

Dr. César Marín

Date: 12 September 2021.

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

Website: <https://cesar-marin.com/> Profile on: [Google Scholar](#) - [ResearchID/Publons](#) - [ORCID](#) - [ResearchGate](#)

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

Editor: [International Mycorrhiza Society Newsletter](#) - (Board) [Journal of Sustainable Agriculture and Environment](#)

Collaborator on [Skype a Scientist](#) - [Afrocolombian of the Year 2019, category Academy](#). E-mail: cesar.marin@uoh.cl

Research: soil ecology; mycology; agronomy; applied ecology; biogeochemistry; mycorrhizas; multilevel selection; crops/weeds dynamics; plant propagation; science history, sociology, and philosophy.

Positions

- July 2021 – *present*. Postdoc. Department of Mycorrhizal Symbioses, Institute of Botany, Czech Academy of Sciences, Průhonice, Czech Republic.

- November 2018 – June 2021. Researcher, Center of Applied Ecology and Sustainability, Pontifical Catholic University of Chile, Santiago, Chile.

- April 2019 – February 2020. Professor (*ad honorem*). Open University of Recoleta, Santiago, Chile.

- November 2018 – December 2020. Postdoctoral researcher. Institute of Agri-food, Animal and Environmental Sciences, University of O'Higgins, San Fernando, Chile, & Department of Ecosystems and Environment, Pontifical Catholic University of Chile, Santiago, Chile.

Academic formation

- March 2014 – August 2018. **Doctorate, Dr.** Doctor in Sciences mention Ecology and Evolution. Austral University of Chile. Degree: 28 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*".

- March 2020 – December 2020. **Diplomat, Dipl.** Philosophy of Science, mention Philosophy of Biology. Institute of Philosophy and Complexity Sciences, Santiago, Chile.

- August 2008 – November 2012. **Bachelor of Sciences, B.Sc.** Environmental Biologist. Jorge Tadeo Lozano University. Degree: 21 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

- 2011 – 2018. A total of **7 short courses** and **11 advanced graduate courses** in areas as botany, science outreach, genetics, evolution, soil sciences, statistics, metagenomics, geology, mycology, university teaching, policy, and systems biology, at Universities in Colombia, Chile, Germany, United Kingdom, and Brazil.

Research stays

- 2015 – 2020. **Five research stays summing 17 months in total.** Stays in: Institute of Soil Science, University of Hannover, Hannover, Germany (3 stays in 2015, 2016, and 2017, 13 months); Plant Ecology Laboratory, University of Tartu, Tartu, Estonia (1 stay on 2015, 3 months); Plant Biology Group, Lund University, Lund, Sweden (1 stay in 2020, 1 month).

Teaching experience

- 2017 - 2019. **Responsible professor.** University of O'Higgins, Rancagua, Chile: Edaphology (2019-II, undergraduate). Open University of Recoleta, Santiago, Chile: Soils, Ecosystems, and Climate Change (2019-I - 2019-II, undergraduate). Evangelical College of Goianésia, Goianésia, Brazil: Soil Fungal Ecology course (2017-II, graduate). Corporation for Biological Research, Medellín, Colombia: Metagenomics course (2017-I, graduate).

- 2016 – 2020. **Collaborator/Invited professor.** National University of Río Negro, Bariloche, Argentina: Agricultural and Industrial Microbiology (2020-II, undergraduate). University of the Republic, Montevideo, Uruguay: Microbiological indicators of soil health/quality (2020-II, graduate). Pontifical Catholic University of Chile, Santiago, Chile: Soil and Fertility (2019-II, undergraduate), Forest soil and hydrology (2019-I, 2020-I, undergraduate). Austral University of Chile, Valdivia, Chile: Forest Ecology (2017-II, 2019-II, graduate), Biodiversity (2016-I – 2019-I, undergraduate), Molecular analysis of terrestrial and freshwater cyanobacterial/algal communities in pristine temperate rainforests, Southern Chile (2019-I, graduate), Professional practice (2017-I, undergraduate), Molecular community ecology of arbuscular mycorrhizal fungi (2016-I, graduate), Research seminary (2016-I, undergraduate). University of O'Higgins, Rancagua, Chile: Edaphology (2019-I, undergraduate), Introduction to Agronomy I (2019-I; undergraduate). La Frontera University, Temuco, Chile: Natural resources management (2017-I, graduate).

