Ricardo I. Alcalá-Briseño

CONTACT INFORMATION

Department of Plant Pathology
University of Florida
Gainesville, Fl 32611 USA

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CURRENT POSITION

Postdoctoral Scholar at Botany and Plant Pathology
Oregon State University.
Research: Sudden Oak Death (SOD) microbiome & Forest Virome in Northwestern US

Advisors: **Jared LeBoldus**, PBB-OSU
Co-Advisor: **Niklaus Grunwald**, USDA

EDUCATION

Ph.D., Plant Pathology
University of Florida,
Department of Plant Pathology, Food Systems Institute, & Emerging Pathogens Institute
Gainesville, Florida, USA. May 2021.
Dissertation Topic: "**Virome Network Analysis:** A network framework for studying landscape agroecological of plant viromes for disease management.

Advisor: **Karen A. Garrett**

M.Sc., Plant Biotechnology
CINVESTAV–IPN. Research Center of Advance Studies at National Polytechnic Institute
Department of Genetic Engineering
Irapuato, Guanajuato, Mexico. August, 2012.
Thesis Topic: "Characterization of *Sugarcane mosaic virus* (SCMV) –CAM6–1, an approach to identify the molecular mechanism of virus –host interaction in two different hosts: sugarcane and maize"

Advisor: **Laura Silva-Rosales**

B.S., Biology
University of Guadalajara, University Center of Biological and Agricultural Sciences (CUCBA)
Guadalajara, Jalisco, Mexico, Feb, 2008.
Thesis Topic: "Development of RNA chromatography to identify proteins that interact with the 5' UTR of *Sugarcane mosaic virus* (SCMV) infecting maize"
Research done in the *Department of Genetic Engineering* at CINVESTAV -IPN.
Irapuato, Guanajuato. Feb 2007 – Feb 2008.

Advisor: **Laura Silva-Rosales**

HONORS AND AWARDS

Top Viewed Poster 2020. Plant Health 2020 Virtual Meeting, **American Phytopathological Societies – APS**.

International Outstanding Achievement Award 2018. College of Agriculture and Life Sciences, **University of Florida**.

Travel award to the International Congress of Plant Pathology (ICPP) 2018. Department of Plant Pathology, **University of Florida**.

Travel award to the American Phytopathological Society (APS) 2016. Plant Pathology Department Grad Student Organization (PPDGSO), **University of Florida**.

Grinter Graduate School Fellowship, 2015. Recruitment of exceptional graduate students, **University of Florida**.

Scholarships

2019–2021 Research Assistantship (University of Florida). Jul 2019 – May 2021.

2015–2019 National Council of Science and Technology, Mexico (CONACyT). No. 234801/410151. Aug 2015 – Jul 2019.

2012–2013 National Council of Science and Technology, Mexico (CONACyT). No. 211-63213. Jan 2012 – Feb 2013.

2009–2011 National Council of Science and Technology, Mexico (CONACyT). No. 33287/234801. Sep 2009 – Aug 2011.

2009 National Program of Student Mobility. Santander-ECOES 2009. No. 20-00453219-3. Jan – May 2009.

2008 National Council of Science and Technology, Mexico (CONACyT).No. 61154. Id AP 12412. Jan – Dec 2008.

Manuscript in preparation

Alcalá-Briseño RI, Xing Y,Fuentes S, Perez A, Kreuze JF, Garrett KA. Virome network analysis and connectivity of sweetpotato populations across Sub-Saharan Africa.

Publications

2020

Herschlag R, Okada R, **Alcalá-Briseño RI**, Rodrigues de Souto E, Valverde RA. Identification of a novel endornavirus in *Geranium carolinianum* and occurrence within three agroecosystems. Virus Genes. 288: 198116. (`https://doi.org/10.1016/j.virusres.2020.198116`)

Saad, N, **Alcalá-Briseño RI**, Polston JE, Olmstead, JW, Varsani A, Harmon PF. Blueberry red ringspot virus genomes from Florida inferred through analysis of blueberry transcriptomes. Scientific Reports. 10: 12043. (`https://doi.org/10.1038/s41598-020-68654-3`)

