

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

Pablo Cornejo Rivas

Publicaciones (2018- presente)

1. Tereucán, G., Ruiz, A., Nahuelcura, J., Oyarzún, P., Santander, C., Winterhalter, P., Ademar Avelar Ferreira, P., **Cornejo, P.** 2022. Shifts in biochemical and physiological responses by the inoculation of arbuscular mycorrhizal fungi in *Triticum aestivum* growing under drought conditions. *Journal of the science of food and agriculture*, 102:1927-1938. Q1.
2. Alarcón, S., Tereucán, G., **Cornejo, P.**, Contreras, B., Ruiz, A. 2022. Metabolic and antioxidant effects of inoculation with arbuscular mycorrhizal fungi in crops of flesh-coloured *Solanum tuberosum* treated with fungicides. *Journal of the science of food and agriculture*, 102: 2270-2280. Q1.
3. Fritz, V., Tereucán, G., Santander, C., Contreras, B., **Cornejo, P.**, Ferreira, P.A.A., Ruiz, A. 2022. Effect of Inoculation with Arbuscular Mycorrhizal Fungi and Fungicide Application on the Secondary Metabolism of *Solanum tuberosum* Leaves. *Plants* 11(3):278. Q1.
4. Santander, C., Vidal, G., Ruiz, A., Vidal, C., **Cornejo, P.** 2022. Salinity Eustress Increases the Biosynthesis and Accumulation of Phenolic Compounds That Improve the Functional and Antioxidant Quality of Red Lettuce. *Agronomy* 12(3):598. Q1.
5. de Souza Campos, P., Meier, S., Morales, A., Borie, F., **Cornejo, P.**, Ruiz, A., Seguel, A. 2022. Root traits distinguish phosphorus acquisition of two wheat cultivars growing in phosphorus-deficient acid soil. *Rhizosphere*, 22: 100549. Q2.
6. Silambarasan, S., Logeswari, P., Sivaramakrishnan, R., **Cornejo, P.**, Sipahutar, M.K., Pugazhendhi, A. 2022. Amelioration of aluminum phytotoxicity in *Solanum lycopersicum* by co-inoculation of plant growth promoting *Kosakonia radicincitans* strain CABV2 and *Streptomyces corchorusii* strain CASL5. *Science of the total environment*, 832: 154935. Q1.
7. Silambarasan, S., **Cornejo, P.**, Vangnai, A.S. 2022. Biodegradation of 4-nitroaniline by novel isolate *Bacillus* sp. strain AVPP64 in the presence of pesticides. *Environmental Pollution*, 306: 119453. Q1.
8. Silambarasan, S., Logeswari, P., Vangnai, A.S., Kamaraj, B., **Cornejo, P.** 2022. Plant growth-promoting actinobacterial inoculant assisted phytoremediation increases cadmium uptake in *Sorghum bicolor* under drought and heat stresses. *Environmental Pollution*. 307: 119489. Q1.
9. Silambarasan, S., Logeswari, P., Vangnai, A.S., **Cornejo, P.** 2022. *Rhodotorula mucilaginosa* CAM4 improved selenium uptake in *Spinacia oleracea* L. and soil enzymatic activities under abiotic stresses. *Environmental Science and Pollution Research*, 29:89943–89953. Q2.
10. Vidal, C., González, F., Santander, C., Pérez, R., Gallardo, V., Santos, C., Aponte, H., Ruiz, A., **Cornejo, P.** 2022. Management of Rhizosphere Microbiota and Plant Production under Drought Stress: A Comprehensive Review. *Plants* 11: 2437. Q1.

