

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

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Publicaciones (2019 – presente)

1. González, A., Ranilla, L.G., **Fuentealba, C.** 2023. Editorial: Advances in plant diversity and its impact on high-nutrition and functional food. *Frontiers in Plant Science*, 14:1272727. Q1.
2. Funes, C.F., Larach, A., Besoain, X., Serrano, D.D., Hadad, C., Pedreschi, R., Van Nhien, A.N., **Fuentealba, C.** 2023. Active coatings based on oxidized chitin nanocrystals and silk fibroins for the control of anthracnose in ‘Hass’ avocados. *International Journal of Biological Macromolecules*, 253: 126673. Q1.
3. Hernández, I., Ponce, E., Vidal, J., Chirinos, R., Campos, D., Pedreschi, R., **Fuentealba, C.** 2023. Metabolomics reveals specific metabolic changes in sweet cherries (*Prunus avium* L.) subjected to postharvest treatment with melatonin after mechanical stress. *Horticulturae*, 9: 940. Q1.
4. Yin, M.H., Vargas, A.I., **Fuentealba, C.**, Shahid, M.A., Bassil, E., Schaffer, B. 2023. Differences in physiological and biochemical responses to short-term flooding among the three avocado (*Persea americana* Mill.) races. *Plant Physiology and Biochemistry*, 196: 925–939. Q1.
5. Ponce, E., Núñez-Lillo, G., Bravo, C., Vidal, J., Tapia-Reyes, P., Meneses, C., Pedreschi, R., **Fuentealba, C.** 2023. Cell wall disassembly, metabolome and transcriptome analysis in sweet cherry fruit with induced surface pitting. *Postharvest Biology and Technology*, 198: 112262. Q1.
6. Hernández, I., Molina, V., **Fuentealba, C.**, Alvaro, J.E., Defilippi, B.G., Pedreschi, R. 2023. Do rootstocks influence global fruit quality, postharvest performance and metabolite profiles of *Persea americana* cv. Hass? *Horticulturae*, 9: 184. Q1.
7. Funes, C.F., Bouvier, B., Cézard, C., **Fuentealba, C.**, Jamali, A., Courty, M., Hadad, C., Van Nhien, A.N. 2023. Theoretical and experimental studies of chitin nanocrystals treated with ionic liquid or deep eutectic solvent to afford nanochitosan sheets. *Journal of Molecular Liquids*, 375: 121350. Q1.
8. **Fuentealba, C.**, Vidal, J., Zulueta, C., Ponce, E., Uarrota, V., Defilippi, B., Pedreschi, R. 2022. Controlled Atmosphere Storage Alleviates Hass Avocado Black Spot Disorder. *Horticulturae*, 8: 369. Q1.
9. Pedreschi, R., Ponce, E., Hernández, I., **Fuentealba, C.**, Urbina, A., González-Fernández, J., Hormaza, J., Campos, D., Chirinos, R., Aguayo, E. 2022. Short vs. Long-distance avocado supply chains: life cycle assessment impact associated to transport and effect of fruit origin and supply conditions chain on primary and secondary metabolites. *Foods*, 11: 1807. Q1.
10. Núñez-Lillo, G., Ponce, E., Alvaro, J.E., Campos, D., Meneses, C., Campos-Vargas, R., Carpentier, S., **Fuentealba, C.**, Pedreschi, R. 2022. Proteomics analysis reveals new insights into surface

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pitting of sweet cherry cultivars displaying contrasting susceptibility. *Journal of Horticultural Science and Biotechnology*, 97: 615-625. Q2.