- 2014 – 2016. **Teaching assistant.** University of Hannover, Hannover, Germany: Soil interface processes (2016-II). Austral University of Chile, Valdivia, Chile: Organic evolution (2014-II - 2015-I), Basic botany (2014-I).

Articles under review

- **Marín, C.**, Rubio, J., Godoy, R. 2021. Chilean blind spots in soil biodiversity and ecosystem function research. *Applied Soil Ecology*.
- De Moura, J.B., de Souza, R.F., Vieira Júnior, W.G., dos Santos Lucas, L., dos Santos, J.M., Dutra e Silva, S., **Marín, C.** 2021. Effects of a megafire in the arbuscular mycorrhizal fungal community and traits in the Cerrado ecosystem. *Forest Systems*.
- Tedersoo L., Mikryukov, V., Anslan, S., Bahram, M., Khalid, A.N., Corrales, A., ... **Marín, C.**, ... Abarenkov, K. 2021. The Global Soil Mycobiome consortium dataset for boosting fungal diversity research. *Fungal Diversity*.
- Vallejos-Torres, G., Valles Ruíz, R., Chappa Santa María, C.E., Gaona Jimenez, N., **Marín, C.** 2021. Una alta diversidad de hongos micorrízicos arbusculares influye en la absorción de cadmio y crecimiento vegetal del cacao. *BioAgro*.
- Cusack, D.F., Addo-Danso, S.D., Agee, E.A., Andersen, K.M., Arnaud, M., Batterman, S.A., Brearley, F., Ciochina, M.I., Cordeiro, A.L., Diaz-Toribio, M.H., Dietterich, L.H., Fisher, J.B., Fleischer, K., Fortunel, C., Fuchslueger, L., Guerrero-Ramírez, N.R., Kotowska, M., Lugli, L.F., **Marín, C.**, McCulloch, L.A., Maeght, J.L., Metcalf, D., Norby, R.J., Oliveira, R., Powers, J.S., Reichert, T., Smith, S.W., Smith-Martin, C.M., Soper, F.M., Toro, L., Umaña, M.N., Valverde-Barrantes, O., Weemstra, M., Werden, L.K., Wong, M., Wright, S.J., Yaffar, D. 2021. Tradeoffs and synergies in tropical forest root traits for nutrient and water acquisition. *Frontiers in Forests and Global Change*.
- Sarneel, J.M., Hefting, M.M., Sandén, T., van den Hoogen, J., Routh, D., ... **Marín, C.**, ... Keuskamp, J.A. 2021. Reading tea leaves: uncoupled drivers of initial decomposition rates and stabilization. *Nature Geoscience*.

Publications numbers

Web of Science articles: 26; *other-indexation articles: 10; preprints: 2; book chapters: 4; books (Ed): 1; technical reports: 3; doctoral thesis: 1.

→First/corresponding author: 30/47. →313 Google Scholar citations (h-index: 9). →Outreach articles: 31.

