ROMINA PEDRESCHI PLASENCIA

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I. PUBLICACIONES (2015 – presente)

Publicaciones en revistas indexadas (ISI)

1. Núñez-Lillo, G., Zabala, J., Lillo-Carmona, V., Álvarez, JM., **Pedreschi, R.,** Meneses, C. 2024. NAC072 interacts with HB12, HAT9 and MYBR1 in a temporal regulatory network controlling peach fruit development. Journal of Plant Growth Regulation (accepted). Q1.

2. Chirinos, R., Rodríguez-Diaz, J., Anticona, S., Aguilar-Gálvez, A., **Pedreschi, R.,** Campos, D. 2024. Antihypertensive and antidiabetic peptides derived from in silico simulated gastrointestinal digestion of quinoa (Chenopodium quinoa) globulins and molecular docking study. Quimica Nova (accepted). Q4.

3. Campos, D., Chirinos, R., Huaraca-Espinoza, P., Aguilar-Galvez, A., García-Ríos, D., Pedreschi, F., **Pedreschi, R.** 2024. Atmospheric immersion and vacuum impregnation of gallotannins and hydrolysed gallotannins from tara pods (Caesalpinia spinosa) mitigate acrylamide and enhances the antioxidant power in potato chips. Food Chemistry, 436: 137675. Q1.

4. Chirinos, R., Delgado, J., Aguilar-Galvez, A., Figueroa-Merma, A., Pacheco-Ávalos, A., Campos, D., **Pedreschi, R.** 2023. Postharvest storage differentially modulates the enzymatic and non-enzymatic antioxidant system of the exocarp and mesocarp of Hass avocado: implications in disorders. Plants, 12: 4008, Q1.

5. Olmedo, P., Vidal, J., Ponce, E., Defilippi, B., Pérez-Donoso, A., Meneses, C., Carpentier, S., **Pedreschi, R.,** Campos-Vargas, R. 2023. Proteomic and metabolite profiling reveal unique dynamics in fatty acid metabolism during flower and berry development of table grapes. International Journal of Molecular Sciences, 24: 15360. Q1.

6. Ferreira, C., Larach, A., Besoain, X., Duarte, D., Hadad, C., **Pedreschi, R.,** Nguyen, A., 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.

7. Serrano-García, I., Domínguez-García, J., Hurtado-Fernández, E., González-Fernández, J., Hormaza, J., Beiro-Valenzuela, G., Monasterio, R., **Pedreschi, R.,** Olmo-García, L., Carrasco-Pancorbo, A. 2023. Assessing the RP-LC-MS-based metabolic profile of Hass avocados marketed in Europe from different geographical origins (Peru, Chile and Spain) over the whole season. Plants, 12: 3004, Q1.

8. 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.

9. Chirinos, R., Valente de Oliveira, T., Guzmán, F., Aguilar-Galvez, A., Figueroa-Merma, A., **Pedreschi, R.,** Campos, D. 2023. In vitro and in silico studies of antioxidant peptides from tarwi (Lupinus mutabilis) as inhibitors of angiotensin-converting enzyme and dipeptidyl peptidase IV enzyme. International Journal of Food Science and Technology, 58: 5193-5202. Q2.

10. Chirinos, R., Escobar-Mendoza, N., Figueroa-Merma, A., Valente de Oliveira, T., Guzmán, F., **Pedreschi, R.,** Campos, D. 2023. Evaluation of the antihypertensive and antidiabetic potential of peptides from the globulin fraction of quinoa (*Chenopodium quinoa*) by an in silico and in vitro approach. International Journal of Food Science and Technology, 58: 4386-4396. Q2.

11. Tamayo, M., Sepúlveda, L., Ponce, E., Saavedra, P., **Pedreschi, R.,** Cáceres-Mella, A., Alvaro, JE., Cuneo, I. 2023. Hydric behavior: Insights into primary metabolites in leaves and roots of Cabernet Sauvignon and Grenache grapevine varieties under drought stress. Horticulturae, 9: 566. Q1.

12. García-Ríos, D., Alvaro, JE., Zuñiga, M., Campos, D; Aguilar-Galvez, A., Mariotti-Celis, S., Pedreschi, F., **Pedreschi, R.** 2023. Targeted primary and secondary metabolite analysis of colored potato "Michuñe negra" grown in soilless culture and during prolonged cold storage: implications in acrylamide formation during frying. Agronomy, 13: 1209. Q1.

13. Beiro-Valenzuela, M., Serrano-García, I., Monasterio, R., Moreno-Tovar, M., Hurtado-Fernández, E., Gonzalez-Fernández, J., Hormaza I., **Pedreschi, R.,** Olmo-García, L., Carrasco-Pancorbo, A. 2023. Characterization of the polar profile of Bacon and Fuerte avocado fruits by HILIC-MS: distribution of non-structural carbohydrates, quinic and chlorogenic acids between seed, mesocarp and exocarp at different ripening stages. Journal of Agricultural and Food Chemistry, 71: 5674-

5685. Q1.

14. Olmedo, P., Zepeda, B., Delgado-Rioseco, J., Leiva, C., Moreno, A., Sagredo, K., Blanco-Herrera, F., Pedreschi, R., Infante, R., **Pedreschi, R.,** Meneses, C., Campos-Vargas, R. 2023. Metabolite profiling analysis reveals the effect of cold storage on primary metabolism in nectarine varieties with contrasting mealiness. Plants, 12: 766. Q1.