Alcalá-Briseño RI, Casarrubias-Castillo K, López-Ley D, Garrett KA, Silva-Rosales L. Network analysis of the papaya orchard virome from two agroecological regions of Chiapas, Mexico. mSystems. 5(1):0423-19. (`https://doi.org/10.1128/mSystems.00423-19`)

2019

Garrett KA, **Alcalá-Briseño RI**, Andersen K, Brawner J, Choudhury R, Delaquis E, Fayette J, Poudel R, Purves D, Rothschild J, Thomas-Sharma S, Xing Y. Effective altruism as an ethical lens on research priorities: orphan pathosystems, the tragedy of the microbiome commons, doomsday pathogens, and big ethics for big data. Phytopathology. 110(4):708–722. (`https://doi.org/10.1094/PHYTO-05-19-0168-RVW`).

Alcalá-Briseño RI, Lotrakul, P, Valverde RA. Genome sequence and phylogenetic analysis of a novel comovirus from tabasco pepper (*Capsicum frutescens*). Virus Genes. 55:854–858(`https://doi.org/10.1007/s11262-019-01707-6`)

Silva-Rosales L., Vargas P, **Alcalá-Briseño RI**, Casarrubias K. Revisiting cross-protection in the form of antagonism: the case of Papaya mosaic virus protecting papaya plants against Papaya ringspot virus. Acta Hortic. 1250, 55-62 (`https://doi.org/10.17660/ActaHortic.2019.1250.9`)

Bell TH, Hockett KL, **Alcalá-Briseño RI**, Barbercheck M, Beattie GA, Bruns MA, *et al.*. Manipulating wild and tamed phytobiomes: challenges and opportunities. Phytobiomes. 3(1):3:21. (`https://doi.org/10.1094/PBIOMES-01-19-0006-W`)

2018 Okada R, **Alcalá-Briseño RI**, Escalante C, Sabanadzovic S, Valverde RA. Molecular properties of a novel endornavirus from *Phaseolus vulgaris* and occurrence in mixed infections with two other endornaviruses. Virus Research. 257: 63-67. (`https://doi.org/10.1016/j.virusres.2018.09.005`)

Garrett KA, **Alcalá-Briseño RI**, Andersen KF, Buddenhagen CE, Choudhury RA, Fulton JC, Hernandez Nopsa JF, Poudel R, Xing Y. Network analysis: A systems framework to address grand challenges in plant pathology. Annual Review of Phytopathology. 56(25):1-22. (`https://doi.org/10.1146/annurev-phyto-080516-035326`)

Alcalá-Briseño RI, Okada R, Herrera F, Valverde RA. A novel endornavirus isolated from cluster bean (*Cyamopsis tetragonoloba*). Archives of Virology. 163:2279–2282. (`https://doi.org/10.1007/s00705-018-3831-9`)

Escalante C, **Alcalá-Briseño RI**, Valverde RA. First report of a mixed infection of pepper mild mottle virus and tobacco mild green mosaic virus in pepper (*Capsicum annuum*) in the United States. Plant Disease. 102(7):1. (`https://doi.org/10.1094/PDIS-11-17-1847-PDN`)

2017 Boukari W, **Alcalá-Briseño RI**, Kraberger S, Fernandez E, Filloux D, Daugrois J-H, Comstock JC, Lett J-M, Martin MP, Varsani A, Roumagnac P, Polston JE, Rott PC. Occurrence of a novel mastrevirus in sugarcane germplasm collections in Florida, Guadeloupe and Rèunion. Virology Journal. 14:146. (`https://doi.org/10.1186/s12985-017-0810-9`)

Kraberger S, Polston JE, Capobianco HM, **Alcalá-Briseño RI**, Fontenele RS, Varsani A. Genomovirus genomes recovered from *Echinothrips americanus* sampled in Florida, USA. Genome Announcements. 5:e00445-17. (`https://doi.org/10.1128/genomeA.00445-17`)

Alcalá-Briseño RI, Coskan S, Londoño MA, Polston JE. Genome sequence of *Southern tomato virus* in asymptomatic tomato "Sweet Hearts". Genome Announcements.5(7):e01374-16.(`https://doi.org/10.1128/genomeA.01374-16`)