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11. Valdebenito, A., Nahuelcura, J., Santander, C., **Cornejo, P.**, Contreras, B., Gómez-Alonso, S., Ruiz, A. 2022. Physiological and Metabolic Effects on the Inoculation of Arbuscular Mycorrhizal Fungi in *Solanum tuberosum* Crops under Water Stress. *Plants* 11: 2539. Q1.
12. Costa, J.; Sepúlveda, M.; Gallardo, V.; Cayún, Y.; Santander, C.; Ruíz, A.; Reyes, M.; Santos, C.; **Cornejo, P.**; Lima, N.; Santos, C. 2022. Antifungal Potential of Capsaicinoids and Capsinoids from the *Capsicum* Genus for the Safeguarding of Agrifood Production: Advantages and Limitations for Environmental Health. *Microorganisms* 10: 2387. Q2.
13. Logeswari, P.; Sivaramakrishnan, R.; Incharoensakdi, A.; Kamaraj, B.; **Cornejo, P.** 2022. *Scenedesmus* sp. strain SD07 cultivation in municipal wastewater for pollutant removal and production of lipid and exopolysaccharides. *Environmental Research*, 218: 115051. Q1.
14. Silambarasan, S., Logeswari, P., Sivaramakrishnan, R., Incharoensakdi, A., **Cornejo, P.**, Kamaraj, B., Lan-Chi, N. 2021. Removal of nutrients from domestic wastewater by microalgae coupled to lipid augmentation for biodiesel production and influence of deoiled algal biomass as biofertilizer for *Solanum lycopersicum* cultivation. *Chemosphere*, 268: 129323. Q1.
15. Pérez, R., Tapia, Y., Antilén, M., Casanova, M., Vidal, C., Santander, C., Aponte, H., **Cornejo, P.** 2021. Interactive effect of compost application and inoculation with the fungus *Claroideoglossum claroideum* in *Oenothera picensis* plants growing in mine tailings. *Ecotoxicology and Environmental Safety*, 208: 111495. Q1.
16. De Souza, P., Borie, F., **Cornejo, P.**, López, J., López, A., Seguel, A. 2021. Wheat root trait plasticity, nutrient acquisition and growth responses are dependent on specific arbuscular mycorrhizal fungus and plant genotype interactions. *Journal of Plant Physiology* 256: 153297. Q2.
17. Ercoli, S., Cartes, J., **Cornejo, P.**, Tereucán, G., Winterhalter, P., Contreras, B., Ruiz, A. 2021. Stability of phenolic compounds, antioxidant activity and colour parameters of a coloured extract obtained from coloured-flesh potatoes. *LWT Food Science and Technology* 136(2): 110370. Q1.
18. Santander, C., Aroca, R., Cartes, P., Vidal, G., **Cornejo, P.** 2021. Aquaporins and cation transporters are differentially regulated by two arbuscular mycorrhizal fungi strains in lettuce cultivars growing under salinity conditions. *Plant Physiology and Biochemistry* 158:396-409. Q1.
19. Ercoli, S., Parada, J., Bustamante, L., Hermosín, I., Contreras, B., **Cornejo, P.**, Ruiz, A. 2021. Noticeable Quantities of Functional Compounds and Antioxidant Activities Remain after Cooking of Colored Fleshed Potatoes Native from Southern Chile. *Molecules* 26: 314. Q2.
20. Silambarasan, S., Logeswari, P., Sivaramakrishnan, R., Pugazhendhi, A., Kamaraj, B., Ruiz, A., Ramadoss, G., **Cornejo, P.** 2021. Polyhydroxybutyrate production from ultrasound-aided alkaline pretreated finger millet straw using *Bacillus megaterium* strain CAM12. *Bioresource Technology* 325: 124632. Q1.