15. Gálvez Ranilla, L., Zolla, G., Afaray-Carazas, A., Vera-Vega, MA., Huanuqueño, H., Begazo- Gutiérrez, H., Chirinos, R., **Pedreschi, R.,** Shetty, K. 2023. Integrated metabolite analysis and health relevant in vitro bioactivity of white, red, and orange maize (*Zea mays* L.) from the Peruvian Andean Race Cabanita at different maturity stages. Frontiers in Nutrition, 10: 1132228. Q2.

16. Figueroa-Merma, A., Chirinos, R., García-Ríos, D., **Pedreschi, R.,** Aguilar-Gálvez, A., Campos, D. 2023. Bioactive compounds characterization of Peruvian Dysphania ambrosioides (L.) Mosyakin & Clemants leaves by GC/MS and UPLC-ESI-Q/TOF-MSn techniques. International Journal of Food Science & Technology, 58: 1219-1229. Q2.

17. Hernández, I., Molina, V., Fuentealba, C., Alvaro, JE., Defilippi, B., **Pedreschi, R.** 2023. Do rootstocks influence global fruit quality, postharvest performance and metabolite profiles of Persea americana cv. Hass? Horticulturae, 9: 184. Q1.

18. 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 & Technology, 198: 112262. Q1.

19. Olmedo, P., Núñez-Lillo, G., Vidal, J., Leiva, C., Rojas, B., Sagredo, K., Arriagada, C., Defilippi, B., Pérez-Donoso, A., Meneses, C., Carpentier, S., **Pedreschi, R.,** Campos-Vargas, R. 2023. Proteomic and metabolomic integration reveals the effects of pre-flowering cytokinin applications on central carbon metabolism in table grape berries. Food Chemistry, 411: 135498, Q1.

20. Núñez-Lillo, G., Ponce, E., Arancibia-Guerra, C., Carpentier, S., Carrasco-Pancorbo, A., Olmo- García, L., Chirinos, R., Campos, D., Campos-Vargas, R., Meneses, C., **Pedreschi, R**. 2023. A multiomics integrative analysis of color de-synchronization with softening of 'Hass' avocado fruit: A first insight into a complex physiological disorder. Food Chemistry, 408: 135215, Q1.

21. Aguilar-Gálvez, A., García-Ríos, D., Ramírez-Guzmán, D., Lindo, J., Chirinos, R., **Pedreschi, R**., Campos, D. 2023. In vitro and in vivo biotransformation of glucosinolates from mashua (Tropaelum tuberosum) by lactic acid bacteria. Food Chemistry, 404: 134631. Q1.

22. Núñez-Lillo, G., Pérez-Reyes, W., Riveros, A., Lillo-Carmona, V., Rothkegel, K., Álvarez, JM., Blanco-Herrera, F., **Pedreschi, R**., Campos-Vargas, R., Meneses, C. 2022. Transcriptome and gene regulatory network analysis reveal new transcription factors controlling harvest date in Prunus persica. Plants, 11: 3473. Q1.

23. Uarrota, V., Hernández, I., Ponce, E., Bauer, C., Maraschin, M., **Pedreschi, R**. 2022. Metabolic profiling and biochemical analysis of stored Hass avocado fruit by GC-MS and UHPLC-UV-VIS revealed oxidative stress as the main driver of "Blackspot" physiological disorder. International Journal of Food Science & Technology, 57: 7896-7916, Q2.

24. Aguilar-Gálvez, A., García-Ríos, D., Lindo, J., Ramírez-Guzmán, D., Chirinos, R., **Pedreschi, R**., Campos, D. 2022. Impact of cold storage followed by drying of mashua tuber (Tropaeolum tuberosum) on the glucosinolate content and their transformation products. International Journal of Food Science & Technology, 57: 7797-7805. Q2.

25. Chirinos, R., Villasante-Bravo, N., Aguilar-Gálvez, A., Figueroa-Merma, A., Carpentier, S., **Pedreschi, R**., Campos, D. 2022. Antioxidant, antihypertensive and antidiabetic properties of peptidic fractions obtained from tarwi (Lupinus mutabilis) protein hydrolysate and identification of promising multifunctional bioactive properties. International Journal of Food Science & Technology, 57: 7402-7411. Q2.

26. Chirinos, R., Ramona, K., Mendoza, M., Figueroa-Merma, A., Pacheco-Ávalos, D., Campos, D., **Pedreschi, R**. 2022. Effect of prolonged cold storage on the dynamics of the enzymatic and non- enzymatic antioxidant system in the mesocarp of avocado (Persea americana) cv. Hass: relationship with oxidative processes. Horticulturae, 8: 369, Q1.

27. Cisneros-Yupanki, M., **Pedreschi, R**., Aguilar-Gálvez, A., Chirinos, R., Campos, D. 2022. Fractionation and separation of peptides with antioxidant and angiotensin-I converting enzyme inhibitory activities form a quinoa (Chenopodium quinoa Willd.) hydrolysate. Journal of Microbiology, Biotechnology and Food Sciences, 12: e2686. Q4.

