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AFFILIATIONS

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ACADEMIC DEGREES AND PROFESSIONAL STUDIES

2018 Doctor in Science of Natural Resources, Universidad de La Frontera, Chile.

2014 Master in Science of Natural Resources, Universidad de La Frontera, Chile.

2012 Agronomist, Universidad Católica de Temuco, Chile.

2001 Bachelor in Agronomy, Universidad Católica de Temuco, Chile.

DOCTORAL THESIS

2018. Role of abscisic acid on anthocyanin biosynthesis under drought stress in *Aristotelia chilensis* (Mol.) plants. Doctoral Program in Science of Natural Resources, Universidad de La Frontera, Temuco, Chile. Tutor: Dra. Marjorie Reyes Díaz. Departamento de Ciencias Químicas y Recursos Naturales, Facultad de Ingeniería y Ciencias, Universidad de La Frontera, Temuco, Chile.

POSTDOCTORAL RESEARCH

2020-2023. "Role of salicylic acid as a modulator of abscisic acid biosynthesis to ameliorate moderate drought stress maintaining photosynthesis and plant growth in maqui (*Aristotelia chilensis*): A tool to improve fruit yield, quality and water-use efficiency". Postdoctoral Project FONDECYT N°3200594.

RESEARCH VISITS

2016. Phytohormone Biochemistry and Molecular Biology Laboratory, Department of Horticultural Science, University of Minnesota, Minnesota, USA. Dr. Jerry D. Cohen.

RESEARCH LINES

Plant Physiology and Biochemistry

Phytohormone Biochemistry

Mechanisms involved in abiotic stresses in plants

Plant Molecular Biology

PUBLICATIONS

- 1.- Alarcón-Poblete E, **González-Villagra J**, Magnum de Oliveira Silva F, Nunes-Nesi A, Inostroza-Blancheteau C, Alberdi M, Reyes-Díaz M. 2020. Metabolic responses of *Vaccinium corymbosum* L. cultivars to Al³⁺ toxicity and gypsum amendment. *Environmental and Experimental Botany* 176: 104119.
- 2.- **González-Villagra J**, Reyes-Díaz M, Alberdi M, Mora ML, Ulloa-Inostroza EM, Ribera-Fonseca AE. 2020. Impact of Cold-Storage and UV-C Irradiation Postharvest Treatments on Quality and Antioxidant Properties of Fruits from Blueberry Cultivars Grown in Southern Chile. *Journal of soil science and plant nutrition* DOI 10.1007/s42729-020-00247-5
- 3.- **González-Villagra J**, Reyes-Díaz M, Alberdi M, Acevedo P, Loyola R, Tighe-Neira R, Arce-Johnson P, Inostroza-Blancheteau C. 2020. Solar UV irradiation effects on photosynthetic performance, biochemical markers, and gene expression in highbush blueberry (*Vaccinium corymbosum* L.) cultivars. *Scientia Horticulturae* 259(3): 108816.
- 4.- Millaleo R, Alvear M, Aguilera P, **González-Villagra J**, Mora ML, Alberdi M, Reyes-Díaz M. 2020. Mn Toxicity Differentially Affects Physiological and Biochemical Features in Highbush Blueberry (*Vaccinium corymbosum* L.) Cultivars. *Journal of soil science and plant nutrition* DOI 10.1007/s42729-019-00166-0
- 5.- **González-Villagra J**, Cohen J.D, Reyes-Díaz M. 2019. Abscisic acid is involved on phenolic compounds biosynthesis, mainly anthocyanin in leaves of *Aristotelia chilensis* plants (Mol.) subjected to drought stress. *Physiologia Plantarum* 165(4) 855-866.
- 6.- **González-Villagra J**, Rodrigues-Salvador A, Nunes-Nesi A, Cohen J.D, Reyes-Díaz M. 2018. Age-related mechanism and its relationship with secondary metabolism and abscisic acid in

Aristotelia chilensis (Mol.) plants subjected to drought stress. *Plant Physiology Biochemistry* 124:136-145.

- 7.- **González-Villagra J**, Kurepin LV, Reyes-Díaz M. 2017. Evaluating the involvement and interaction of abscisic acid and miRNA156 in the induction of anthocyanin biosynthesis in drought-stressed plants. *Planta* 246(2) 299-312

BOOKS AND CHAPTER BOOKS

1. Ulloa E, Ulloa E, Peña-Sanhueza D, **González-Villagra J**, Alberdi M, Reyes-Díaz M. 2017. Native Chilean Fruits and the Effects of their Functional Compounds on Human Health. In: *Superfood and Functional Food-An Overview of their processing and utilization*. InTech.
2. Reyes-Díaz M, Ulloa E, **González-Villagra J**, Ivanov AG and Kurepin LV. 2016. Phytohormonal responses to soil acidity in plants. In: *Plant hormones under challenging environment factors*. Springer.

OTHER PUBLICATIONS (reports)

1. González-Villagra, J. 2018. El maqui como una alternativa ante el déficit hídrico. *Revista Campo y Tecnología*. Año 3, Ed 2018.