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21. Vidal, C., Larama, G., Riveros, A., Meneses, C., **Cornejo, P.** 2021. Main Molecular Pathways Associated with Copper Tolerance Response in *Imperata cylindrica* by De novo Transcriptome Assembly. *Plants* 10: 357. Q1.
22. Tereucan, G., Ercoli, S., **Cornejo, P.**, Winterhalter, P., Contreras, B., Ruiz, A. 2021. Stability of antioxidant compounds and activities of a natural dye from coloured-flesh potatoes in dairy foods. *LWT-Food Science and Technology* 144:111252. Q1.
23. Aponte, H., Mondaca, P., Santander, C., Meier, S., Paolini, J., Buttler, B., Rojas, C., Diez, C., **Cornejo, P.** 2021. Enzyme activities and microbial functional diversity in metal(loid) contaminated soils near to a copper smelter. *Science of the total environment*, 779: 146423. Q1.
24. Aguilera, P., Romero, J., Becerra, N., Martínez, O., Vilela, R., Borie, F., **Cornejo, P.**, Alvear, M., López, M. 2021. Phenological Stages and Aluminum Presence Influences Arbuscular Mycorrhizal Fungi Communities in Roots of Plant Cereals. *Journal of Soil Science and Plant Nutrition* 21:1467-1473. Q2.
25. Santander, C., García, S., Moreira, J., Aponte, H., Araneda, P., Olave, J., Vidal, G., **Cornejo, P.** 2021. Arbuscular Mycorrhizal Fungal Abundance in Elevation Belts of the Hyperarid Atacama Desert. *Fungal Ecology*, 51: 101060. Q2.
26. Medina, J., Calabi, M., Aponte, H., Santander, C., Paneque, M, Meier, S., Panettieri, M., **Cornejo, P.**, Borie, F., Knicker, H. 2021. Utilization of inorganic nanoparticles and biochar as additives of agricultural waste composting: Effects of end-products on plant growth, C and nutrient stock in soils from a Mediterranean region. *Agronomy* 11: 767. Q1.
27. Silambarasan, S., Logeswari, P., Sivaramakrishnan, R., Kamaraj, B., Thuy Lan Chi, N., **Cornejo, P.** 2021. Cultivation of *Nostoc* sp. LS04 in municipal wastewater for biodiesel production and their deoiled biomass cellular extracts as biostimulants for *Lactuca sativa* growth improvement. *Chemosphere* 280: 130644. Q1.
28. Urgiles, N., Avila, M., Loján, P., Encalada, M., Hurtado, L., Araujo, S., Collahuazo, Y., Guachanamá, J., Poma, N., Granda, K., Robles, A., Senés, C., **Cornejo, P.** 2021. Plant Growth-Promoting Microorganisms in Coffee Production: From Isolation to Field Application. *Agronomy* 11: 1531. Q1.
29. Pérez, R., Tapia, Y., Antilén, M., Casanova, M., Vidal, C., Silambarasan, S., **Cornejo, P.** 2021. Rhizosphere management for phytoremediation of copper mine tailings. *Journal of Soil Science and Plant Nutrition* 21:3091-3109. Q2.
30. Nahuelcura, J., Ruiz, A., Gomez, F., **Cornejo, P.** 2021. The effect of arbuscular mycorrhizal fungi on the phenolic compounds profile, antioxidant activity and grain yields in wheat cultivars growing under hydric stress. *Journal of the Science of Food and Agriculture* 102: 407-416. Q1.
31. Seguel, A., Meier, S., Azcón, R., Valentine, A., Meriño, C., **Cornejo, P.**, Aguilera, P., Borie, F. 2020. Showing their mettle: Extraradical mycelia of arbuscular mycorrhizae form a metal filter to improve

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host Al tolerance and P nutrition. *Journal of the Science of Food and Agriculture* 100(2): 803-810. Q1.