28. Olivares, D., García-Rojas, M., Ulloa, P; Riveros, A., **Pedreschi, R**., Campos-Vargas, R., Meneses, C., Defilippi, B. 2022. Response mechanisms of Hass avocado under 1-methyl cyclopropene (1-MCP) application at different maturity stages during cold storage. Plants, 11: 1781. Q1.

29. Arancibia-Guerra, C., Nuñez-Lillo, G., Cáceres-Mella, A., Carrera, E., Meneses, C., Kuhn, N., **Pedreschi, R**. 2022. Color de-synchronization with softening of "Hass" avocado: targeted pigment, hormone and gene expression analysis. Postharvest Biology & Technology, 194: 112067. Q1.

30. Uarrota, V., **Pedreschi, R**. 2022. Mathematical modeling of Hass avocado firmness

by destructive and non-destructive devices at different maturity stages and under two storage conditions. Folia Horticulturae, 34: 1-12. Q2.

31. Serrano-García, I., Hurtado-Fernández, H., Gonzalez-Fernandez, J., Hormaza, J.I., **Pedreschi, R**., Olmo-García, L., Carrasco-Pancorbo, A. Prolonged on-tree maturation vs. cold storage of Hass avocado fruit: changes in metabolites of bioactive interest at edible ripeness. Food Chemistry, 394: 133447. Q1.

32. **Pedreschi, R**., Ponce, E., Hernández, I., Fuentealba, C., Urbina, A., González-Fernández, J., Hormaza, I., 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.

33. Balic, I., Olmedo, P., Zepeda, B., Rojas, B., Ejsmentewic, T., Barros, M., Aguayo, D., Moreno, A., **Pedreschi, R**., Meneses, C., Campos-Vargas, R. 2022. Metabolomic and biochemical analysis of mesocarp tissues from table grape berries with contrasting firmness reveals differences in cell wall composition associated to harvest and cold storage. Food Chemistry, 389: 133052, Q1.

34. Fuentealba, C., Vidal, J., Zulueta, C., Ponce, E., Uarrota, V., Defilippi, B., **Pedreschi, R**. 2022. Controlled atmosphere storage alleviates Hass avocado black spot disorder: implications of the skin antioxidant defense system. Horticulturae, 8: 369. Q1.

35. Beyer, C., Barrientos-Sanhueza, C., Ponce, E., **Pedreschi, R**., Cuneo, I., Alvaro, JE. 2022. Differential hydraulic properties and primary metabolism in fine root of avocado trees rootstocks. Plants, 11: 1059. Q1.

36. Nuñez-Lillo, G., Ponce, E., Alvaro, JA., Campos, D., Meneses, C., Campos-Vargas, R., Carpentier, D., Fuentealba, C., **Pedreschi, R**. 2022. Proteomics analysis reveals new insights into surface pitting of sweet cherry cultivars displaying contrasting susceptibility. Journal of Horticulture Science & Biotechnology, 97: 615-625. Q2.

37. Hernández, I., Uarrota, V., Fuentealba, C., Paredes, D., Defilippi, B., Campos-Vargas, R., Nuñez, G.,Carrera, E., Meneses, C., Hertog, M., **Pedreschi, R**. 2022. Transcriptome and hormone analysis reveals differences in physiological age of Hass avocado fruit. Postharvest Biology & Technology, 185: 111806. Q1.

38. Pedreschi, F., Matus, J., Bunger, A., **Pedreschi, R**., Huamán-Castilla, N., Mariotti-Celis, S. 2022. Effect of the integrated addition of a red Tara pods (Caesalpinia spinosa) extract and NaCl over the neo-formed contaminants content and sensory properties of crackers. Molecules, 27: 1020. Q2.

39. Campos, D., García-Ríos, D., Aguilar-Gálvez, A., Chirinos, R., Pardo-Flores, A., **Pedreschi, R**. 2022. Comparison of conventional and ultrasound assisted

extractions of polyphenols from Inca Muña (*Clinopodium bolivianum*) and their characterisation using UPLC-ESI-Q/TOF-MSn and UPLC-PDAtechniques. Journal of Food Processing & Preservation, 46: e16310. Q3.

40. 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*; doi: 10.1016/j.postharvbio.2021.111494

41. Hernández I, Uarrota V, Paredes D, Fuentealba C, Defilippi BG, 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*; doi: 10.1016/j.postharvbio.2020.111457

42. 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*; doi: 10.1016/j.foodchem.2020.128307

43. Beyer C, Cuneo I, Alvaro JE, **Pedreschi R** (2021). Confronting the differential physiology of 'Hass' avocado grafted onto two different rootstocks in a controlled environment. ***Acta Horticulturae*** *1327*; doi: 10.17660/ActaHortic.2021.1327.16

44. 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*(6); doi: 10.3390/antibiotics10060664

45. Beyer C, Cuneo I, Alvaro JE, **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*; doi: https://doi.org/10.1016/j.scienta.2020.109830