11. Fuentes-Cardenas, I., Cuba-Puma, R., Marcilla-Truyenque, S., Begazo-Gutiérrez, H., Zolla, G., **Fuentealba, C.**, Shetty, K., Gálvez-Ranilla, L. 2022. Diversity of the Peruvian Andean maize (*Zea mays* L.) race Cabanita: polyphenols, carotenoids, in vitro antioxidant capacity, and physical characteristics. *Frontiers in Nutrition*, 9: 983208. Q2.
12. Hernández, I., Uarrota, V., **Fuentealba, C.**, Paredes, D., Defilippi, B.G., Campos-Vargas, R., Nuñez, G., Carrera, E., Meneses, C., Hertog, M., Pedreschi, R. 2022. Transcriptome and hormone analyses reveals differences in physiological age of 'Hass' avocado fruit. *Postharvest Biology and Technology*, 185: 111806. Q1.
13. Delgado, N., Olivera, M., Cádiz, F., Bravo, G., Montenegro, I., Madrid, A., **Fuentealba, C.**, Pedreschi, R., Salgado, E., Besoain, X. 2021. Volatile Organic Compounds (VOCs) produced by *Gluconobacter cerinus* and *Hanseniaspora osmophila* displaying control effect against table grape-rot pathogens. *Antibiotics-Basel*, 10: 663. Q1.
14. Gálvez-Ranilla, L., Rios-Gonzales, B.A., Ramírez-Pinto, M.F., **Fuentealba, C.**, Pedreschi, R., Shetty, K. 2021. Primary and Phenolic Metabolites Analyses, In Vitro Health-Relevant Bioactivity and Physical Characteristics of Purple Corn (*Zea mays* L.) Grown at Two Andean Geographical Locations. *Metabolites*, 11, 722. Q2.
15. **Fuentealba, C.**, Ejsmentewicz, T., Campos-Vargas, R., Saa, S., Aliaga, O., Chirinos, R., Campos, D., Pedreschi, R. 2021. Cell wall and metabolite composition of sweet cherry fruits from two cultivars with contrasting susceptibility to surface pitting during storage. *Food Chemistry*, 342: 128307. Q1.
16. Covarrubias, M.P., Lillo-Carmona, V., Melet, L., Benedetto, G., Andrade, D., Maucourt, M., Deborde, C., **Fuentealba, C.**, Moing, A., Valenzuela, M.L., Pedreschi, R., Miyasaka Almeida, A. 2021. Metabolite fruit profile is altered in response to source–sink imbalance and can be used as an early predictor of fruit quality in nectarine. *Frontiers in Plant Science*, 11: 604133. Q1.
17. Ponce, E., Alzola, B., Cáceres, N., Gas, M., Ferreira, C., Vidal, J., Chirinos, R., Campos, D., Rubilar, M., Campos-Vargas, R., Pedreschi, R., **Fuentealba, C.** 2021. Biochemical and phenotypic characterization of sweet cherry (*Prunus avium* L.) cultivars with induced surface pitting. *Postharvest Biology and Technology*, 175: 111494. Q1.
18. Hernández, I., Uarrota, V., Paredes, D., **Fuentealba, C.**, Defilippi, B.G., Campos-Vargas, R., Meneses, C., Hertog, M., Pedreschi, R. 2021. Can metabolites at harvest be used as physiological markers for modelling the softening behaviour of Chilean “Hass” avocados destined to local and distant markets? *Postharvest Biology and Technology*, 174: 111457. Q1.
19. Uarrota, V.G., Hernandez, I., Ponce, E., Vidal, J., **Fuentealba, C.**, Defilippi, B.G., Lindh, V., Zulueta, C., Chirinos, R., Campos, D., Pedreschi, R. 2020. Unravelling factors associated with

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‘blackspot’ disorder in stored Hass avocado (*Persea americana* Mill) fruit. Journal of Horticultural Science and Biotechnology, 95 (6): 804-815. Q2.

20. Uarrota, V.G., **Fuentealba, C.**, Hernández, I., Defilippi-Bruzzone, B., Meneses, C., Campos-Vargas, R., Lurie, S., Hertog, M., Carpentier, S., Poblete-Echeverría, C., Pedreschi, R. 2019. Integration of proteomics and metabolomics data of early and middle season T Hass avocados under heat treatment. Food Chemistry 289: 512-521. Q1.
21. Gálvez, L., Huamán-Alvino, C., Flores-Báez, O., Aquino-Méndez, E.M., Chirinos, R., Campos, D., Sevilla, R., **Fuentealba, C.**, Pedreschi, R., Sarkar, D., Shetty, K. 2019. Evaluation of phenolic antioxidant-linked in vitro bioactivity of Peruvian corn (*Zea mays* L.) diversity targeting for potential management of hyperglycemia and obesity. Journal of Food Science and Technology 56: 2909–2924. Q2.
22. Pedreschi, R., Uarrota, V., **Fuentealba, C.**, Alvaro, J.E., Olmedo, P., Defilippi, B.G., Meneses, C., Campos-Vargas, R. 2019. Primary Metabolism in Avocado Fruit. Frontiers in Plant Science 10: 795. Q1.
23. Rodríguez, F., Pedreschi, R., **Fuentealba, C.**, de Kartzow, A., Olaeta, J.A., Alvaro, J.E. 2019. The increase in electrical conductivity of nutrient solution enhances compositional and sensory properties of tomato fruit cv. Patrón. Scientia Horticulturae 244: 388-398. Q1.

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

1. Cell wall remodeling in sweet cherry with surface pitting: an underlying response during cold stress.
Financiamiento: Fondecyt Regular N°1221616, ANID
Rol: Investigadora Responsable
Duración: 2022-2026
Año de adjudicación: 2022
2. Hydrogels based on biorenewable nano(fibers/crystals) from chitin, cellulose, alginate and silk to save water in chilean agriculture (NanoBioGel)
Financiamiento: ECOS210006. Programa de Cooperación Científica ECOS-ANID
Rol: Investigadora Responsable
Duración: 2022-2024
Año de adjudicación: 2022
3. Physiological status at harvest: key to predict postharvest ripening behaviour of Chilean Hass avocado.
Financiamiento: Fondecyt Regular N°1180303, ANID
Rol: Co-Investigador
Duración: 2018-2022
Año de adjudicación: 2018



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4. Red de investigación Perú-Chile: compartiendo experiencias y desafíos relacionados a la biotecnología vegetal, industrial & bioprocesos.
Financiamiento: Redes de investigación en Biotecnología Chile-Perú REDBIO0001. Programa de Cooperación Internacional, ANID.
Rol: Investigadora asociada
Duración: 2019-2021
Año adjudicación: 2019

5. An integrative approach to understand surface pitting in sweet cherries
Financiamiento: FONDECYT de Iniciación en Investigación 11170360
Rol: Investigador Responsable
Duración: 2017- 2020
Año adjudicación: 2017