Indexed articles (*=Non Web of Science article)

- Vallejos-Torres, G., Ríos-Ramírez, O., Corazon-Guivin, M.A., Reátegui, E., Mesén Sequeira, F., **Marín, C.** 2021. Effects of number of leaflets and indole-3-butyric acid dose in the vegetative propagation by mini-tunnels of the rubber tree (*Hevea brasiliensis*). *Journal of Rubber Research*. First online. DOI: <https://doi.org/10.1007/s42464-021-00097-5>
- García-Carmona, M., **Marín, C.**, García-Orenes, F., Rojas, C. 2021. Contrasting organic amendments induce short-term responses in soil abiotic and biotic properties in a fire-affected native mediterranean forest in Chile. *Journal of Soil Science and Plant Nutrition* 21(3): 2105-2114. DOI: <https://doi.org/10.1007/s42729-021-00506-z>
- Silva-Flores, P., Argüelles-Moyao, A., Aguilar, A., Simões Calaça, F.J., Duchicela, J., Fernández, N., Furtado, A., Guerra-Sierra, B., Lovera, M., **Marín, C.**, Neves, M.A., Pezzani, F., Rinaldi, A.C., Rojas, K., Vasco-Palacios, A.M. 2021. Mycorrhizal science outreach: scope of action and available resources in the face of global change. *Plants, People, Planet* 3(5): 506-522. DOI: <https://doi.org/10.1002/ppp3.10213>
- Vallejos-Torres, G., Ríos-Ramírez, O., Saavedra, H., Gaona-Jimenez, N., Mesén Sequeira, F., **Marín, C.** 2021. Vegetative propagation of *Manilkara bidentata* (A.DC.) A.Chev. using mini-tunnels in the Peruvian Amazon region. *Forest Systems* 30(2): eRC01. DOI: <https://doi.org/10.5424/fs/2021302-17971>
- *- **Marín, C.**, van der Heijden, M.A.G. 2021. Editorial: lets legislate on soil biodiversity! *IMS Newsletter* 2(2): 2-5.
- Pölme, S., Abarenkov, K., Nilsson, R.H., Lindahl, B.D., Clemmensen, K.E., Kauserud, H., Nguyen, N., Kjøller, R., Bates, S.T., Baldrian, P., Frøslev, T.G., Adojaan, K., Vizzini, A., Suija, A., Pfister, D., Baral, H.O., Järv, H., Madrid, H., Nordén, J., Liu, J.K., Pawlowska, J., Pöldmaa, K., Pärtel, K., Runnel, K., Hansen, K., Larsson, K.H., Hyde, K.D., Sandoval-Denis, M., Smith, M.E., Toome-Heller, M., Wijayawardene, N.N., Menolli Jr, N., Reynolds, N.K., Drenkhan, R., Maharachchikumbura, S.N.N., Gibertoni, T.B., Læssøe, T., Davis, W., Tokarev, Y., Corrales, A., Soares, A.M., Agan, A., Machado, A.R., Argüelles-Moyao, A., Detheridge, A., de Meiras-Ottoni, A., Verbeken, A., Dutta, A.K., Cui, B.K., Pradeep, C.K., **Marín, C.**, Stanton, D., Gohar, D., Wanasinghe, D.N., Otsing, E., Aslani, F., Griffith, G.W., Lumbsch, T.H., Grossart, H.P., Masigol, H., Timling, I., Hiiesalu, I., Oja, J., Kupagme, J.Y., Geml, J., Alvarez-Manjarrez, J., Ilves, K., Loit, K., Adamson, K., Nara, K., Küngas, K., Rojas-Jimenez, K., Biteniaks, K., Irinyi, L., Nagy, L.G., Soonvald, L., Zhou, L.W., Wagner, L., Aime, M.C., Öpik, M., Mujica, M.I., Metsoja, M., Ryberg, M., Vasar, M., Murata, M., Nelsen, M.P., Cleary, M., Samarakoon, M.C., Doilom, M., Bahram, M., Hagh-Doust, N., Dulya, O., Johnston, P., Kohout, P., Chen, Q., Tian, Q., Nandi, R., Amiri, R., Perera, R.H., dos Santos Chikowski, R., Mendes-Alvarenga, R.L., Garibay-Orijel, R., Gielen, R., Phookamsak, R., Jayawardena, R.S., Rahimlou, S., Karunarathna, S.C., Tibpromma, S., Brown, S.P., Sepp, S.K., Mundra, S., Luo, Z.H., Bose, T., Vahter, T., Netherway, T., Yang, T., May, T., Varga, T., Li, W., Matos Coimbra, V.R., Targino de Oliveira, V.R., de Lima, V.X., Mikryukov, V.S., Lu, Y., Matsuda, Y., Miyamoto, Y., Kõljalg, U., Tedersoo, L. 2021. Correction to: FungalTraits: a user friendly traits database of fungi and fungus-like stramenopiles. *Fungal Diversity* 107: 129-132. DOI: <https://doi.org/10.1007/s13225-021-00470-0>
- **Marín, C.**, García-Merchán, V.H., Arbeláez-Moreno, J.D., Ochoa-Berrío, E.C., Martínez-Rincón, D., D'Elía, G. 2021. Effects of academic degree and discipline on religious and evolutionary views in Chile and Colombia. *Zygon: Journal of Religion and Science* 56(1): 54-74. DOI: <https://doi.org/10.1111/zygo.12664>
- *- Van der Heijden, M.A.G., **Marín, C.**, Martin, F. 2021. Editorial. *IMS Newsletter* 2(1): 2-3.