2015 Harmon PF, **Alcalá-Briseño RI**, Polston JE. Severe symptoms of mosaic and necrosis in St. Augustinegrass associated with *Sugarcane mosaic virus* in neighborhoods of St. Petersburg, FL. Plant Disease. 99(4): 557. (`https://doi.org/10.1094/PDIS-11-14-1140-PDN`)

2011 Chaves-Bedoya G, Espejel F, **Alcalá-Briseño RI**, Hernández-Vela J, Silva-Rosales L. Short distance movement of genomic negative strands in a host and non-host for *Sugarcane mosaic virus*. Virology Journal 8:1-8. (`https://dx.doi.org/10.1186%2F1743-422X-8-15`)

Books and book chapters

Garrett KA, **Alcalá-Briseõ** RI, Andersen KF, Choudhury RA, Dantes W, Fayette J, Fulton JC, Poudel R, Staub CG. **2020**. Adapting disease management systems under global change. Emerging Plant Diseases and Global Food Security. Ristaino, JB, and Records, A. Eds. APS Publications. ISBN 9780890546383

Silva-Rosales L, **Alcalá-Briseño RI**, Espejel F. **2015**. *Sugarcane mosaic virus.* Virus Diseases of Tropical and Subtropical Crops. Ed. Tennant P., and Fermin G., CABI Plant Protection Series. ISBN 9781780644264.

Proceedings

Alcalá-Briseño RI, Rodríguez-Rios D, Echegoyen-Nava R, Alvarado Y, Zaina S, Lund G. Identification of DNA methylation targets of in transgenics mice lung by *Hpa*II metiltransferase (*Hpa*MT). Avances de la investigación científica en el CUCBA. XVIII semana de la investigación científica. pp. 178-181. Carbajal S. y Pimientas-Barrios E (eds). Universidad de Guadalajara y Consejo Estatal de Ciencia y Tecnología. Gobierno del Estado de Jalisco. Zapopan, Jal. México. **2007** (ISBN 9789702712800).

Invited Presentations

Seminar Series: CINVESTAV Alumni, *Biochemistry and Genetic Engineering Department*. Plant Viromes: Network analysis and ecological networks in agricultural systems. **CINVESTAV-Irapuato**. Virtual Seminar. Irapuato, Guanajuato. May 14, 2021.

Bioinformatic Webinar Seminars, *Solaria Biodata*. Virome studies in agricultural systems applying epidemiology and network analysis. **Solaria Biodata Initiative**. Virtual Seminar. Mexico City, Mexico. August 11, 2020.

Roots, tubers and banana (RTB), CGIAR. *Annual Seed Systems Meetings*. CC2.1. Opening the pandora's box of virome analysis: hope lies in the known. **International Center of Tropical Agriculture (CIAT)**. Entebbe, Uganda, March 10–14, 2020.

Alcalá-Briseño RI, Garrett KA. Plant pathology addressing the challenges of global change. **Mexican Phytopatology Society meeting**. Morelia, Michoacan, Mexico. August 24 –28, 2019. [Keynote presentation]

Roots, tubers and banana (RTB), CGIAR. *Annual Pest Risk Assessment Meetings*. CC3.1. Virome networks analysis and its application to agriculture: sweetpotato and potato. **Seoul National University**. Seoul, South Korea, May 20–21, 2019.

Master lecture at the *Symposium of the Peru Potato Virome: Project results and closure*. Papaya Virome in Southeast Mexico: Discovery of associations of viruses using viral metagenomics and network analysis. **International Potato Center (CIP)**. Lima, Peru. March 19, 2019.

Roots, tubers and banana (RTB), CGIAR. *Annual Seed Systems Meeting*. CC2.1. Virome network analysis and its application for seed systems. **International Institute of Tropical Agriculture (IITA)**. Ibadan, Nigeria, March 13–14, 2019.