46. Uarrota V, Maraschin M, de Bairros Â, Pedreschi R (2021) Factors affecting the capsaicinoid profile of hot peppers and biological activity of their non-pungent analogs (Capsinoids) present in sweet peppers. ***Critical Reviews in Food Science and Nutrition*** *61*(4); doi: 10.1080/10408398.2020.1743642

47. Lindh V, Uarrota V, Zulueta C, Alvaro JE, Valdenegro M, Cuneo I, 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*** *11*(9); doi: 10.3390/agronomy11091699

48. Covarrubias M, Lillo-Carmona V, Melet L, Benedetto G, Andrade D, Maucourt M, Deborde C, Fuentealba C, Moing A, Valenzuela M, **Pedreschi R,** 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*; doi: 10.3389/fpls.2020.604133

49. 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]; doi: 10.1016/j.fbio.2021.100882

50. **Pedreschi R**, Hernández I, Uarrota V, Fuentealba C, Defilippi B, Campos-Vargas R, Meneses C, Hertog M (2021). Modeling the softening behavior of Chilean 'Hass' avocado to commercially segregate different batches destined for local and distant markets. ***Acta Horticulturae*** *1327*; doi: 10.17660/ActaHortic.2021.1327.75

51. Huaman-Alvino C, Chirinos R, Gonzales-Pariona F, **Pedreschi R**, Campos D (2021). Physicochemical and bioactive compounds at edible ripeness of eleven varieties of avocado (Persea americana) cultivated in the Andean Region of Peru. ***International Journal of Food Science and Technology***; doi: 10.1111/ijfs.15287

52. Rojas B, Suárez-Vega F, Saez-Aguayo S, Olmedo P, Zepeda B, Delgado-Rioseco J, Defilippi B, **Pedreschi R**, Meneses C, Pérez-Donoso A, Campos-Vargas R (2021). Pre-anthesis cytokinin applications increase table grape berry firmness by modulating cell wall polysaccharides. ***Plants*** *10*(12); doi: 10.3390/plants10122642

53. Ranilla L Rios-Gonzales B, Ramírez-Pinto M, 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*(11); doi: 10.3390/metabo11110722

54. Chirinos R, Campos D, Martínez S, Llanos S, Betalleluz-Pallardel I, García-Ríos D, **Pedreschi R** (2021). The effect of hydrothermal treatment on metabolite composition of hass avocados stored in a controlled atmosphere. ***Plants*** *10*(11); doi: 10.3390/plants10112427

55. Núñez-Lillo G, Ulloa-Zepeda L, Pavez C, Riveros A, Blanco-Herrera F, Campos-Vargas R, **Pedreschi R**, Meneses C (2021). Unravelling the molecular regulation mechanisms of slow ripening trait in prunus persica**.** ***Plants*** *10*(11); doi: 10.3390/plants10112380

56. Mejía-Águila R, Aguilar-Galvez 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*(1); doi: 10.1111/ijfs.14654

57. 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*(6); doi: 10.3390/antibiotics10060663

58. Alvarado L, Saa S, Cuneo IF, **Pedreschi R**, Morales J, Larach A, Barros W, Guajardo J, 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; doi: 10.1094/PDIS-03-19-0455-RE

59. Aguilar-Galvez A, Pedreschi R, Carpentier S, Chirinos R, García-Ríos D, Campos D (2020) Proteomic analysis of mashua (Tropaeolum tuberosum) tubers subjected to postharvest treatments. ***Food Chemistry*** 305; doi: 10.1016/j.foodchem.2019.125485

60. Campos D, Teran-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 and Technology*** 55; doi: 10.1111/ijfs.14474

61. Chirinos R, **Pedreschi R**, Campos D (2020). Enzyme-assisted hydrolysates from sacha inchi (Plukenetia volubilis) protein with in vitro antioxidant and antihypertensive properties. ***Journal of Food Processing and Preservation*** *44*(12); doi: 10.1111/jfpp.14969

62. Lillo-Carmona V, Espinoza A, Rothkegel K, Rubilar M, Nilo-Poyanco R, **Pedreschi R**, Campos-Vargas R, Meneses C (2020). Identification of metabolite and lipid profiles in a segregating peach population associated with mealiness in prunus persica (L.) batsch. ***Metabolites*** *10*(4); doi: 10.3390/metabo10040154

63. Chirinos R, **Pedreschi R**, Velásquez-Sánchez M, Aguilar-Galvez A, Campos D (2020). In vitro antioxidant and angiotensin I-converting enzyme inhibitory properties of enzymatically hydrolyzed quinoa (Chenopodium quinoa) and kiwicha (Amaranthus caudatus) proteins. ***Cereal Chemistry*** *97*(5); doi: 10.1002/cche.10317

64. Chirinos R, Cerna E, **Pedreschi R,** Calsin M, Aguilar-Galvez A, Campos D

(2020). Multifunctional in vitro bioactive properties: Antioxidant, antidiabetic, and antihypertensive of protein hydrolyzates from tarwi (Lupinus mutabilis Sweet) obtained by enzymatic biotransformation. ***Cereal Chemistry***; doi: 10.1002/cche.10382

65. Porras-Mija I, Chirinos R, Garcia-Rios D, Aguilar-Galvez A, Huaman-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 subsp. peruviana). ***Journal of Berry Research*** 10; doi: 10.3233/JBR-190439