- **Marín, C.** 2021. Spatial and density-dependent multilevel selection on weed-infested maize. *Genetic Resources and Crop Evolution* 68(3): 885-897. DOI: <https://doi.org/10.1007/s10722-020-01031-1>
- Guerra, C.A., Bardgett, R.D., Caon, L., Crowther, T.W., Delgado-Baquerizo, M., Montanarella, L., Navarro, L.M., Orgiazzi, A., Singh, B.K., Tedersoo, L., Vargas-Rojas, R., Briones, M.J.I., Buscot, F., Cameron, E.K., Cesarz, S., Chatzinotas, A., Cowan, D.A., Djukic, I., van den Hoogen, J., Lehmann, A., Maestre, F.T., **Marín, C.**, Reitz, T., Rillig, M.C., Smith, L.C., de Vries, F.T., Weigelt, A., Wall, D.H., Eisenhauer, N. 2021. Tracking, targeting, and conserving soil biodiversity. *Science* 371(6526): 239-241. DOI: <https://doi.org/10.1126/science.abd7926>
- **Marín, C.**, Kohout, P. 2021. Response of soil fungal ecological guilds to global changes. *New Phytologist* 229(2): 656-658. DOI: <https://doi.org/10.1111/nph.17054>
- *- **Marín, C.**, Rojas, C. 2020. Early responses of soil health indicators to organic amendments and plant establishment at a fire affected sclerophyllous forests. *Agro Sur* 48(2): 17-27. DOI: <https://doi.org/10.4206/agrosur.2020.v48n2-03>
- Pölme, S., Abarenkov, K., Nilsson, R.H., Lindahl, B.D., Clemmensen, K.E., Kauserud, H., Nguyen, N., Kjoller, R., Bates, S.T., Baldrian, P., Frøslev, T.G., Adojaan, K., Vizzini, A., Suija, A., Pfister, D., Baral, H.O., Järv, H., Madrid, H., Nordén, J., Liu, J.K., Pawlowska, J., Pöldmaa, K., Pärtel, K., Runnel, K., Hansen, K., Larsson, K.H., Hyde, K.D., Sandoval-Denis, M., Smith, M.E., Toome-Heller, M., Wijayawardene, N.N., Menolli Jr, N., Reynolds, N.K., Drenkhan, R., Maharachchikumbura, S.N.N., Gibertoni, T.B., Læssøe, T., Davis, W., Tokarev, Y., Corrales, A., Soares, A.M., Agan, A., Machado, A.R., Argüelles-Moyao, A., Detheridge, A., de Meiras-Ottoni, A., Verbeken, A., Dutta, A.K., Cui, B.K., Pradeep, C.K., **Marín, C.**, Stanton, D., Gohar, D., Wanasinghe, D.N., Otsing, E., Aslani, F., Griffith, G.W., Lumbsch, T.H., Grossart, H.P., Masigol, H., Timling, I., Hiiesalu, I., Oja, J., Kupagme, J.Y., Geml, J., Alvarez-Manjarrez, J., Ilves, K., Loit, K., Adamson, K., Nara, K., Küngas, K., Rojas-Jimenez, K., Bitenieks, K., Irinyi, L., Nagy, L.L., Soonvald, L., Zhou, L.W., Wagner, L., Aime, M.C., Öpik, M., Mujica, M.I., Metsoja, M., Ryberg, M., Vasar, M., Murata, M., Nelsen, M.P., Cleary, M., Samarakoon, M.C., Doilom, M., Bahram, M., Hagh-Doust, N., Dulya, O., Johnston, P., Kohout, P., Chen, Q., Tian, Q., Nandi, R., Amiri, R., Perera, R.H., dos Santos Chikowski, R., Mendes-Alvarenga, R.L., Garibay-Orijel, R., Gielen, R., Phookamsak, R., Jayawardena, R.S., Rahimlou, S., Karunarathna, S.C., Tibpromma, S., Brown, S.P., Sepp, S.K., Mundra, S., Luo, Z.H., Bose, T., Vahter, T., Netherway, T., Yang, T., May, T., Varga, T., Li, W., Matos Coimbra, V.R., Targino de Oliveira, V.R., de Lima, V.X., Mikryukov, V.S., Lu, Y., Matsuda, Y., Miyamoto, Y., Kõljalg, U., Tedersoo, L. 2021. FungalTraits: a user-friendly traits database of fungi and fungus-like stramenopiles. *Fungal Diversity* 105: 1-16. DOI: <https://doi.org/10.1007/s13225-020-00466-2>
