

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

Romina Pedreschi Plasencia

Publicaciones (2016- presente)

1. 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*, 10: 663. Q2.
2. Lindh, V., Uarrota, V., Zulueta, C., Alvaro, J.E., Valdenegro, M., Cuneo, I.F., Mery, D., **Pedreschi, R.** 2021. Image Analysis Reveals That Lenticel Damage Does Not Result in Black Spot Development but Enhances Dehydration in *Persea americana* Mill. cv. Hass during Prolonged Storage. *Agronomy-Basel*, 11: 9. Q1.
3. Olivera, M., Delgado, N., Cádiz, F., Riquelme, N., Montenegro, I., Seeger, M., Bravo, G., Barros, W., **Pedreschi, R.**, Besoain, X. 2021. Diffusible compounds produced by *Hanseniaspora osmophila* and *Gluconobacter cerinus* help to control the causal agents of gray rot and summer bunch rot of table grapes. *Antibiotics*, 10: 664. Q2.
4. 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 & Technology*, 175: 111494. Q1.
5. Aguilar-Galvez, A., García-Ríos, D., Janampa, C., Mejía, C., Chirinos, R., **Pedreschi, R.**, Campos, D. 2021. Metabolites, volatile compounds and in vitro functional properties during growth and commercial harvest of Peruvian lucuma (*Pouteria lucuma*). *Food Bioscience*, 40: 100882. Q2.
6. Uarrota, V., Maraschin, V., de Bairros, A., **Pedreschi, R.** 2021. Factors affecting the capsaicinoid profile of hot peppers and biological activity of their non-pungent analogues (capsinoids) present in sweet peppers. *Critical Reviews in Food Science and Nutrition*, 61: 649-665. Q1.
7. 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 & Technology*, 174: 111457. Q1.
8. 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.

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9. Chirinos, R., Cerna, M., **Pedreschi, R.**, Calsin, M., Aguilar-Galvez, A., Campos, D. 2021. Multifunctional in vitro bioactive properties: antioxidant, antidiabetic and antihypertensive of protein hydrolyzates from Tarwi (*Lupinus mutabilis* Sweet) obtained by enzymatic biotransformation. *Cereal Chemistry*, 98: 423-433. Q3.
10. Beyer, C., Cuneo, I.F., Alvaro, J.E., **Pedreschi, R.** 2021. Evaluation of aerial and root plant growth behavior, water and nutrient use efficiency and carbohydrate dynamics for Hass avocado grown in a soilless and protected growing system. *Scientia Horticulturae*, 277: 109830. Q1.
11. 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.
12. Mejía-Aguila, R., Aguilar-Gálvez, A., Chirinos, R., **Pedreschi, R.**, Campos, D. 2021. Vacuum impregnation of apple slices with Yacon (*Smallanthus sonchifolius* Poepp & Endl) fructooligosaccharides to enhance the functional properties of the fruit snack. *International Journal of Food Science and Technology*, 56: 392-401. Q2.
13. Uarrota V, Maraschin V, de Bairros A, **Pedreschi R.** 2021. Factors affecting the capsaicinoid profile of hot peppers and biological activity of their non-pungent analogues (capsinoids) present in sweet peppers. *Critical Reviews in Food Science and Nutrition*, 61: 641-665.Q1.
14. Chirinos, R., Sánchez-Sandoval, R., **Pedreschi, R.**, Campos, D. 2020. Enzyme-assisted hidrolisates from sacha inchi (*Plukenetia volubilis*) protein with in vitro antioxidant and antihypertensive properties. *Journal of Food Processing and Preservation*, 44: e14969. Q3.
15. Chirinos, R., **Pedreschi, R.**, Velásquez-Sánchez, M., Aguilar-Gálvez, A., Campos, D. 2020. In vitro antioxidant and angiotensine-I converting enzyme inhibitory properties of enzymatically hydrolyzed quinoa (*Chenopodium quinoa*) and kiwicha (*Amaranthus caudatus*) proteins. *Cereal Chemistry*, 97: 949-957. Q3.
16. Lillo-Carmona, V., Espinoza, A., Rothkegel, K., Nilo-Poyanco, D., **Pedreschi, R.**, Campos-Vargas, R., Meneses, C. 2020. Identification of metabolite and lipid profile in a segregating peach population associated with mealiness in peach. *Metabolites*, 10: 154. Q2.
17. **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 'blackspot' disorder in stored Hass avocado (*Persea americana* Mill) fruit. *Journal of Horticultural Science & Biotechnology*, 95: 804-815. Q2.
18. García-Ríos D, Aguilar-Galvez A, Chirinos R, **Pedreschi R**, Campos D. 2020. Relevant metabolites for the organoleptic and functional properties of two commercial varieties of Peruvian Pouteria lucuma. *Journal of Food Processing and Preservation*, 44: e14479. Q3.