Upcoming Presentations

Alcalá-Briseño RI, Xing Y,Fuentes S, Perez A, Kreuze JF, Garrett KA. Sweetpotato virome communities in Sub-Saharan Africa: a network analysis framework for complex virome datasets **Plant Health – American Phytopathological Society 2021**. Virtual Meeting. August 2 – 6 [Presentation]

Plex Sulá AI*, **Alcalá Briseño RI**, Xing Y, Etherton BA, Andersen KF, Andrade-Piedra JL, Dita Rodriguez MA, Hodson D, Jarvis A, Kreuze JF, Sonder K, Suresh LM, Garrett KA. Geographic disease risk analysis for major crops of Central America and Mexico: regional analyses and global structures **Plant Health – American Phytopathological Society 2021**. Virtual Meeting. August 2 – 6 [Presentation by *]

Xing Y, Plex Sulá AI*, **Alcalá Briseño RI**, Etherton BA, Choudhury R, Andersen KF, Garrett KA. Cropland connectivity: best practices for incorporation in geographic risk analyses **Plant Health – American Phytopathological Society (APS) 2021**. Virtual Meeting. August 2 – 6 [Presentation by *]

Choudhury R, Etherton BA*, Xing Y, **Alcalá Briseño RI**, Crane JH, Evans E, Wasielewski J, Stelinski LL, Ploetz R, Grogan K, Garrett KA. Regional network analysis to understand the effects of farmer management decisions on the avocado laurel wilt epidemic in Florida **Plant Health – American Phytopathological Society 2021**. Virtual Meeting. August 2 – 6 [Presentation by *]

Alcalá-Briseño RI, Fuentes S, Perez A, Kreuze JF, Garrett KA. Network structure of the Peruvian potato virome: changes in ecological dynamics across an altitudinal gradient **Networks 2021**. Virtual Meeting. July 5 – 10 [Oral presentation]

Conference Presentations

2021

Alcalá-Briseño RI, Fuentes S, Perez A, Kreuze JF, Garrett KA. Diversity and community structure of the Peruvian potato virome. **American Phytopathological Society Southern Division 2021**. Virtual Meeting. February 15 – 19 [Oral presentation]

2020

Alcalá-Briseño RI, Kreuze JF, Garrett KA. A network analysis framework for complex virome data. **American Phytopathological Society: Plant Health 2020**. St. Paul, Minnesota. August 10 – 14 [Poster presentation]

Thomas-Sharma S*, **Alcalá-Briseño RI**, Almekinders C, Andersen KF, Andrade-Piedra JL, Omondi AB, Buddenhagen C, Carvajal-Yepes M, Choudhury R, Dantes W, Fayette J, Fulton J, Hernandez Nopsa JF, Kreuze JF, Kromann P, Legg JP, McEwan M, McManus PS, Nkengla L, Ogero K, Ortiz O, Thiele G, Xing Y, Yuen JE, Forbes GA, Garrett KA. Management performance maps: identifying system traits for seed degeneration management in vegetatively-propagated crops. **American Phytopathological Society: Plant Health 2020**. St. Paul, Minnesota. August 10 – 14 [Poster presented by *]

Andersen KF*, Delaquis E, Newby J, Le Thuy CT, de Haan S, Legg JP, Cuellar W, **Alcalá-Briseño RI**, Garrett KA. A decision support model for landscape-level management of cassava mosaic disease in Southeast Asia. **American Phytopathological Society: Plant Health 2020**. St. Paul, Minnesota. August 10 – 14 [Oral presented by *]

Escalante Guardado C*, **Alcalá-Briseño RI**, Okada R, Valverde RA. Properties of an endornavirus infecting three Capsicum species .**American Phytopathological Society: Plant Health 2020**. St. Paul, Minnesota. August 10 – 14 [Poster presented by *]

2019

Alcalá-Briseño RI, Casarrubias-Castillo K, López-Ley D, Garrett KA, Silva-Rosales L. Analysis and identification of interactions in viral communities of papaya plants, weeds, and insects in papaya agroecosystems in Chiapas, Mexico. **Mexican Virology Conference**. Guanajuato, Guanajuato, Mexico. September 4–7. [Oral presentation]

Herschlag R, Okada R, **Alcalá-Briseño** RI, Rodrigues De Souto E, Valverde RA*. Identification of a novel endornavirus in Geranium carolinianum and occurrence in plants within three agroecosystems. **American Phytopathological Society**. Cleveland, Ohio. August 3 –7. [Poster presented by *]