32. Medina, J., Monreal, C., Orellana, L., Calabi, M., González, M., Meier, S., Borie, F., **Cornejo, P.** 2020. Influence of saprophytic fungi and inorganic additives on enzyme activities and chemical properties of the biodegradation process of wheat straw for the production of organo-mineral amendments. *Journal of Environmental Management* 255:109922. Q1.
33. Ruiz, A., García, S., Aroca, R., Cumming, J., **Cornejo, P.** 2020. Efficiency of two arbuscular mycorrhizal fungal inocula to improve saline stress tolerance in lettuce plants by changes of antioxidant defense mechanisms. *Journal of the Science of Food and Agriculture* 100: 1577-1587. Q1.
34. Chávez, D., Machuca, A., Fuentes, A., Fernández, N., **Cornejo, P.** 2020. Shifts in soil traits and arbuscular mycorrhizal symbiosis represent the conservation status of *Araucaria araucana* forests and the effects after fire events. *Forest Ecology and Management* 458: 117806. Q1.
35. Aguilera, A., Tereucán, G., Ercoli, S., **Cornejo, P.**, Rodríguez, M., Uhlmann, L., Guigas, C., Esatbeyoglu, T., Ruiz, A. 2020. Influence of organic and traditional fertilization on antioxidant compounds profiles and activities in fruits of *Fragaria ananassa* var. Camarosa. *Journal of Soil Science and Plant Nutrition* 20: 715-724. Q2.
36. Tapia, Y., Loch, B., Castillo, B., Acuña, E., Casanova, M., Salazar, O., **Cornejo, P.**, Antilén, M. 2020. Accumulation of sulfur in *Atriplex nummularia* cultivated in mine tailings and effect of organic amendments addition. *Water Air & Soil Pollution* 231(1): 8. Q3.
37. Medina, J., Monreal, C., Antilén, M., Calabi, M., Velasco, M., Meier, S., Borie, F., **Cornejo, P.**, Knicker, H. 2020. Influence of inorganic additives on wheat straw composting: characterization and structural composition of organic matter derived from the process. *Journal of Environmental Management* 260: 110137. Q1.
38. Pfeiffer, M., Padarian, J., Osorio, R., Bustamante, N., Olmedo, G., Guevara, M., Aburto, F., Antilén, M., Araya, E., Arellano, E., Barret, M., Barrera, J., Boeckx, P., Briceño, M., Bunning, S., Cabrol, L., Casanova, M., **Cornejo, P.**, Corradini, F., Curaqueo, G., Doetterl, S., Durán, P., Escudey, M., Espinoza, A., Francke, S., Fuentes, J., Fuentes, M., Gajardo, G., García, R., Gallaud, A., Galleguillos, M., Gómez, A., Hidalgo, M., Ivelic, J., Mashalaba, L., Matus, F., Mora, M., Mora, J., Muñoz, C., Norambuena, P., Olivera, C., Ovalle, C., Panichini, M., Pauchard, A., Pérez, J., Radic, S., Ramírez, J., Riveras, N., Ruiz, G., Salazar, O., Salgado, I., Seguel, O., Sepúlveda, M., Sierra, C., Tapia, Y., Toledo, B., Torrico, J., Valle, S., Vargas, R., Wolff, M., Zagal, E. 2020. CHLSOC: The Chilean Soil Organic Carbon database, a multi-institutional collaborative effort. *Earth System Science Data* 12(1):457-468. Q1.
39. Aponte, H., Herrera, W., Cameron, C., Black H., Meier, S., Paolini, J., Tapia, Y., **Cornejo, P.** 2020. Alteration of enzyme activities and functional diversity of a soil contaminated with copper and arsenic. *Ecotoxicology and Environmental Safety* 192: 110264. Q1.

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40. Aponte, H., Medina, J., Butler, B., Meier, S., **Cornejo, P.**, Kuzyakov, Y. 2020. Soil quality indices for metal(loid) contamination: An enzymatic perspective. *Land Degradation and Development* 31:2700-2719. Q2.
41. Aponte, H., Meli, P., Butler, B., Paolini, J., Matus, F., Merino, C., **Cornejo, P.**, Kuzyakov, Y. 2020. Meta-analysis of heavy metal effects on soil enzyme activities. *Science of the Total Environment* 737: 73. Q1.
42. Ávila, M., Montesdeoca, F., Orellana, M., Pacheco, K., Alvarado, S., 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: 2156-2163. Q2.
43. Merino, C., Kuzyakov, Y., Godoy, K., **Cornejo, P.**, Matus, F. 2020. Synergy effect of peroxidases enzymes and Fenton reactions greatly increase the anaerobic oxidation of soil organic matter. *Scientific Reports* 10:11289. Q2.
44. Silambarasan, S., Logeswari, P., Ruiz, A., **Cornejo, P.**, Kannan, V. 2020. Influence of plant beneficial *Stenotrophomonas rhizophila* strain CASB3 on the degradation of diuron-contaminated saline soil and improvement of *Lactuca sativa* growth. *Environmental Science and Pollution Research* 27:35195-35207. Q2.
45. Oyarzún, P., **Cornejo, P.**, Góme, S., Ruiz, A. 2020. Influence of Profiles and Concentrations of Phenolic Compounds in the Coloration and Antioxidant Properties of *Gaultheria poeppigii* Fruits from Southern Chile. *Plant Foods for Human Nutrition* 75(4):532-539. Q1.
46. Silambarasan, S., Logeswari, P., Valentine, A., **Cornejo, P.**, Kannan, V. 2020. *Pseudomonas citronellolis* strain SLP6 enhances the phytoremediation efficiency of *Helianthus annuus* in copper contaminated soils under salinity stress. *Plant and Soil* 457: 241-253. Q1.
47. Vidal, C., Ruiz, A., Ortiz, J., Larama, G., Perez, R., Santander, C., Avelar, P., **Cornejo, P.** 2020. Antioxidant responses of phenolic compounds and immobilization of copper in *Imperata cylindrica*, a plant with potential use for bioremediation of Cu contaminated environments. *Plants* 9(10): 1397. Q1.
48. Montesdeoca, F., Ávila, M., Quishpe, J., Borie, F., **Cornejo, P.**, Aguilera, P., Alvarado, S., Espinosa, J. 2020. Early changes in the transition from conventional to no-tillage in a volcanic soil cultivated with beans (*Phaseolus vulgaris* L.). *Chilean Journal of Agricultural and Animal Sciences (Agrociencia)* 36: 181-189. Q4.
49. Silambarasan, S., Logeswari, P., **Cornejo, P.**, Kannan, V. 2019. Evaluation of the production of exopolysaccharide by plant growth promoting yeast *Rhodotorula* sp. strain CAH2 under abiotic stress conditions. *International Journal of Biological Macromolecules* 121:55-62. Q1.
50. Parada, J., Valenzuela, T., Gómez, F., Tereucán, G., García, S., **Cornejo, P.**, Winterhalter, P., Ruiz, A. 2019. Effect of fertilization and arbuscular mycorrhizal fungal inoculation on antioxidant profiles