RESEARCH PROJECTS

2020-2022: Role of salicylic acid as a modulator of abscisic acid biosynthesis to ameliorate moderate drought stress maintaining photosynthesis and plant growth in maqui (*Aristotelia chilensis*): A tool to improve fruit yield, quality and water-use efficiency. **Investigador Responsable**. Fondecyt Postdoctorado N° 3200594

2019: Rol del ácido salicílico sobre el sistema de defensa antioxidante, rendimiento fotosintético, uso eficiente del agua y crecimiento en plantas de maqui (*Aristotelia chilensis*) sometidas a estrés hídrico. **Investigador Responsable**. UCT 2019EM-JG-06.

PRESENTATION AT NATIONAL/INTERNATIONAL CONGRESSES

1. Pino-Jaramillo, R., Ribera-Fonseca, A., Calderón, C., Reyes-Díaz, M., **González-Villagra, J**. 2019. Jasmonato de metilo como una herramienta para reducir los niveles tóxicos de aluminio y manganeso en plantas de arándano (*Vaccinium corymbosum*) cv. Legacy. IV Congreso Chileno de Berries, Valdivia.

2. **González-Villagra, J.** Cohen J.D. Reyes-Díaz, M. 2017. Abscisic acid regulates anthocyanin biosynthesis in *Aristotelia chilensis* (Mol.) plants subjected to drought stress. 6th International Workshop: Advances in Science and Technology of Bioresources, 29-30 November, 01 December, Pucon, Chile.
3. **González-Villagra, J.** and Reyes-Díaz, M. 2016. Abscisic acid analysis by GC/MS in *Aristotelia chilensis*. In International Plant Growth Substances Association Meeting 21 Junio – 25 Junio, Toronto, Canadá.
4. **González-Villagra, J.** Reyes-Díaz, M. 2015. Efecto del estrés por sequía sobre parámetros fisiológicos y producción de antocianinas en *Aristotelia chilensis* (Mol.). II Congreso Chileno Berries, Temuco, Chile.
5. **González-Villagra, J.** and Reyes-Díaz, M. 2015. Anthocyanin and physiological responses to drought stress in *Aristotelia chilensis* plants. In Plant Abiotic Stress Tolerance III Conference. 29 Junio – 1 Julio, Vienna, Austria.
6. **González-Villagra, J.,** Mora, M.L. Alberdi, M., Reyes-Díaz, M. 2014. Antioxidant compounds in leaves of *Aristotelia chilensis* (Mol. Stuntz) from different sites of Southern Chile. In: XV Congreso Latinoamericano y XXX Reunión Argentina de Fisiología Vegetal. 21 -24 Septiembre, Mar del Plata, Argentina.
7. **González-Villagra, J.,** Mora, M.L. Alberdi, M., Reyes-Díaz, M. 2014. Comparative study between two seasons of the potential antioxidant in *Aristotelia chilensis* (Mol. Stuntz) leaves from different sites of Southern Chile”, In: “II Symposium of Soil, Plant and Microorganism”, Pucón, Chile.
8. **González-Villagra, J,** Mora, M.L., Alberdi, M. and Reyes-Díaz, M. 2013. Antioxidant compounds of maqui (*Aristotelia chilensis* (Mol.)) leaves from three different zones in Southern Chile. 4th International Workshop: Advances in Science and Technology of Natural Resources.

ACADEMIC ACTIVITIES

Undergraduate courses:

2018 to date. AGR1109 Agronomy introduction, Universidad Católica de Temuco, Chile.

2018 to date. AGRO1159 Advances in Agronomy, Universidad Católica de Temuco, Chile.

Outreach activities

2018 to date. Collaboration in EXPLORA-CONICYT Program, Temuco, Chile.

Awards and Distinctions

2013. Premio Mejor Estudiante Agronomía de Chile, otorgado por la Asociación Nacional de Productores de Semillas de Chile (ANPROS). Descripción: otorgado por excelencia académica y méritos personales, seleccionado entre todas las Universidades Chilenas.
2012. Premio Mejor Egresado/Titulado de la promoción 2011 de la Facultad de Recursos Naturales de la Universidad Católica de Temuco, otorgado por el Colegio de Ingenieros Agrónomos de Chile.
2012. Premio Mejor Titulado carrera de Agronomía, otorgado por la Escuela de Agronomía de la Universidad Católica de Temuco.
2012. Premio Mejor Rendimiento Académico de la Facultad de Recursos Naturales de la Universidad Católica de Temuco, otorgado por la Facultad de Recursos Naturales, Universidad Católica de Temuco.
- 2012-2018: Doctoral CONICYT fellowship, Gobierno de Chile, Comisión Nacional de Investigación Científica y Tecnológica.
- 2016: U.S. National Science Foundation grant and Gordon and Margaret Bailey Endowment for Environmental Horticulture.
- 2016: CONICYT 21130602 Fellowship for internship in Phytohormone Biochemistry and Molecular Biology Laboratory, Department of Horticultural Science, University of Minnesota, Minnesota, USA. Dr. Jerry D. Cohen.