- Ávila-Salem, M.E., Montesdeoca, F., Orellana, M., Pacheco, K., Becerra, N., **Marín, C.**, Borie, F., Aguilera, P., Cornejo, P. 2020. Soil biological properties and arbuscular mycorrhizal fungal communities of representative crops established in the Andean Region from Ecuadorian Highlands. *Journal of Soil Science and Plant Nutrition* 20(4): 2156-2163. DOI: <https://doi.org/10.1007/s42729-020-00283-1>
- *- **Marín, C.**, van der Heijden, M.G.A. 2020. Global soil biodiversity, ecosystem multifunctionality, and the mycorrhizal symbiosis. *IMS Newsletter* 1(3): 8-11.
- Vallejos-Torres, G., Arévalo, L.A., Ríos, O., Cerna, A., **Marín, C.** 2020. Propagation of rust-tolerant *Coffea arabica* L. plants by sprout rooting in microtunnels. *Journal of Soil Science and Plant Nutrition* 20(3): 933-940. DOI: <http://dx.doi.org/10.1007/s42729-020-00180-7>
- Guerra, C.A., Heintz-Buschart, A., Sikorski, J., Chatzinotas, A., Guerrero-Ramírez, N., Cesarz, S., Beaumelle, L., Rillig, M.C., Maestre, F.T., Delgado-Baquerizo, M., Buscot, F., Overmann, G., Phillips, H.R.P., Winter, M., Wubet, T., Küsel, K., Bardgett, R.D., Cameron, E.K., Cowan, D., Grebenc, T., **Marín, C.**, Orgiazzi, A., Singh, B.K., Wall, D.H., Eisenhauer, N. 2020. Blind spots in global soil biodiversity and ecosystem function research. *Nature Communications* 11: 3870. DOI: <https://doi.org/10.1038/s41467-020-17688-2>
- **Marín, C.** 2020. Fight prejudice at all levels: from airports to conferences. *Nature* 583(7815): 202. DOI: <http://dx.doi.org/10.1038/d41586-020-02039-4>
- De Moura, J.B., de Souza, R.F., Vieira Junior, W.G., Lima, I.R., Brito, G.H.M., **Marín, C.** 2019. Arbuscular mycorrhizal fungi associated with bamboo under Cerrado Brazilian vegetation. *Journal of Soil Science and Plant Nutrition* 19(4): 954-962. DOI: <http://dx.doi.org/10.1007/s42729-019-00093-0>
- Mujica, M.I., Bueno, C.G., Duchicela, J., **Marín, C.** 2019. Strengthening mycorrhizal research in South America. *New Phytologist* 224(2): 563-567. DOI: <http://dx.doi.org/10.1111/nph.16105>
- *- 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.
- *- **Marín, C.** 2018. Delirios y estereotipos racionalistas en ciencia: cómo combatirlos desde la consiliencia. *Konvergencias, filosofía y culturas en diálogo* 27: 59-75.
- *- **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. 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.
- **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>