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and activities in *Fragaria ananassa* fruit. *Journal of the Science of Food and Agriculture* 99:1397-1404. Q1.

51. Ruiz, A., Sanhueza, M., Gómez, F., Tereucán, G., Valenzuela, T., García, S., **Cornejo, P.**, Hermosín, I. 2019. Changes on the content of anthocyanins, flavonols and antioxidant activity in *Fragaria ananassa* var. *camarosa* fruits under traditional and organic fertilization. *Journal of the Science of Food and Agriculture* 99:2404-2410. Q1.
52. Santander, C., Sanhueza, M., Olave, J., Borie, F., Valentine, A., **Cornejo, P.** 2019. Arbuscular Mycorrhizal Colonization Promotes the Tolerance to Salt Stress in Lettuce Plants through an Efficient Modification of Ionic Balance. *Journal of Soil Science and Plant Nutrition* 19: 321-331. Q2.
53. **Borie, F.**, Aguilera, P., Castillo, C., Valentine, A., Seguel, A., Barea, J., **Cornejo, P.** 2019. Revisiting the nature of phosphorus pools in Chilean volcanic soils as a basis for arbuscular mycorrhizal management in plant P acquisition. *Journal of Soil Science and Plant Nutrition* 19: 390-401. Q2.
54. Silambarasan, S., Logeswari, P., **Cornejo, P.**, Abraham, J., Valentine, A. 2019. Simultaneous mitigation of aluminum, salinity and drought stress in *Lactuca sativa* growth via formulated plant growth promoting *Rhodotorula mucilaginosa* CAM4. *Ecotoxicology and Environmental Safety* 180: 63-72. Q1.
55. Campos, P., **Cornejo, P.**, Rial, C., Borie, F., Varela, R., Seguel, A., López, J. 2019. Phosphate acquisition efficiency in wheat is related to root:shoot ratio, strigolactone levels, and PHO2 regulation. *Journal of Experimental Botany* 70(20): 5631–5642. Q1.
56. Silambarasan, S., Logeswari, P., Valentine, A., **Cornejo, P.** 2019. Role of *Curtobacterium herbarum* strain CAH5 on aluminum bioaccumulation and enhancement of *Lactuca sativa* growth under aluminum and drought stresses. *Ecotoxicology and Environmental Safety* 183:109573. Q1.
57. Silambarasan, S., Logeswari, P., **Cornejo, P.**, Kannan, V. 2019. Role of plant growth–promoting rhizobacterial consortium in improving the *Vigna radiata* growth and alleviation of aluminum and drought stresses. *Environmental Science and Pollution Research* 26:27647-27659. Q2.
58. Griebenow, S., Zuñiga, A., Muñoz, G., Cornejo, P., Kleinert, A., Valentine, A. 2019. Photosynthetic metabolism during phosphate limitation in a legume from the Mediterranean-type Fynbos ecosystem. *Journal of Plant Physiology* 243: 153051. Q2.
59. Aguilera P., Larsen, J., Borie, F., Berríos, D., Tapia, C., **Cornejo, P.** 2018. New evidences on the contribution of arbuscular mycorrhizal fungi inducing Al tolerance in wheat. *Rhizosphere* 5: 43-50. Q2.
60. Campos, P., Borie, F., **Cornejo, P.**, López, J., López, A., Seguel, A. 2018. Phosphorus acquisition efficiency related to root traits: Is mycorrhizal symbiosis a key factor to wheat and barley cropping? *Frontiers in Plant Science* 9:752. Q1.