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19. Porrás-Mija I, Chirinos R, García-Ríos D, Aguilar-Galvez A, Huamán-Alvino C, **Pedreschi R**, Campos D. 2020. Physico-chemical characterization, metabolomic profile and in vitro antioxidant, antihypertensive, antiobesity and antidiabetic properties of Andean elderberry (*Sambucus nigra* L). *Journal of Berry Research*, 10: 193-208. Q2.
20. Campos D, Terán-Hilares F, Chirinos R, Aguilar-Galvez A, García-Ríos D, Pacheco-Avalos A, **Pedreschi R**. 2020. Bioactive compounds and antioxidant activity from harvest to edible ripeness of avocado cv. Hass (*Persea americana*) throughout the harvest seasons. *International Journal of Food Science & Technology*, Q2, doi: 10.1111/ijfs.14474.
21. Alvarado L, Saa S, Cuneo I, **Pedreschi R**, Morales J, Larach A, Barros W, Besoain X. 2020. A comparison of immediate and short-term defensive responses to *Phytophthora* species infection in both susceptible and resistant walnut rootstocks. *Plant Disease*, 104: 921-929. Q1.
22. Aguilar-Galve A, **Pedreschi R**, Carpentier S, Chirinos R, García-Ríos D, Campos D. 2020. Proteomics analysis of mashua (*Tropaeolum tuberosum*) tubers subjected to postharvest treatments. *Food Chemistry* 305, 125485. Q1.
23. Rodríguez F, **Pedreschi R**, Fuentealba C, de Kartzow A, Olaeta JA, Alvaro JE. 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.
24. Carrasco-Valenzuela T, Muñoz-Espinoza C, Riberos A, **Pedreschi R**, Arus P, Campos-Vargas R, Meneses C. 2019. Expression QTL (eQTLs) analyses reveal candidate genes associated with fruit flesh softening rate in peach [*Prunus persica* (L.) Batsch]. *Frontiers in Plant Sciences* 10: 1581. Q1.
25. **Pedreschi R**, Uarrota V, Fuentealba C, Alvaro J, Olmedo P, Defilippi B, Meneses C, Campos-Vargas R. 2019. Primary metabolism in avocado fruit. *Frontiers in Plant Science* 10: 795. Q1.
26. Gálvez Ranilla L, Huamán-Alvino C, Flores-Báez O, Aquino- Méndez E, 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 & Technology* 56, 2909-2924. Q2.
27. Uarrota V, Fuentealba C, Hernández I, Defilippi B, Meneses C, Campos-Vargas R, Hertog M, Nicolai B, Carpentier S, Poblete-Echeverría C, **Pedreschi R**. 2019. Integration of proteomics and metabolomics data of early and middle season Hass avocados under heat treatment. *Food Chemistry* 289, 512-521. Q1.
28. Campos D, Aguilar-Galvez A, García-Ríos D, Chirinos R, Limaymanta E, **Pedreschi R**. 2019. Postharvest storage and cooking techniques affect the stability of glucosinolates and myrosinase activity of Andean mashua tubers (*Tropaeolum tuberosum*). *International Journal of Food Science & Technology* 54, 2387-2395. Q2.