66. García-Ríos D, Aguilar-Galvez A, Chirinos R, **Pedreschi R,** Campos D (2020) Relevant physicochemical properties and metabolites with functional properties of two commercial varieties of Peruvian Pouteria lucuma. ***Journal of Food Processing and Preservation*** *44*(6); doi 10.1111/jfpp.14479

67. Uarrota V, Hernandez I, Ponce E, Vidal J, Fuentealba C, Defilippi B, 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 and Biotechnology*** *95*(6); doi: 10.1080/14620316.2020.1763860

68. Vergara-Pulgar C, Rothkegel K, González-Agüero M, **R Pedreschi**, Campos-Vargas R, Defilippi B & Meneses C (2019) De novo assembly of Persea americana cv. 'Hass' transcriptome during fruit development. ***BMC Genomics***, 20; doi: 10.1186/s12864-019-5486-7.

69. Ranilla L, Huamán-Alvino C, Flores-Báez O, Aquino-Méndez E, Chirinos R, Campos D, Sevilla R, Fuentealba C, **R Pedreschi**, Sarkar D & Shetty K (2019) Evaluation of phenolic antioxidant-linked in vitro bioactivity of Peruviancorn (Zea mays L.) diversity targeting for potential management of hyperglycemia and obesity. ***Journal of Food Science and Technology***, 56;doi: 10.1007/s13197-019-03748-z.

70. García-Mazcorro J, **R Pedreschi**, Yuan J, Kawas J, Chew B, Dowd S & Noratto G (2019) Apple consumption is associated with a distinctive microbiota, proteomics and metabolomics profile in the gut of Dawley Sprague rats fed a high-fat diet. ***PLOS ONE***, 14, e0212586; doi: 10.1371/journal.pone.0212586.

71. Carrasco-Valenzuela T, Muñoz-Espinoza C, Riveros A, **pedreschi R**, Arús 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 Science*** *10*, [1581]; doi: 10.3389/fpls.2019.01581

72. Campos D, Aguilar-Gálvez A, García-Ríos D, Chirinos R, Limaymanta E & **R**

Pedreschi (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***; doi: 10.1111/ijfs.14150.

73. Gavicho V, Fuentealba C, Hernández I, Defilippi-Bruzzone B, Meneses C, Campos-Vargas R, Lurie S, Hertog M, Carpentier S, Poblete-Echeverría C &**R Pedreschi** (2019) Integration of proteomics and metabolomics data of earlyand middle season Hass avocados under heat treatment. ***Food Chemistry***, 289; doi: 10.1016/j.foodchem.2019.03.090.

74. **Pedreschi R**, Uarrota V, Fuentealba C, Alvaro JE, Olmedo P, Defilippi BG, Meneses C, Campos-Vargas R (2019). Primary metabolism in avocado fruit. ***Frontiers in Plant Science*** *10* [795]; doi: 10.3389/fpls.2019.00795

75. Rodríguez F, **R Pedreschi**, Fuentealba C, De Kartzow A, Olaeta J & Álvaro Juan 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; doi: 10.1016/j.scienta.2018.09.059.

76. Chirinos R, Ochoa K, Aguilar-Gálvez A, Carpentier S, **R Pedreschi** & Campos D (2018) Obtaining of peptides with antioxidant and antihypertensiveproperties from cañihua protein (Chenopodium pallidicaule Aellen). ***Journal of Cereal Science***, 83; doi: 10.1016/j.jcs.2018.07.004.

77. Zepeda B, Olmedo P, Ejsmentewicz T, Sepúlveda P, Balic I, Balladares C, Delgado-Rioseco J, Fuentealba C, Moreno A, Defilippi B, Meneses C, **R Pedreschi** & Campos-Vargas R (2018) Cell wall and metabolite compositionof berries of Vitis vinifera (L.) cv Thompson Seedless with different firmness.***Food Chemistry***, 268; doi: 10.1016/j.foodchem.2018.06.065.

78. García-Mazcorro J, **R Pedreschi**, Chew B, Dowd S, Kawas J & Noratto G (2018) Dietary Supplementation with Raspberry Extracts Modifies the Fecal Microbiota in Obese Diabetic db/db Mice. ***Journal of microbiology and biotechnology***, 28; doi: 10.4014/jmb.1803.03020.

79. Pedreschi F, Saavedra I, Bunger A, Zúñiga R, **R Pedreschi**, Chirinos R, Campos D & Mariotti-Celis M (2018) Tara pod (Caesalpinia spinosa) extract mitigates neo-contaminant formation in Chilean bread preserving their sensory attributes. ***LWT***, 95; doi: 10.1016/j.lwt.2018.04.086.

80. Hernández I, Fuentealba C, Olaeta J, Poblete-Echeverría C, Defilippi B, González-Agüero M, Campos-Vargas R, Lurie S & **R Pedreschi** (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; doi: 10.1016/j.scienta.2017.07.025.

81. Campos D, Mescua L, Aguilar-Galvez A, Chirinos R & **R Pedreschi** (2017) Effect of Yacon (Smallanthus sonchifolius) fructooligosaccharide purificationtechnique using activated charcoal or ion exchange fixed bed column on recovery, purity and sugar content. ***International Journal of Food Science & Technology***, 52; doi: 10.1111/ijfs.13551.