Preprints

- **Marín, C.**, Rubio, J., Godoy, R. 2021. Chilean blind spots in soil biodiversity and ecosystem function research. *BioRxiv*, 2021.06.24.449754. DOI: <https://doi.org/10.1101/2021.06.24.449754>
- Guerra, C.A., Heintz-Buschart, A., Sikorski, J., Chatzinotas, A., Guerrero-Ramírez, N., Cesarz, S., Beaumelle, L., Rillig, M.C., Maestre, F.T., Delgado-Baquerizo, M., Buscot, F., Overmann, G., Phillips, H.R.P., Winter, M., Wubet, T., Küsel, K., Bardgett, R.D., Cameron, E.K., Cowan, D., Grebenc, T., **Marín, C.**, Orgiazzi, A., Singh, B.K., Wall, D.H., Eisenhauer, N. 2019. Blind spots in global soil biodiversity and ecosystem function research. *BioRxiv*, 774356. DOI: <https://doi.org/10.1101/774356>

Book chapters

- Godoy, R., Matus, F., **Marín, C.**, Aguilera, P., Martínez, O. 2021. 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. 2021. 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*. Springer, Fungal Biology Series. Pp. 315-341. DOI: https://doi.org/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*. Springer, Fungal Biology Series. Pp. 97-110. DOI: https://doi.org/10.1007/978-3-030-15228-4_5

Technical reports

- FAO, ITPS, GSBI, SCBD, EC. 2020. *State of knowledge of soil biodiversity - Status, challenges and potentialities, Report 2020*. Rome, FAO. DOI: <https://doi.org/10.4060/cb1928en>
- Brito Carrasco, B., Fuenzalida González, P., **Marín, C.**, Pinochet Cobos, C., Santana Valenzuela, J., Rojas Alvarado, C. 2019. *Revista de divulgación Proyecto FPA 6-RE-002-2018: Recuperación de Salud de Suelos y su Implicancia en el Restablecimiento de Bosque Nativo Incendiado en Zonas del Secano de la VI Región*. Fondo de Protección Ambiental, Ministerio del Medio Ambiente, Gobierno de Chile. 45 p.