Alcalá-Briseño RI, Jan Kreuze, Karen A. Garrett. Bipartite network analysis for understanding associations in plant viromes: the sweetpotato virome in Africa. **14th International Plant Virus Epidemiology**. Seoul, South Korea. May 13 –17. [Oral presentation]

Segundo Fuentes, Ana Perez, Jan Kreuze*, **Alcalá-Briseño RI***. The Peruvian potato virome:

mapping virus diversity to understand current and future threats under a changing climate. **14th International Plant Virus Epidemiology**. Seoul, South Korea. May 13 –17. [Poster presented by *]

Alcalá-Briseño RI, Kena Casarrubias-Castillo, Diana Ley, Laura Silva-Rosales and Karen A. Garrett. Virus community analysis to identify the underlying structure of plant-virus interactions. **American Phytopathological Society Southern Division**. Gainesville, Florida. May 29 – March 3. [Oral presentation]

2018 **Alcalá-Briseño RI**, Kena Casarrubias-Castillo, Diana Ley, Laura Silva-Rosales and Karen A. Garrett. Bipartite networks of hosts and viromes: diversity of viruses of papaya orchards, associated weed and potential vectors in Souther Mexico. **International Conference of Plant Pathology**. Boston, Massachussets. July 29 –August 3. [Poster presentation]

Escalante C*, **Alcalá-Briseño RI**, Valverde RA. Identification of a novel endornavirus in *Hydrocotyle* spp. **International Conference of Plant Pathology**. Boston, Massachussets. July 29 –August 3. [Poster presented by *]

2017 **Alcalá-Briseño RI**, Kena Casarrubias-Castillo, Diana Ley, Laura Silva-Rosales and Karen A. Garrett. Virus diversity in papaya in southern Mexico, where PRSV was common in asymptomatic plants. **V International Symposium on Papaya** and the **9th National Meeting of Papaya Growers**. Merida, Yuc. Mx. October 24–27. [Poster presentation]

Karen A. Garrett and **Alcalá-Briseño RI***. Impact Network Analysis: A framework for evaluating the effect of technologies through linked socioeconomics and biophysical networks. **V International Symposium on Papaya** and the **9th National Meeting of Papaya Growers**. Merida, Yuc. Mx. October 24–27. [Poster presented by *]

Alcalá-Briseño RI, Harmon PF and Polston JE. Viral metagenomics unravels the etiology of lethal necrosis of St. Augustinegrass 'Floratam'. **36th APS annual meeting 2017**. San Antonio, Texas. August 5– 9. [Poster presentation]

Alcalá-Briseño RI, Okada R, Escalante C, and Valverde RA. Endornavirus of Capsicum species. **36th APS annual meeting 2017**. San Antonio, Texas. August 5–9. [Poster presentation]

Alcalá-Briseño RI, Herrera F and Valverde RA. An endornavirus from cluster bean *(Cyamopsis tetragonoloba)*. **36th APS annual meeting 2017**. San Antonio, Texas. August 5–9. [Poster presentation]

Saad N*, **Alcalá-Briseño RI**, Harmon P, Polston JE, Olmstead J. 2017. Viral metagenomics uncovers virus diversity in wild and cultivated blueberry (*Vaccinum corymbosum*). **36th APS annual meeting 2017**. San Antonio, Texas. August 5–9. [Poster presented by *]

2016 **Alcalá-Briseño RI**, Londoño M, and Polston JE. 2016. Viral metagenomics in *Caladium x hortulanum* in Florida. **35th APS annual meeting 2016**. Tampa, Florida. July 30 –August 3. [Poster presentation]

Bourkari W*, **Alcalá-Briseño RI**, Kraberger S, Fernandez E, Filloux D, Comstock J, Varsani A, Roumagnac P, Polston JE and Rott P. 2016. Identification of new *Mastrevirus* of *Saccharum barberi*, *Saccharum officinarum* and *Saccharum spontaneum* in Florida. **35th APS annual meeting 2016**. Tampa, Florida. July 30 –August 3. [Poster presented by *]