82. Ahumada J, Fuentealba C, Olaeta J, Martínez P, **R Pedreschi**, Shetty K, Chirinos R, Campos D & Ranilla L (2017) Bioactive compounds of loquat (Eriobotrya japonica Lindl.) cv. Golden Nugget and analysis of the in vitro functionality for hyperglycemia management. ***Ciencia e investigaciónagraria***, 44, 271-283; doi: 10.7764/rcia.v44i3.1816.

83. Terán H, Chirinos R, **R Pedreschi** & Campos D (2017) Enhanced antioxidant properties of tara gallotannins by thermal hydrolysis and its synergistic effectswith α-tocopherol, ascorbyl palmitate and citric acid on sacha inchi oil. ***Journal of Food Process Engineering***, 41; doi: 10.1111/jfpe.12613.

84. Fuentealba C, Hernández I, Olaeta J, Defilippi B, Meneses C, Campos R, Lurie S, Carpentier S & **R Pedreschi** (2017) New insights into the heterogeneous ripening in Hass avocado via LC–MS/ MS proteomics. ***Postharvest Biology and Technology***, 132, 51-61; doi: 10.1016/j.postharvbio.2017.06.001.

85. Fuentealba C, I Hernandez, S Saa, L Toledo, P Burdiles, R Chirinos, D Campos, P Brown & **R Pedreschi** (2017) Colour and in vitro quality attributesof walnuts from different growing conditions correlate with key precursors of primary and secondary metabolism. ***Food Chemistry*** 232: 664-672; doi: 10.1016/j.foodchem.2017.04.029

86. Betalleluz-Pallardel I, M Inga, L Mera, **R Pedreschi**, D Campos & R Chirinos(2017) Optimisation of extraction conditions and thermal properties of protein from the Andean pseudocereal canihua (*Chenopodium pallidicaule* Aellen). ***International Journal of Food Science and Technology*** 52: 1026-1034; doi: 10.1111/ijfs.13368

87. Chirinos R, M Aquino, **R Pedreschi** & D Campos (2017) Optimized Methodology for Alkaline and Enzyme-Assisted Extraction of Protein from Sacha Inchi (*Plukenetia volubilis*) Kernel Cake. ***Journal of Food Process Engineering*** 40; doi: 10.1111/jfpe.12412

88. Riquelme J, JA Olaeta, L Galvez, P Undurraga, C Fuentealba, A Osses, J Orellana, J Gallardo & **R Pedreschi** (2016) Nutritional and functional characterization of wild and cultivated Sarcocornia neei grown in Chile.***Ciencia e Investigación Agraria*** 43: 283-293; doi: 10.4067/S0718-16202016000200011

89. Fuentealba C, **R Pedreschi**, I Hernandez & J Saavedra (2016) A statistical approach for assessing the heterogeneity of Hass avocados subjected to different postharvest abiotic stresses. ***Ciencia e Investigación Agraria*** 43: 356-365; doi: 10.4067/S0718-16202016000300002

90. Hernández I, C Fuentealba, J.A Olaeta, S Lurie, B Defilippi, R Campos- Vargas & **R Pedreschi** (2016) Factors associated with postharvest ripening heterogeneity of Hass avocados (*Persea americana* Mill). ***Fruits*** 71: 259-268; doi: 10.1051/fruits/2016016
91. Campos D, A Aguilar-Galvez & **R Pedreschi** (2016) Stability of fructooligosaccharides, sugars and colour of yacon (*Smallanthus sonchifolius*) roots during blanching and drying. ***International Journal of Food Science and Technology*** 51: 1177-1185; doi: 10.1111/ijfs.13074

92. Chirinos R, O Necochea, **R Pedreschi** & D Campos (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; doi: 10.1111/ijfs.13049

93. **Pedreschi R**, S Hollak, H Harkema, E Otma, P Robledo, E Westra, DSomhorst, R Ferreyra & BG Defilippi (2016) Impact of postharvest ripening strategies on 'Hass' avocado fatty acid profiles. ***South African Journal of Botany*** 103: 32-35; doi: 10.1016/j.sajb.2015.09.012

94. Chirinos R, D Zorrilla, A Aguilar-Galvez, **R Pedreschi** & D Campos (2016) Impact of roasting on fatty acids, tocopherols, phytosterols, and phenolic compounds present in *Plukenetia huayllabambana* seed. ***Journal of Chemistry*** 2016: 6570935; doi: 10.1155/2016/6570935

95. Fuentealba C, L Galvez, A Cobos, JA Olaeta, BG Defilippi, R Chirinos, D Campos & **R Pedreschi** (2016) Characterization of main primary and secondary metabolites and in vitro antioxidant and antihyperglycemic properties in the mesocarp of three biotypes of *Pouteria lucuma.* ***Food Chemistry*** 190: 403-411; doi: 10.1016/j.foodchem.2015.05.111