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29. García-Mazcorro J, **Pedreschi R**, Chew B, Dowd S, Kawas J, Noratto G. 2019. Dietary supplementation with apple extracts modifies the fecal microbiota in obese diabetic db/db mice. *Plos One*, 14: e0212586. Q2.
30. Vergara-Pulgar C, Rothkegel K, **Pedreschi R**, Campos-Vargas R, González-Aguero M, Defilippi B, Meneses C. 2019. De novo assembly and profile of *Persea americana* cv. 'Hass' transcriptome during fruit development. *BMC Genomics* 20:108. Q2.
31. Zepeda B, Olmedo P, Ejsmentewics T, Sepúlveda P, Balic I, Balladares C, Delgado-Rioseco J, Fuentealba C, Moreno A, Defilippi B, Meneses C, **Pedreschi R**, Campos-Vargas R. 2018. Cell wall and metabolite composition of berries of *Vitis vinifera* (L.) cv. Thompson Seedless with different firmness. *Food Chemistry* 268: 492-497. Q1.
32. Chirinos R, Ochoa K, Aguilar-Gálvez A, Carpentier S, **Pedreschi R**, Campos D. 2018. Obtaining of peptides with in vitro antioxidant and angiotensin I converting enzyme inhibitory activities from cañihua protein (*Chenopodium pallidicaule* Aellen). *Journal of Cereal Science* 83: 139-146. Q2.
33. Pedreschi F, Saavedra I, Bunger A, Zuñiga R, **Pedreschi R**, Chirinos R, Campos D, Mariotti-Celis MS. 2018. Tara pod (*Caesalpinia spinosa*) extract mitigates neo-contaminant formation in Chilean bread preserving their sensory attributes. *LWT Food Science & Technology* 95: 116-122. Q1.
34. García-Mazcorro JF, **Pedreschi R**, Chew B, Dowd SE, Kowas JR, Noratto G. 2018. Dietary supplementation with raspberry extracts modifies the fecal microbiota in obese diabetic db/db mice. *Journal of Microbiology & Biotechnology* 28: 1247-1259. Q3.
35. Terán-Hilares R, Chirinos R, **Pedreschi R**, Campos D. 2018. Enhanced antioxidant properties of tara (*Caesalpinia spinosa*) gallotannins by thermal hydrolysis and its synergistic effects with α -tocopherol, ascorbyl palmitate, and citric acid on sacha inchi (*Plukenetia volubilis*) oil. *Journal of Food Process Engineering* 41: e12613. Q3.
36. Hernández I, Fuentealba C, Olaeta JA, Poblete C, Defilippi B, González M, Campos-Vargas R, Lurie S, **Pedreschi R**. 2017. Effects of heat shock and nitrogen shock pre-treatments on ripening heterogeneity of Hass avocados stored in controlled atmosphere. *Scientia Horticulturae* 225: 408-415. Q1.
37. Fuentealba C, Hernández I, Olaeta JA, Defilippi B, Meneses C, Campos-Vargas R, Lurie S, Carpentier S, **Pedreschi R**. 2017. New insights into the Heterogeneous ripening in Hass avocado via LC MS/MS proteomics. *Postharvest Biology and Technology* 132: 51-61. Q1.
38. Campos D, Mescua L, Aguilar-Gálvez A, Chirinos, **Pedreschi R**. 2017. Effect of fructooligosaccharide purification technique using activated charcoal or ion exchange fixed bed column on recovery, purity and contents of fructose, glucose and sucrose. *International Journal of Food Science and Technology* 52: 2637-2646. Q2.

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39. Fuentealba C, Hernandez I, Saa S, Toledo L, Burdiles P, Chirinos R, Campos D, Brown P, **Pedreschi R**. 2017. Color and in vitro quality attributes of walnuts from different growing conditions correlate with key precursors of primary and secondary metabolism. *Food Chemistry* 232: 664-672. Q1.
40. Chirinos R, Aquino M, **Pedreschi R**, Campos D. 2017. Optimized methodology for alkaline and enzyme assisted extraction of protein from sacha inchi (*Plukenetia volubilis*) kernel cake. *Journal of Food Process Engineering* 40: e12412. Q3.
41. Betalleluz-Pallardel I, Inga M, Mera L, **Pedreschi R**, Campos D, Chirinos R. 2017. Optimization of extraction conditions and thermal properties of protein from the Andean pseudocereal cañihua (*Chenopodium pallidicaule* Aellen). *International Journal of Food Science & Technology* 52: 1026-1034. Q2.
42. Fuentealba C, **Pedreschi R**, Saavedra J. 2016. A statistical approach to assess the heterogeneity of Hass avocados submitted to different postharvest abiotic stresses. *Ciencia e Investigación Agraria* 43: 356-365. Q4.
43. Fuentealba C, Galvez L, Cobos A, Olaeta JA, Defilippi BG, Chirinos R, Campos D, **Pedreschi R**. 2016. Characterization of main primary and secondary metabolites and in vitro antioxidant and antihyperglycemic properties of the mesocarp tissue of three biotypes of *Pouteria lucuma*. *Food Chemistry* 190: 403-411. Q1.
44. **Pedreschi R**, Hollak S, Harkema H, Otma E, Robledo P, Westra E, Somhorst D, Ferreyra R, Defilippi BG. 2016. Impact of postharvest ripening strategies on Hass avocado fatty acid profiles. *South African Journal of Botany* 103: 32-35. Q2.
45. Mendieta B, Olaeta JA, **Pedreschi R**, Undurraga P. 2016. Reduction of cold damage during cold storage of Hass avocado by a combined use of pre-conditioning and waxing. *Scientia Horticulturae* 8: 119-124. Q1.
46. Chirinos R, Necochea O, **Pedreschi R**, Campos D. 2016. Sacha inchi (*Plukenetia volubilis* L.) Shell: an alternative source of phenolic compounds and antioxidants. *International Journal of Food Science and Technology* 51: 986-993. Q2.
47. Campos D, Aguilar-Galvez A, **Pedreschi R**. 2016. Stability of fructooligosaccharides, sugars and color of yacon (*Smallanthus sonchifolius*) roots during blanching and drying. *International Journal of Food Science & Technology* 51: 1177-1185. Q2.
48. Chirinos R, Zorrilla D, Aguilar-Galvez A, **Pedreschi R**, Campos D. 2016. Impact of roasting on fatty acids, tocopherols, phytosterols and phenolic compounds present in *Plukenetia huayllabambana* seed. *Journal of Chemistry*, Article ID 6570935. Q3.
49. Hernández I, Fuentealba C, Olaeta JA, Lurie S, Defilippi B, Campos-Vargas R, **Pedreschi R**. 2016. Factors associated with postharvest ripening heterogeneity of Hass avocados (*Persea americana* Mill). *Fruits* 71: 259-268. Q3.

