

XIMENA BESOAIN CANALES

**Escuela de Agronomía, Pontificia Universidad Católica de Valparaíso,
Calle San Francisco s/n, La Palma, Quillota, Chile**

I. PUBLICACIONES (2015 – presente)

Publicaciones en revistas indexadas (ISI)

1. Aravena R, **Besoain X**, Riquelme N, Salinas A, Valenzuela M, Oyanedel E, Barros W, Olguin Y, Madrid A, Alvear M, Montenegro I (2021) Antifungal Nanoformulation for Biocontrol of Tomato Root and Crown Rot Caused by *Fusarium oxysporum* f. sp. *radicis-lycopersici*. **Antibiotics**; 10(9):1132; doi: 10.3390/antibiotics10091132
2. Camps R, Fiore N, Riquelme N, Barros-Parada W, **Besoain X** (2021). Genotype variation of citrus tristeza virus after passage on different hosts, and changes in the virus genotype populations by the vector *Aphis gossypii*. **Phytopathologia Mediterranea** 61(1); doi: 10.36253/phyto-12965
3. Luna I, **Besoain X**, Saa S, Peach-Fine E, Morales F, Riquelme N, Larach A, Morales J, Ezcurra E, Ashworth V, Rolshausen P (2021). Identity and pathogenicity of Botryosphaeriaceae and Diaporthaceae from *Juglans regia* in Chile. **Phytopathologia Mediterranea** 61(1); doi: 10.36253/phyto-12832
4. Díaz K, Werner E, **Besoain X**, Flores S, Donoso V, Said B, Caro N, Vega E, Montenegro I, Madrid A (2021) In Vitro Antifungal Activity and Toxicity of Dihydrocarvone-Hybrid Derivatives against *Monilinia fructicola*. **Antibiotics**; 10(7):818; doi: 10.3390/antibiotics10070818
5. Valenzuela M, González M, Velásquez A, Dorta F, Montenegro I, **Besoain X**, Salvà-Serra F, Jaén-Luchoro D, Moore ERB, Seeger M (2021) Analyses of Virulence Genes of *Clavibacter michiganensis* subsp. *michiganensis* Strains Reveal Heterogeneity and Deletions That Correlate with Pathogenicity. **Microorganisms**; 9(7):1530; doi: 10.3390/microorganisms9071530
6. 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):663; doi: 10.3390/antibiotics10060663

7. Olivera M, Delgado N, Cádiz F, Riquelme N, Montenegro I, Seeger M, Bravo G, Barros-Parada W, Pedreschi R, **Besoain X** (2020) 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):664; doi: 10.3390/antibiotics10060664
8. Larach, A., Torres, C., Riquelme, N., Valenzuela, M., Salgado, E., Seeger, M., **Besoain X**. (2020). Yield loss estimation and pathogen identification from *Botryosphaeria dieback* in vineyards of Central Chile over two growing seasons. **Phytopathologia Mediterranea**; 59(3), 537-548; doi: 10.14601/Phyto-11235
9. Méndez V, Valenzuela M, Salvà-Serra F, Jaén-Luchoro D, **Besoain X**, Moore ERB, Seeger M (2020) Comparative Genomics of Pathogenic *Clavibacter michiganensis* subsp. *michiganensis* Strains from Chile Reveals Potential Virulence Features for Tomato Plants. **Microorganisms**; 8(11):1679; doi: 10.3390/microorganisms8111679
10. López G, Mellado M, Werner E, Said B, Godoy P, Caro N, **Besoain X**, Montenegro I, Madrid A (2020) Sonochemical Synthesis of 2'-Hydroxy-Chalcone Derivatives with Potential Anti-Oomycete Activity. **Antibiotics**; 9(9):576; doi:10.3390/antibiotics9090576
11. Flores O, Retamales J, Núñez M, León M, Salinas P, **Besoain X**, Yañez C, Bastías R (2020) Characterization of Bacteriophages against *Pseudomonas Syringae* pv. *Actinidiae* with Potential Use as Natural Antimicrobials in Kiwifruit Plants. **Microorganisms**; 8(7):974; doi: 10.3390/microorganisms8070974
12. Werner E, Montenegro I, Said B, Godoy P, **Besoain X**, Caro N, Madrid A (2020) Synthesis and Anti-Saprolegnia Activity of New 2',4'-Dihydroxydihydrochalcone Derivatives; **Antibiotics**; 9:317; doi:10.3390/antibiotics9060317
13. Tapia L, Larach A, Riquelme N, Guajardo J, **Besoain X** (2020) First Report of *Neofusicoccum luteum* Causing Stem-End Rot Disease on Avocado Fruits in Chile. **Plant Disease**; 104, 2027-2027; doi: 10.1094/PDIS-11-19-2299-PDN
14. Vasconez, I. N., **Besoain, X.**, Vega-Celedón, P., Valenzuela, M., & Seeger, M. (2020) First report of bacterial wilt caused by *Ralstonia solanacearum* phylotype IIB sequevar 1 affecting tomato in different regions of Chile. **Plant Disease**; 104(7), 2023; doi: 10.1094/PDIS-01-20-0181-PDN

