

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

Romina Pedreschi Plasencia

Publicaciones (2015- presente)

1. 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*, Q3, e14479. <https://doi.org/10.1111/jfpp.14479>. Q3.
2. Uarrota V, Maraschin V, de Bairros A, **Pedreschi R**. 2020. 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*, <https://doi.org/10.1080/10408398.2020.1743642>. Q1.
3. Porras-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*, doi: 10.3233/JBR-190439. Q2.
4. 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.
5. 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*, <https://doi.org/10.1094/PDIS-03-19-0455-RE>. Q1.
6. Aguilar-Galve A, **Pedreschi R**, Carpentier S, Chirinos R, García-Ríos D, Campos D. 2020. Proteomics analysis of mashua (*Tropaelum tuberosum*) tubers subjected to postharvest treatments. *Food Chemistry* 305, 125485. Q1.
7. 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.
8. 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.
9. **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.
10. 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-

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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.

11. Uarrote 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.

12. 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.

13. 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.

14. Vergara-Pulgar C, Rothkegel K, **Pedreschi R**, Campos-Vargas R, González-Agüero 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.

15. 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.

16. 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.

17. 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.

18. 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.

19. 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 sachá inchi (*Plukenetia volubilis*) oil. *Journal of Food Process Engineering* 41: e12613. Q3.

20. 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

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- heterogeneity of Hass avocados stored in controlled atmosphere. *Scientia Horticulturae* 225: 408-415. Q1.
21. 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.
22. 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.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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.
28. **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.
29. 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.
30. 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.

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31. 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.
32. 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.
33. 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.
34. 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 neei* grown in Chile. *Ciencia e Investigación Agraria* 43: 283-293. Q4.
35. 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.
36. **Pedreschi R**, Lurie S. 2015. Advances and current challenges in understanding postharvest abiotic stresses in perishables. *Postharvest Biology & Technology* 107: 77-89. Q1.
37. Guerrero-Ochoa M, **Pedreschi R**, Chirinos R. 2015. Optimized methodology for the extraction of protein from quinoa (*Chenopodium quinoa* Willd). *International Journal of Food Science & Technology* 50: 1815-1822. Q2.
38. Chirinos R, **Pedreschi R**, Cedano I, Campos D. 2015. Antioxidants from mashua (*Tropaeolum tuberosum*) control lipid oxidation in sacha inchi (*Plukenetia volubilis* L.) oil and raw ground pork meat. *Journal of Food Processing and Preservation* 39: 2612-2619. Q3.

Proyectos con financiamiento externo (2015-presente)

1. 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
Año de adjudicación: 2019

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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 N°1200139, Conicyt

Rol: Co-Investigador

Duración: 2020-2023

Año de adjudicación: 2020

3. 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

4. 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

5. 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

6. 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

7. 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

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8. Postharvest Systems Biology: hands on integrating omics data into metabolic networks Chile-Belgium-Israel.

Financiamiento: Apoyo a la Formación de Redes Internacionales entre Centros de Investigación 2015, REDES150030.

Rol: Investigador responsable

Duración: 2016-2017

Año de adjudicación: 2015

9. Creación de un piloto demostrativo para la obtención de productos deshidratados de alta calidad mediante investigación y desarrollo colaborativo con PyMEs y el Reino Unido.

Financiamiento: I Concurso de Fortalecimiento de Centros Regionales para el desarrollo territorial mediante proyectos de I+D colaborativa con PYMES. Conicyt

Rol: Co-investigador

Duración: 2015-2016

Año de adjudicación: 2015

10. Discovery of biomarker candidates linked to table grape berry firmness based on transcriptomic and metabolomics analysis.

Financiamiento: Fondecyt Regular N° 1150492.

Rol: Co-investigador

Duración: 2015-2019

Año de adjudicación: 2015