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50. Riquelme J, Olaeta JA, Gálvez L, Undurraga P, Fuentealba C, Osses A, Orellana J, Gallardo J, **Pedreschi R**. 2016. Nutritional and functional characterization of wild and cultivated *Sarcocornia* *neeii* grown in Chile. *Ciencia e Investigación Agraria* 43: 283-293. Q4.
51. Chirinos R, **Pedreschi R**, Domínguez G, Campos D. 2015. Comparison of the physico-chemical and phytochemical characteristics of the oil of two *Plukenetia* species. *Food Chemistry* 173: 1203-1206. Q1.

Proyectos con financiamiento externo (2016-presente)

1. A transcriptomic approach to study the differences in the parameters of root development, canopy and fruit quality of avocado cv. 'Hass' for two rootstocks grown under controlled conditions.
Financiamiento: Fondecyt -ANID Postdoctorado N°3210011
Rol: Patrocinante
Duración: 2023-2024
Año adjudicación: 2021
2. Study of cytokinin applications in early stages of berry development on changes in cell wall metabolism and its effect on the grape firmness in *Vitis vinifera*.
Financiamiento: Fondecyt Regular – ANID N°1200139.
Rol: Co-investigador
Duración: 2020-2024
Año adjudicación: 2020
3. Study of cytokinin applications in early stages of berry development on changes in cell wall metabolism and its effect on the grape firmness in *Vitis vinifera*
Financiamiento: Fondecyt Regular N°1200139, Conicyt
Rol: Co-Investigador
Duración: 2020-2023
Año de adjudicación: 2020
4. Evaluación del sistema de defensa antioxidante y metabolitos implicados en el daño por frío de la palta (*Persea americana*) Hass para comprender y mitigar este desorden fisiológico.
Financiamiento: Fondecyt contrato 369-2019, Concytec, Perú
Rol: Investigador asociado internacional
Duración: 2019-2022
Año adjudicación: 2019
5. Concurso de apoyo a la cooperación en investigación Chile-Perú, redes de investigación en Biotecnología. “Red de investigación Perú-Chile: compartiendo experiencias y desafíos relacionados a la Biotecnología Vegetal, Industrial & Bioprocesos”
Financiamiento: Redes PCI-Conicyt redbio0001
Rol: Director
Duración: 2019-2020

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Año de adjudicación: 2019

6. Red de investigación Perú-Chile: compartiendo experiencias y desafíos relacionados a la Biotecnología Vegetal, Industrial & Bioprocesos Principal
Financiamiento: ANID, N° REDBIO0001.
Rol: Investigador responsable
Duración: 2019-2022
Año adjudicación: 2019
7. Formation and mitigation of potentially toxic compounds generated by heat processing starchy and protein matrixes.
Financiamiento: Fondecyt Regular N°1190080
Rol: Co-investigador
Duración: 2019-2023
Año de adjudicación: 2019
8. Metabolic profiling of “Black spot disorder” in stored Hass avocado (*Persea americana* Mill) fruit
Financiamiento: Fondecyt Postdoctorado N°3190055
Rol: Patrocinante
Duración: 2018-2021
Año de adjudicación: 2018
9. Physiological status at harvest: key to predict postharvest ripening behaviour of Chilean Hass avocado.
Financiamiento: Fondecyt Regular N°1180303, Conicyt
Rol: Investigador responsable
Duración: 2018-2022
Año de adjudicación: 2018
10. Síntesis de tiocianatos, nitriles, epitionitrilos y otros con potencial anticancerígeno a partir de los glucosinolatos de mashua (*Tropaeolum tuberosum*) usando bacterias lácticas.
Financiamiento: Fondecyt E041-2018-01, Concytec, Perú
Rol: Investigador asociado internacional
Duración: 2018-2021
Año adjudicación: 2018
11. Entendiendo la complejidad metabólica y nutricional de frutos en poscosecha: una perspectiva integradora desde la biología de sistemas.
Financiamiento: Concurso de apoyo a la formación de redes internacionales para investigadores en etapa inicial. REDI170422.
Rol: Investigador
Duración: 2017-2019
Año de adjudicación: 2017



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12. Identification of biomarkers associated with mealiness in peach using mQTL and meQTL.
Financiamiento: Fondecyt Regular #1160584.
Rol: Co-investigador
Duración: 2016-2020
Año de adjudicación: 2016