96. Mendieta B, JA Olaeta, **R Pedreschi** & P Undurraga (2016) Reduction of cold damage during cold storage of Hass avocado by a combined use of pre- conditioning and waxing. ***Scientia Horticulturae*** 200: 119-124; doi: 10.1016/j.scienta.2016.01.012

97. Chirinos R, **R Pedreschi**, G Dominguez & D Campos (2015) Comparison of the physicochemical and phytochemical characteristics of the oil of two Plukenetia species. ***Food Chemistry*** 173: 1203-1206; doi: 10.1016/j.foodchem.2014.10.120

98. **Pedreschi R** & S Lurie (2015) Advances and current challenges in understanding post-harvest abiotic stresses in perishables. ***PostharvestBiology & Technology*** 107: 77-89; doi: 10.1016/j.postharvbio.2015.05.004

99. Guerrero-Ochoa M, **R Pedreschi** & R Chirinos (2015) Optimized methodology for the extraction of protein from quinoa (*Chenopodium quinoa* Willd.). ***International Journal of Food Science & Technology*** 50: 1815- 1822; doi: 10.1111/ijfs.12834

100. Chirinos R, **R Pedreschi**, I Cedano & D Campos (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; doi: 10.1111/jfpp.12511

II. EXPERIENCIA EN PROYECTOS DE INVESTIGACION (2018 - presente)

1. A multiomics approach to study the effects of temperature oscillations on the fatty acid metabolism of avocado cv. 'Hass' during fruit growth and development
   Financiamiento: Fondecyt Postdoctorado – ANID N°3240084 Rol: Patrocinante
   Duración: 2024-2027
   Año de adjudicación: 2024

2. Effect of endogenous and exogenous natural antioxidants in the formation and mitigation of neo- formed contaminants and dietary advanced glycation end products in starchy food matrices Financiamiento: Fondecyt Regular – ANID N°1240031
   Rol: Co-investigador Duración: 2024-2028
   Año de adjudicación: 2024

3. Effect of high tunnel-induced microenvironment on methylome, transcriptome and metabolome during fruit development in sweet cherry (*Prunus avium*)
   Financiamiento: Fondecyt Regular – ANID N°1240628 Rol: Co-investigador
   Duración: 2024-2028
   Año de adjudicación: 2024

4. Tree-fruit performance and plant adaptation mechanisms to water deficit conditions of avocado Hass grafted on commercial rootstocks in soilless cultivation system
   Financiamiento: Fondecyt Regular – ANID N°1240260 Rol: Co-investigador
   Duración: 2024-2028
   Año de adjudicación: 2024

5. Towards a sustainable fruit production: deciphering the effect of rootstock x

scion interaction on theadaptability of stone fruit trees (prunus spp.) to climate change.
Financiamiento: Concurso de Fortalecimiento al Desarrollo Científico Tecnológico de CentrosRegionales ANID - R23F0002
Rol: Co-investigadorDuración: 2023-2027
Año de adjudicación: 2023

6. Fortalecimiento de las capacidades y competencias para desarrollar investigación en bioaccesibilidad, bioactividad y bioactividad y empleo de tecnologías emergentes en compuestos bioactivosprovenientes de la biodiversidad nativa importantes por su potencial funcional y nutracéutico
Financiamiento: Contrato N° PE501085296-2023-Prociencia-BM, Concytec, Perú
Rol: Co-investigadorDuración: 2023-2026
Año de adjudicación: 2023

7. Obtención de un producto fermentado con características: probiótica, prebiótica, antihipertensiva y antioxidante, a partir de una mezcla de torta desgrasada de Sacha Inchi (*Plukenetia volubilis*) y fructooligosacáridos de Yacón (*Smallanthus sonchifolius*)
Financiamiento: Contrato N° PE501083311-2023-Prociencia, Concytec, Perú
Rol: Co-investigador
Duración: 2023-2025
Año de adjudicación: 2023

8. Estudio de la formación y reducción de neocontaminantes utilizando antioxidantes naturales, en sistemas modelos y en la elaboración de galletas dulces a base a cereales andinos, quinua (*Chenopodium quinoa*) y cañihua (*Chenopodium pallidicaule*)
Financiamiento: Contrato N° PE501082111-2023-Prociencia, Concytec, Perú
Rol: Co-investigador
Duración: 2023-2025
Año de adjudicación: 2023

9. Evaluación de las características químicas y prebióticas in vitro de los pectooligosacaridos (POS) obtenidos por hidrólisis enzimática de la pectina, empleando poligalacturonasa, pectato y pectín liasas Financiamiento: Contrato N° PE501082134-2023-Prociencia, Concytec, Perú
Rol: Co-investigadorDuración: 2023-2025

10. Una alternativa en la fortificación con hierro: obtención, purificación y caracterización de péptidos con capacidad queladora de Fe^{2+} a partir de la proteína del tarwi (Lupinus mutabilis), empleando enfoques *in vitro* e *in silico*
Financiamiento: Contrato N° PE501082412-2023-Prociencia, Concytec, Perú
Rol: Co-investigador
Duración: 2023-2025

Año de adjudicación: 2023

11. Understanding carbohydrate dynamics at the interplay between cold acclimation/deacclimation pathways and dormancy release in sweet cherry as influenced by changing climate conditions Financiamiento: Fondecyt Regular – ANID N°1230163
    Rol: Co-investigador Duración: 2023-2027
    Año de adjudicación: 2023

