), *Fungal Ecology* (1), *Plant and Soil* (1), *Symbiosis* (1), *MycoKeys* (1), *Current Research Journal of Social Sciences and Humanities* (1), *Antonie van Leeuwenhoek* (1), *PeerJ* (1).

Review of books and books chapters

- Gonzalez, M. A., Arenas-Castro, H. (Eds.). 2017. *Recolección de tejidos biológicos para análisis genéticos*-Instituto de Investigación de Recursos Biológicos Alexander von Humboldt. Bogotá, D.C., Colombia, 33 pp.

Scientific conferences participation

- 2012 – 2019. 46 participations (1 as keynote speaker; 1 travel grant) on scientific conferences on: Colombia, United States, Chile, Brazil, Germany, Argentina, United Kingdom, Austria, Czech Republic, Peru, Puerto Rico.

Invited conferences

- 2014 – 2019. 42 invited conferences (24 on outreach) on: Chile, Colombia, Estonia, United States, Brazil, Germany.

Scholarships, benefits and prices

- 2014 – 2018. 28 economic benefits summing USD\$128,902 from the Government, Universities and Organizations of: Colombia, Chile, United States.

Research projects

- April 2019 – March 2022. Fondecyt Regular Project 1190642 (Dr. Roberto Godoy, UACH): Relationship between plant mycorrhizal type and soil fungal assemblages of endangered Araucaria araucana forest in Nahuelbuta National Park, Chile. **Co-Researcher**, Austral University of Chile.

- November 2018 – October 2021. Fondecyt Initiation Project 11180869 (Dr. Claudia Rojas, UOH): Understanding the effect of fires on non-mutualistic diazotrophic population structure in Mediterranean native forest soils: towards ecosystem services and natural resilience restoration. **Part of the research team**, University of O'Higgins, Chile.

- September 2018 – *present*. Taproot iDiv project: Global Soil Biodiversity and Ecosystem Function Dynamics. **Invited researcher**. German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig, Germany.

- January 2018 - April 2019. Proyecto Fondo de Protección Ambiental No. 6-RE-002-2018 (Dra. Claudia M. Rojas Alvarado, UOH): Recuperación de salud de suelos y su implicancia en el restablecimiento de bosque nativo incendiado en zonas del secano de la VI Región. **Collaborator**, University of O'Higgins, Chile.

- February 2015 - April 2017. DFG-SPP Program 1803: EarthShape: Earth Surface Shaping by Biota; sub-project: Biogenic weathering: opening the black box with new isotope systems and in situ mineral decomposition experiments (EarthShape – BioSoils). **Student**. University of Hannover, Germany; Austral University of Chile, Chile.

- March 2014 - April 2017. Fondecyt Regular Project 1141060 (Dr. Roberto Godoy, UACH): Soil-age driven inverse coupling of biogenic weathering and nutrient recycling on ecosystem level. **Student**. Austral University of Chile, Chile; University of Hannover, Germany.

- September 2011 - October 2014. Evolutionary Agroecology Project. **Student**. University of Copenhagen, Denmark.

Thesis supervision, co-supervision, and review

- Araneda Vargas, R. F. G. 2018. "Química del agua de precipitación en una red de sitios remotos en Áreas Protegidas, Centro Sur de Chile". Natural Resources Conservation Engineering Thesis, Austral University of Chile, Valdivia, Chile. Advisor: Godoy, R. **Co-advisor: Marín, C.**

Awards

- 2016. Second best poster. **Marín, C.**, Godoy, R., Boy, J., Öpik, M. 2016. Soil fungal assemblages in Chilean temperate rainforests: effects of geological history, mycorrhizal dominance and altitude on taxonomic, functional and phylogenetic diversity. Metagenomics Bioinformatics course, European Bioinformatics Institute (EMBL-EBI), Hinxton, United Kingdom.

Scientific memberships (past and present)

Weed Science Society of America; Asociación Colombiana de Botánica; Red Colombiana de Biología Evolutiva; American Society of Naturalists; British Ecological Society; Global Soil Biodiversity Initiative; Global Soil Partnership (FAO); Asociación Colombiana para el Avance de la Ciencia; International Mycological Association; South American Mycorrhizal Research Network; Global Soil Biodiversity Observation Network.

Miscellanea

- 2019 – present. Foreign collaborator in the research group "Soils, Ecology, and Organic Matter Dynamics", Evangelical School of Goianésia, Goianésia, Brasil.

- 2018 – 2019. Participation in the creation meetings of the Global Soil Biodiversity Observation Network in the German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig, Germany (2018), and in the Joint Research Centre of the European Commission, Ispra, Italy (2019).

- 2018. Elsevier poster judge, Ecology theme, 11St International Mycological Congress, Puerto Rico.

- 2018. Organizer II International Symposium Mycorrhizal Symbiosis in South America, Universidad Nacional del Comahue, Bariloche, Argentina.

- 2018. International consultant and member of the scientific committee, 5th Interdisciplinary Congress – The science in the reduction of inequality, Faculdade Evangélica de Goianésia, Goianésia, Brazil.

- 2017. International guest, VI Rick Foray, Laboratório de Micologia, Universidade Federal de Santa Catarina. Lagoa do Peri, Florianópolis, Brazil.

- 2017. Symposium coordinator: "South American Mycorrhizal Research Network" in the IX Latin American Congress of Mycology, Cayetano Heredia Peruvian University, Peru.

- 2017. Organizer of the *International Workshop 2017: Mycorrhizal symbiosis in the southern cone South America*, Austral University of Chile, Chile.
- 2016. Adequacy of the visitors' center (with informative posters) of the Alerce Costero National Park, Chile.
- 2016. Coordinator of interchange agreement between Austral University of Chile (Chile) and University of Hannover (Germany).
- 2016. Organizer graduate course Molecular community ecology of arbuscular mycorrhizal fungi (AMF), Austral University of Chile, Chile.
- 2015. Instructor for intern student (University of Hannover, Germany) on Austral University of Chile, Chile.
- 2014. Organizer III and IV Seminar cycle of Plant Biology. Austral University of Chile, Chile.
- 2014. Reviewer XI Scholar Regional Congress of Science and Technology, Explora CONICYT, Los Ríos Region, Chile.
- 2011 – 2013. Student representative and career accreditation. Environmental Biology bachelor, Jorge Tadeo Lozano University, Colombia.

Press reports

- 2013 – 2019. 75 printed and online press reports on media from Colombia, Chile, Denmark, United States, Germany, Estonia, Peru, Brazil.

Personal references

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Prof. Dr. Götz Palfner. Concepción University. gpalfner@udec.cl

Prof. Dr. Francisco Matus. La Frontera University. francisco.matus@ufrontera.cl

Prof. Dr. Jacob Weiner. University of Copenhagen. jw@plen.ku.dk