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

Science outreach articles

- **Marín, C.**, Guzman, A. 2021. What we are reading in September, 2021. South American Mycorrhizal Research Network. [Online](#).
- **Marín, C.**, Malar C, M. 2021. What we are reading in June, 2021. South American Mycorrhizal Research Network. [Online](#).
- **Marín, C.**, Wall, D.H., Guerra, C.A. 2021. What we are reading in March-II, 2021. South American Mycorrhizal Research Network. [Online](#).
- **Marín, C.**, Martin, F.M. 2020. What we are reading in September, 2020. South American Mycorrhizal Research Network. [Online](#).
- **Marín, C.**, Soudzilovskaia, N. 2020. What we are reading in September, 2020. South American Mycorrhizal Research Network. [Online](#).
- **Marín, C.**, Tedersoo, L. 2020. What we are reading in April, 2020. South American Mycorrhizal Research Network. [Online](#).
- **Marín, C.** 2019. Nota editorial. *Revista Digital Fulica*, Edición No. 10: El alucinante universo de los hongos. [Online](#).
- **Marín, C.** 2018. La ciencia ha sido mi terapia ante la violencia en Colombia. *Revista Digital Fulica*, Edición Especial No. 1. [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.
- **Marín, C.** 2014. Docilidad o agresividad en arañas sociales: una evidencia más de selección de grupo. *Órbitas Científicas* 3(30): 63.
- **Marín, C.** 2014. Selección natural en múltiples niveles: ¿un debate de nunca acabar? *Órbitas Científicas* 3(29): 83.
- **Marín, C.** 2014. Entrevista: el doctor David Sloan Wilson. *Órbitas Científicas* 3(29): 74-80.
- **Marín, C.** 2014. Un problema de conceptos y difusión, no de herencia. *Órbitas Científicas* 3(28): 57.
- **Marín, C.** 2014. Criminalidad, culpabilidad y biología del castigo. *Órbitas Científicas* 3(27): 59.
- **Marín, C.** 2014. Transgénicos: variación, biodiversidad y ecología evolutiva. *Órbitas Científicas* 3(26): 61.
- **Marín, C.** 2014. Biodiversidad humana. *Órbitas Científicas* 3(25): 59.
- **Marín, C.** 2014. Las mariposas Heliconius y el origen de las especies. *Órbitas Científicas* 2(24): 55.
- **Marín, C.** 2014. El gen casi nunca es egoísta: una visión fenotípica de la evolución. *Órbitas Científicas* 2(23): 59.
- **Marín, C.** 2013. Estudios evolutivos de la religión. *Órbitas Científicas* 2(22): 59.
- **Marín, C.** 2013. Volvox: cooperación y transiciones mayores en la vida. *Órbitas Científicas* 2(21): 57.
- **Marín, C.** 2013. Agroecología Evolutiva: Darwin en la finca. *Órbitas Científicas* 2(20): 53.

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.).

Editor for journals

- 2021 – present. Editorial Board, *Journal of Sustainable Agriculture and Environment*. ISSN:2767-035X. <https://onlinelibrary.wiley.com/journal/2767035x>
- 2020 – present. Newsletter Editor, *International Mycorrhiza Society Newsletter*. ISSN: 2563-1497. <https://mycorrhizas.org/category/quarterly-newsletter/>
- 2019. *Revista Digital Fulica*, Edición No. 10: El alucinante universo de los hongos. ISSN 2382-4743. [Online](#).

- 2019. *Cientific@ - 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 (n=68)

BioScience (2), *Journal of Soil Science and Plant Nutrition* (10), *Microbiome* (4), *Applied Soil Ecology* (5), *Fungal Ecology* (1), *Plant and Soil* (3), *Symbiosis* (1), *MycKeys* (1), *Current Research Journal of Social Sciences and Humanities* (1), *Antonie van Leeuwenhoek* (1), *PeerJ* (1), *Forest Ecology and Management* (3), *New Phytologist* (2), *Biodiversity Data Journal* (1), *Data* (3), *Frontiers in Microbiology* (1), *Phytotaxa* (1), *Land* (10), *Ecosistemas* (2), *Bosque* (1), *Biocatalysis and Agricultural Biotechnology* (1), *PLOS One* (1), *Zygon: Journal of Religion and Science* (2), *Chiang Mai Journal of Science* (1), *Sensors* (1), *Frontiers in Plant Science* (1), *Mycorrhiza* (1), *Journal of the Science of Food and Agriculture* (2), *International Journal of Environmental Research and Public Health* (1), *Microbial Ecology* (1), *Journal of Ecology* (1), *Sustainability* (1).

Review of books and books chapters

- Evolución de las especies por cooperación natural. Editorial de la Universidad Peruana de Ciencias Aplicadas. Santiago de Surco, Perú, 160 pp.
- 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.

Projects reviewer

FONDECYT Initiation 2022 (1).

Scientific conferences participation

- 2012 – 2021. 53 participations (32 as main speaker – 1 as keynote speaker – 21 as co-author; 1 travel grant) on scientific conferences on: Colombia, United States, Chile, Brazil, Germany, Argentina, United Kingdom, Austria, Czech Republic, Peru, Puerto Rico, Mexico.