Coskan S*, **Alcalá-Briseño RI** and Polston J.E. 2016. Distribution and vertical transmission of *Southern tomato virus* in tomato. **35th APS annual meeting 2016**. Tampa, Florida. July 30 –August 3. [Poster presented by *]

Saad N*, Olmstead J, **Alcalá-Briseño RI**, Varsani A, and Polston JE. 2016. Root transcriptome analysis reveals viral diversity in two species of blueberry. **35th APS annual meeting 2016**. Tampa, Florida. July 30 –August 3. [Poster presentated by *]

2012

Alcalá-Briseño RI, Espejel F,* Cháves-Bedoya G, Ruíz-Castro S, Gonzales-de-León D, and Silva-Rosales L. Elucidating the evolutionary process of SCMV: Between host isolates of sugarcane and maize. XXIX Congreso Nacional de Bioquímica. Oaxaca, Oaxaca, Mexico. November 11 –18. [Poster presented by *]

2011

Alcalá-Briseño RI, Délaye-Arredondo L, Silva-Rosales L. Are untranslated regions of Sugarcane mosaic virus involved in host adaptability? **International Union of Microbiological Societies (IUMS)**. Sapporo, Japan. September 11–16. [Poster presentation]

2010

Garcia-Neria M, **Alcalá-Briseño RI***, Chávez-Calvillo G, Palomino A, Hernández-Vela J, Hernández-Chávez JL, Rangel-Cano A, Londoño-Avedaño A, Carrillo-Tripp M, de la Rosa E, Gutiérrez A y Silva-Rosales L. Mining plant virus biodiversity for biotechnology: multiple uses of potyvirus and potexvirus coat proteins in Mexico. MEXICO BIO 2nd International Forum in Biotechnology Business. Laboratorio Nacional de Genómica para la Biodiversidad (LANGEBIO) - Cinvestav. Irapuato, Guanajuato, Mexico. November 24–25. [Poster presented by *]

2007

Alcalá-Briseño RI, Rodríguez-Ríos Echegoyen-Nava R, Zaina S, Lund G. Identification of DNA methylation targets of in transgenics mice lung by HpaII metiltransferase (HpaMT). XII Verano de la Investigación científica del Pacífico. Nuevo Vallarta, Nayarit, Mexico. August 22–24. [Oral presentation]

2006

Alcalá-Briseño RI. Silva-Rosales L. P1 sequences in Papaya ringspot virus (PRSV) in mixed and simple infection of different isolates of Mexico. XI Verano de la Investigación Científica del Pacífico. Nuevo Vallarta, Nayarit, Mexico. August 23–26. [Oral presentation]

Alcalá-Briseño RI. Botanical collections, within the herbarium IBUG appointment event in honor of Honorary Doctor Luz María Villareal de Puga. Departamento de Botánica y Zoologá. Instituto de Botánica. Centro Universitario de Ciencias Biológicas y Agropecuarias. Universidad de Guadalajara. Zapopan, Jalisco, Mexico. June 16. [Poster presentation]

Professional Experience

University of Florida, Gainesville, Florida, USA. *Research Scholar.* **March 2013 - July 2015**

Includes viral discovery and diagnostic of RNA viruses and viroids. Molecular biology techniques as reverse transcription (RT), -PCR, vector cloning, capilar sequencing, next generation sequencing. Characterization assays and viral pathogenicity. Phylogenetic analysis and identity matrix of viral species.

CINVESTAV, Irapuato, Guanajuato, Mexico. *Research Assistant.* **January, 2012 - March, 2013**

Includes viral diagnostic of single stranded and double stranded RNA viruses. Molecular biology techniques as RT-PCR, vector cloning, capilar sequencing. Sequence analysis and evolution of viruses. Viral RNA - host protein interaction.

Graduate teaching assistance and guest lectures

Guest lecture **April, 2021**.
Virology **PLP-6905**. University of Florida. Gainesville, Fl. Fall.

Teaching assistant **Aug - Dec, 2020**.
Epidemiology and Data Sciences **PLP-6905**. University of Florida. Gainesville, Fl. Fall, 16 weeks (40 hours).