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61. Ruiz, A., Aguilera, A., Ercoli, S., Parada, J., Winterhalter, P., Contreras, B., **Cornejo, P.** 2018. Effect of the frying process on the composition of hydroxycinnamic acid derivatives and antioxidant activity in flesh colored potatoes. *Food Chemistry* 268: 577-584. Q1.
62. Ferreira, P., Ceretta, C., Tiecher, T., Facco, D., Garlet, L., Soares, C., Soriani, H., Nicoloso, F., Giachini, A., Brunetto, G., **Cornejo, P.** 2018. *Rhizophagus clarus* and Phosphorus in *Crotalaria juncea*: Growth, Glomalin Content and Acid Phosphatase Activity in a Copper-Contaminated Soil. *Revista Brasileira de Ciência do Solo* 42: e0170245. Q4.
63. Moguilevsky, D., Fernández, N., **Cornejo, P.**, Puntieri, J., Fontenla, S. 2018. *Nothofagus pumilio* forest affected by recent tephra deposition in northern Patagonia: I Environmental traits influencing seedling growth. *Journal of Soil Science and Plant Nutrition* 18: 487-498. Q2.
64. Fernández, N., Fontenla, S., Moguilevsky, D., Meier, S., Rilling, J., **Cornejo, P.** 2018. *Nothofagus pumilio* forest affected by recent tephra deposition in northern Patagonia: II Shifts in diversity and structure of rhizosphere fungal communities. *Journal of Soil Science and Plant Nutrition* 18: 499-511. Q2.
65. Durán, P., Viscardi, S., Acuña, J., **Cornejo, P.**, Azcón, R., Mora, M. 2018. Endophytic selenobacteria and arbuscular mycorrhizal fungus for Selenium biofortification and *Gaeumannomyces graminis* biocontrol. *Journal of Soil Science and Plant Nutrition* 18:1021-1035. Q2.

Proyectos con financiamiento externo últimos 5 años (adjudicado y/o ejecutado)

1. Obtención de pigmentos de papas coloreadas para su uso como colorante de alimentos procesados.
Financiamiento: FIA code PYT-2016-0674
Rol: Director alterno
Duración: 2017-2019
Año adjudicación: 2017
2. Development of climate-resilient bio-inoculants of plant growth promoting yeast to improve the production of horticultural crops in La Araucanía Region.
Financiamiento: FONDECYT Postdoctorado 3170123
Rol: Supervisor
Duración: 2017-2020
Año adjudicación: 2017
3. Efecto de las asociaciones vegetales y de la incidencia de incendios forestales sobre las comunidades de hongos micorrícicos arbusculares asociados a la rizosfera de *Araucaria araucana*.
Financiamiento: FONDECYT Postdoctorado 3170089
Rol: Supervisor
Duración: 2017-2020
Año Adjudicación: 2017