Invited conferences

- 2014 – 2021. 63 invited conferences (36 on outreach) on: Chile, Colombia, Estonia, United States, Puerto Rico, Brazil, Germany, Czech Republic.

Scholarships, benefits and prices (excluding projects)

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

Research projects

- April 2021 – March 2025. Fondecyt Regular Project 1211655 (Dr. Paula Aguilera, UFRO): Biodiversity and functionality of arbuscular mycorrhizal fungi: Incorporation of bioinoculants in Viticulture for sustainable production under a global change scenario. **Co-Researcher**, University of O'Higgins. USD\$305,710.
- April 2019 – March 2022. Froward Cape Research Project, UACH - VIDCA, No. 43353934. (Dr. Pablo Corti, UACH). **Co-Researcher**, University of O'Higgins. USD\$6,600.
- 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. USD\$143,014.
- 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.
- November 2018 – December 2020. Posdoctoral research project, University of O'Higgins: Diversidad fúngica integral como indicadora de recuperación de la salud del suelo, tras tratamientos orgánicos post-incendio en la VI Región de Chile. **Principal researcher**. USD\$58,140.
- 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 and co-supervision

- 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.**

Thesis opposing committee

- Schapheer Carrasco, C. 2019. "Composición y diversidad filogenética del ensamble microbiano de la hojarasca de bosques esclerófilos, plantaciones forestales e intestino de cucarachas endémicas del género *Moluchia* Rehn, 1933 (Blattodea: Ectobiidae) asociado a su rol funcional como agente detritívoro". Doctorate in Silvo-agricultural and Veterinary Sciences Thesis, University of Chile, Santiago, Chile. Advisor: Scherson Vicencio, R. Co-advisor: Fuentes Espoz, J. P.

Awards

- 2019. Afrocolombian of the Year 2019, category Academy. Granted by: El Espectador newspaper and Color de Colombia Foundation.
- 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; Asociación Latinoamericana de Micología; Tropical Root Trait Initiative.

Organization of scientific events and courses

- 2019 – 2020. Organizer X Latin American Mycology Congress, University of Chile, Santiago, Chile.
- 2019. Organizer graduate course Molecular analysis of terrestrial and freshwater cyanobacterial/algal communities in pristine temperate rainforests, Southern Chile, Austral University of Chile, Chile.
- 2018 – 2019. Founding member of the Global Soil Biodiversity Observation Network, with meetings 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). [Link.](#)
- 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. Organizer graduate course Molecular community ecology of arbuscular mycorrhizal fungi (AMF), Austral University of Chile, Chile.
- 2014. Organizer III and IV Seminar cycle of Plant Biology. Austral University of Chile, Chile.

Miscellaneous

- 2020 – 2021. Participation as Partner (South American Mycorrhizal Research Network) on the 8th and 9th Sessions of the Global Soil Partnership (FAO) Plenary Assembly.
- 2019 – 2020. Scientific advisor Academies of Scientific Research School, PAR Explora CONICYT - O'Higgins Region, Chile.
- 2019 – present. Foreign collaborator in the research group "Soils, Ecology, and Organic Matter Dynamics", Evangelical School of Goianésia, Goianésia, Brasil.

- 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).
- 2015. Instructor for intern student (University of Hannover, Germany) on 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.
- 2011 – 2013. Reviewer. National Short Stories Contest, Colombian Society of Universities, Bogotá, Colombia.

Press reports

- 2013 – 2021. 140 printed and online press reports on media from Colombia, Chile, Denmark, United States, Germany, Estonia, Peru, Brazil, Spain, United Kingdom, Australia, China.

Personal references

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Res. Prof. Dr. Maarja Öpik. University of Tartu. maarja.opik@ut.ee

Dr. C. Guillermo Bueno. University of Tartu. cgbuenog@gmail.com