12. Nuevas herramientas metabolómicas para impulsar la industria del aguacate español Financiamiento: Ayudas correspondientes a la convocatoria de 2021 de «PROYECTOS DE GENERACIÓN DE CONOCIMIENTO» en el marco del Programa Estatal para Impulsar la Investigación Científico-Técnica y su Transferencia, del Plan Estatal de Investigación Científica, Técnica y de Innovación PID2021-128508OB-I00.
    Rol: Colaborador internacional Duración: 2022 - 2024
    Año de adjudicación: 2022

13. Millennium Institute Center for Genome Regulation Financiamiento: Iniciativa Milenio ANID N° ICN2021_044 Rol: Investigador Principal
    Duración: 2022 – 2032 Año de adjudicación: 2022

14. Valoración de la proteína de tora de sacha inchi (*Plukenetia volubilis*), subproducto de la industriade aceite asistido por tecnologías verdes para la obtención de hidrolizados proteicos multifuncionales: antioxidantes, antihipertenstivos, hipoglucemiantes, antiobesidad y fijadores de hierro. Financiamiento: Proyectos de Investigación Aplicada 2022-02, PE501077970-2022-PROCIENCIA Rol: Investigador asociado internacional
    Duración: 2022 - 2024 Año de adjudicación: 2022

15. Obtención y caracterización de compuestos fenólicos y terpenoides a partir de plantas utilizadas en medicina tradicional mediante tecnologías alternativas de extracción, y evaluación de su potencial antimicrobiano y antioxidante in vitro Financiamiento: Proyectos de Investigación Básica 2022-02, PE501077921-2022-PROCIENCIA Rol: Investigador asociado internacional
    Duración: 2022 – 2024 Año de adjudicación: 2022

16. Skin color de-synchronization with softening of Hass avocado: dissecting the problem by integration of omics and targeted hormone analysis at harvest and during postharvest storage
    Financiamiento: Investigador responsable Rol: Investigador
    Duración: 2022 - 2026 Año de adjudicación: 2022

17. At the right time and at the right place: the role of cell wall calcium on fruit softening and exocarp disorders during storage on avocado (*Persea*

americana Mill) grown under water deficit Financiamiento: Fondecyt Regular – ANID N°1220484
Rol: Co-Investigador Duración: 2022 – 2026 Año de adjudicación: 2022

18. Cell wall remodeling in sweet cherry with surface pitting: an underlying response during cold stressFinanciamiento: Fondecyt Regular – ANID N°1221616
Rol: Co-Investigador Duración: 2022 – 2026 Año de adjudicación: 2022

19. Unravelling the biophysical modulations of the soil-mucilage-root interface in response to droughtand its impact on stomatal responses in different crop species (SoMuRo)
Financiamiento: Fondecyt Regular – ANID N°1220235Rol: Co-Investigador
Duración: 2022 - 2026 Año de adjudicación: 2022

20. Strenghtening of a smart breeding platform to accelerate the selection of new plant species adaptedto water restriction scenario in Chile
Financiamiento: Fondo de Investigación Estratégica en Sequía N°FSEQ210014 – ANIDRol: Investigador Principal
Duración: 2022 – 2023 Año de adjudicación: 2021

21. 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: 2021-2024
Año adjudicación: 2021

22. Study of cytokinin applications in early stages of berry development on changes in cell wallmetabolism and its effect on the grape firmness in Vitis vinifera
Financiamiento: Fondecyt Regular-ANID N°1200139Rol: Co-Investigador
Duración: 2020-2024
Año de adjudicación: 2020

23. Evaluación del sistema de defensa antioxidante y metabolitos implicados en el daño por frío de lapalta (Persea americana) Hass para comprender y mitigar este desorden fisiológico.
Financiamiento: Fondecyt contrato 369-2019, Concytec, PerúRol: Investigador asociado internacional
Duración: 2019-2022
Año adjudicación: 2019

24. Red de investigación Perú-Chile: compartiendo experiencias y desafíos relacionados a laBiotecnología Vegetal, Industrial & Bioprocesos Principal.
Financiamiento: Concurso de apoyo a la cooperación en investigación Chile-Perú, redes deinvestigación en Biotecnología, ANID, N° REDBIO0001.

Rol: Investigador responsable Duración: 2019-2022
Año adjudicación: 2019

25. Formation and mitigation of potentially toxic compounds generated by heat processing starchy and protein matrixes.
    Financiamiento: Fondecyt Regular - ANID N°1190080 Rol: Co-investigador
    Duración: 2019-2023
    Año de adjudicación: 2019

26. Metabolic profiling of “Black spot disorder” in stored Hass avocado (*Persea america* Mill) fruit Financiamiento: Fondecyt Postdoctorado - ANID N°3190055
    Rol: Patrocinante Duración: 2019-2022
    Año de adjudicación: 2019

27. Physiological status at harvest: key to predict postharvest ripening behaviour of Chilean Hass avocado.
    Financiamiento: Fondecyt Regular N°1180303, ANID Rol: Investigador responsable
    Duración: 2018-2022
    Año de adjudicación: 2018