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4. Influence of drought on the efficiency of arbuscular mycorrhizal symbiosis in phosphorus acquisition by plants growing in Andisols from Southern Chile: wheat as a crop model.
Financiamiento: FONDECYT Regular 1170264
Rol: Investigador responsable
Duración: 2017-2021
Año adjudicación: 2017
5. Contribution of native bacteria and fungi to alleviate stress in soil degraded by heavy metals and drought: evaluation of plant growth promotion, tolerance mechanisms and rhizosphere interactions.
Financiamiento: FONDECYT Regular 1170931
Rol: Co-investigador
Duración: 2017-2021
Año adjudicación: 2017
6. Estudio comparativo de las adaptaciones y simbiosis radicales Micorrizas Arbusculares, Rhizobio-Leguminosa y Raíces Proteoideas en especies agrícolas y nativas chilenas: Hacia un uso eficiente de fósforo retenido en Andisoles del sur de Chile.
Financiamiento: Proyecto para Atracción de Capital Humano Avanzado del Extranjero Modalidad Estadías Cortas, MEC-CONICYT folio 80170023
Rol: Director
Duración: 2017-2018
Año adjudicación: 2017
7. Sustainable management of mining tailings using native plants and biofertilizers to recover the landscape, mitigate the socioenvironmental impact and create bases for its valorization.
Financiamiento: ACM170002 Anillos de Investigación en Ciencia y Tecnología en tópicos de Minería.
Rol: Investigador principal
Duración: 2018-2021
Año adjudicación: 2017
8. Valorización del residuo de papas de pulpa coloreada tras la extracción de pigmentos para su potencial utilización industrial.
Financiamiento: Voucher de Innovación CORFO 17VIP87872
Rol: Co-director
Duración: 2018
Año adjudicación: 2018
9. How precedent non-mycorrhizal crops affect soil P bioavailability, physiological root traits, and mycorrhizal symbiosis of wheat in a rotation system in volcanic soils of Chile.
Financiamiento: FONDECYT Regular 1191551
Rol: Co-investigador
Duración: 2019-2022
Año adjudicación: 2019

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- 10.** Can the directed inoculation of arbuscular mycorrhizal fungi modify the profiles and quantity of antioxidant compounds in flesh-colored potatoes cropped under drought and P starvation conditions?
Financiamiento: FONDECYT Regular 1190585
Rol: Co-investigador
Duración: 2019-2023
Año adjudicación: 2019
- 11.** Centro de Recursos Hídricos para la Agricultura y Minería, CRHIAM.
Financiamiento: ANID/FONDAP/15130015
Rol: Investigador asociado
Duración: 2019-2023
Año adjudicación: 2018
- 12.** Obtención de líneas de papas ricas en proteínas de origen vegetal y antioxidantes como superalimento.
Financiamiento: CORFO Súmate a Innovar 20SN-139512
Rol: Investigador co-responsable
Duración: 2020-2021
Año adjudicación: 2020
- 13.** How the management of rhizosphere microbiota can enhance plant production under drought stress: Developing a scientific basis for the design of next generation biofertilizers.
Financiamiento: FONDECYT Regular 1210964
Rol: Investigador responsable
Duración: 2021-2025
Año adjudicación: 2021
- 14.** Interacción biotecnología-ambiente-agricultura para la mitigación del cambio climático: Hacia la sustentabilidad productiva y resiliencia de los recursos naturales.
Financiamiento: InES19-VRIP-UFRO
Rol: Director general
Duración: 2021-2023
Año adjudicación: 2021
- 15.** Tecnologías, metodologías CRHIAM, y guía de buenas prácticas para la sostenibilidad hídrica de las industrias mineras y agrícolas.
Financiamiento: ANID FONDE de Sequía ANID/FSEQ210002
Rol: Investigador Asociado.
Duración: 2022-2023.
Año adjudicación: 2021
- 16.** Development of a biofungicide from pod extracts of *Capsicum annuum* L. to prevent mycotoxigenic fungi in wheat production.
Financiamiento: FONDECYT Regular 1221024
Rol: Co-Investigador
Duración: 2022-2026
Año adjudicación: 2022

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CATÓLICA DE
VALPARAÍSO

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

17. Búsqueda de lípidos de hongos antárticos y evaluación de su potencial actividad antifúngica contra hongos patógenos humanos.

Financiamiento: INACH Regular RT_16_20.

Rol: Coinvestigador

Duración: 2021-2023

Año adjudicación: 2020