Teaching assistant **Aug - Dec, 2019**.
Impact through Networks **PLP-6701**. University of Florida. Gainesville, Fl. Fall, 18 weeks (30 hours).

Teaching assistant **January - March, 2017**.
Introduction to applied bioinformatics in Plant Pathology **PLP-6905**. University of Florida. Gainesville, Fl. Spring, 9 weeks (19 hours).

Workshops and trainings

Instructor **March 2 – 4, 2020**.
Workshop 'NGS analysis applied to virome sequencing in agricultural systems' . University of Costa Rica. San José, Costa Rica. (21 hours)

Instructor **July 28, 2020**.
Workshop 'Network Analysis' . International Conference of Plant Pathology. Boston, United States of America. (5 hours)

Instructor **October - November, 2012**
Training in molecular techniques for the diagnoses of plant virus in papaya plants. Taught to **AGROMOD S.A DE C.V.** 4 weeks (160 hours).

Affiliations

Member of the American Society of Microbiome **(ISHS)**. 2017 - 2019

Member of the American Phytopathological Society **(APS)**. 2015 - present

Member of the American Association for the Advancement of Science **(AAAS)**. 2017 - present

Member of the International Society of Horticultural Science **(ISHS)**. 2017 - 2019

Repositories

github: https://github.com/ricardoi

Computer and laboratory skills

Programming: R, Linux/Unix, bash, Python, High Performance Computer (HPC) cluster, Mac OS and Unix/Linux user.
Genomics/Transcriptomics: Abyss, Velvet, Spades, BFAST, BOWTIE, BOWTIE2, Trinity, BBMap.
Sequence analysis: BLAST, muscle, clustal, t-coffee, mafft, RDP4, SDT, secondary RNA prediction.
Phylogenetic analysis: PhyML, RAxML, IQ-TREE, MEGA, BEAST & BEAuTI, Mr. Bayes, Bucky, Astral.
Text and vector graphics processors: LaTeX, Office packages, Inkscape, Affinity Designer and Illustrator.
Molecular biology: Nucleic acid extractions (DNA, RNA, dsRNA, small RNAs), protein extraction, protein and virion purification, *in vitro* transcription, protein chromatography, reverse

transcription (RT), PCR, quantitative PCR, cloning and transformation, SDS-PAGE and agarose gels.

Other positions and activities

- **Community Organizer at** *Madres Sin Fronteras* **(Mothers Without Borders)**. **2016-present**.
  Madres Sin Fronteras (MSF) is an immigrant-led grassroots organization based in Alachua County that seeks justice and works to protect the rights of immigrants and their families. We have four main programs: The Community ID program with our partner program Human Rights Coalition of Alachua, Know Your Rights training, First Responder MSF hotline, and Sanctuary.
  Activities:
  - **First contact of Gainesville Hotline for immigration Rights** Duties: Coordinating the hotline group, and managing the first responder system, and organizing the Gainesville first response network.

  - **Leader of "Know Your Rights"**. Duties: training other volunteers, training member of the affected community, point of contact with the affected community, and translator.

- **Treasurer of Mexicans in Gainesville (MIG)**. **2018-2020**. University Student Organization at University of Florida. Activities: Help organizing activities and outreach to new Mexican students coming to UF.
- **Vice-president of Mexicans in Gainesville (MIG)**. **2017-2018**. University Student Organization at University of Florida. Activities: Help organizing activities and outreach to new Mexican students coming to UF.
- **President of Mexicans in Gainesville (MIG)**. **2015-2016**. University Student Organization at University of Florida. Activities: Organize activities of MIG, outreach to the community at UF from Mexico, Mexican-descendent and people interested in Mexican culture and heritage.

References

Karen A. Garrett Preeminent Profesor. Department of Plant Pathology, Emerging Pathogens Institute and Food Systems Institute, University of Florida, Gainesville, FL USA.
karengarrett@ufl.edu
Rose M. Loria Chair and Professor. Department of Plant Pathology, University of Florida, Gainesville, FL. USA.
rloria@ufl.edu
Rodrigo A. Valverde Professor. Department of Plant Pathology and Crop Physiology, Louisiana State University, Baton Rouge. LA, USA.
rvalverde@agcenter.lsu.edu