15. 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**; 104:921-929; doi: 10.1094/PDIS-03-19-0455-RE.
16. Montenegro I, Said B, Godoy P, **Besoain X**, Parra C, Díaz K, Madrid A (2020) Antifungal Activity of Essential Oil and Main Components from *Mentha pulegium* Growing Wild on the Chilean Central Coast. **Agronomy**; 10(2):254. doi: 10.3390/agronomy10020254
17. Guajardo J, Saa S, Riquelme N, Browne G, Youlton C, Castro M, **Besoain, X** (2019). Characterization of oomycete species associated with root and crown rot of english walnut in Chile. **Plant Disease** 103(4); doi: 10.1094/PDIS-07-18-1160-RE
18. Montenegro I, Mellado A, Russo A, Said B, **Besoain X**, Godoy P, Werner E, Caro N, Madrid A (2019). Carveoylphenols and their antifungal potential against pathogenic yeasts. **Antibiotics**, 8(4); doi: 10.3390/antibiotics8040185
19. **X Besoain**, Guajardo J, Larach A, Riquelme N, Gálvez E, Tapia L, Alvarado L, Saratscheff T & Celis-Diez J (2019) First Report of Diplodia seriata causing gummy canker in Araucaria araucana wild populations in south- central Chile. **Plant Disease**; doi: 10.1094/PDIS-01-19-0200-PDN.
20. Morales J, **Besoain X**, Cuneo I, Larach A, Alvarado L, Cáceres A, Saa S (2019) Impact of nitrogen fertilization on phytophthora cinnamomi root-related damage in juglans regia saplings. **HortScience** 54(12); doi: 10.21273/HORTSCI14299-19
21. Valenzuela M, Méndez V, Montenegro I, **Besoain X**, Seeger M (2019). Streptomycin resistance in Clavibacter michiganensis subsp. michiganensis strains from Chile is related to an rpsL gene mutation. **Plant Pathology** 68(3); doi: 10.1111/ppa.12971
22. Valenzuela M, Méndez V, Montenegro Iván, **X Besoain** & Seeger M (2018) Streptomycin resistance in Clavibacter michiganensis subsp. michiganensis strains from Chile is related to an rpsL gene mutation. **Plant Pathology**; doi: 10.1111/ppa.12971.
23. Guajardo J, Saa S, Riquelme N, Browne G, Youlton C, Castro M & **X Besoain** (2018) Characterization of Oomycete Species Associated With Root and Crown Rot of English Walnut in Chile. **Plant Disease**, 103; doi: 10.1094/PDIS-07-18-1160-RE.

24. Flores O, Prince C, Núñez M, Vallejos A, Mardones C, Yáñez C, **X Besoain** & Bastías R (2018) Genetic and Phenotypic Characterization of Indole-Producing Isolates of *Pseudomonas syringae* pv. *actinidiae* Obtained From Chilean Kiwifruit Orchards. *Frontiers in Microbiology*, 9; doi: 10.3389/fmicb.2018.01907.
25. Montenegro I, Madrid A, Cuellar M, Seeger M, Alfaro J, **X Besoain**, Martínez J, Ramírez I, Olguin Y & Valenzuela M (2018) Biopesticide Activity from Drimanic Compounds to Control Tomato Pathogens. *Molecules*, 23; doi: 10.3390/molecules23082053.
26. Guajardo J, Riquelme N, Tapia L, Larach A, Torres C, Camps R & **X Besoain** (2017) First Report of *Lasiodiplodia theobromae* Causing Bot Gummosis in Citrus limon in Chile. *Plant Disease*, 102; doi: 10.1094/PDIS-09-17-1517-PDN.
27. **X Besoain**, Guajardo J & Camps R (2017) First Report of *Diplodia mutila* causing gummy canker in *Araucaria araucana* (Molina) K. Koch in Chile. *Plant Disease*, 101; doi: 10.1094/PDIS-12-16-1730-PDN.
28. Guajardo J, S Saa, R Camps & **X Besoain** (2017) Outbreak of crown and root rot of walnut caused by *Phytophthora cinnamomi* in Chile. *Plant Disease* 101: 636-636; doi: 10.1094/PDIS-09-16-1242-PDN
29. Camps R, L Mansur, C De La Cuadra & **X Besoain** (2016) First Report of Turnip mosaic virus (TuMV) Infecting *Leucocoryne purpurea* (Amaryllidaceae) in Chile. *Plant Disease* 100: 2341-2341; doi: 10.1094/PDIS-05-16-0777-PDN
30. Valenzuela M, S Fuentes, F Claverias, **X Besoain** & M Seeger (2016) Genetic diversity of pathogenic *Clavibacter michiganensis* subsp *michiganensis* strains from Central Chile. *Phytopathology* 106: 133-133.
31. **X Besoain**, AV Takasaki & R Camps (2016) Necrotic Streaking of Asiatic Lilies caused by *Plantago asiatica* mosaic virus in Chile. *Phytopathology* 106: 106-106
32. Vidal AK, R Camps & **X Besoain** (2016) First Report of Necrotic Streaking of Asiatic Lilies Caused by *Plantago asiatica* mosaic virus in Chile. *Plant Disease* 100: 1799 – 1799; doi: 10.1094/PDIS-01-16-0091-PDN
33. Torres C, R Camps, R Aguirre & **X Besoain** (2016) First Report of *Diaporthe rudis* in Chile Causing Stem-End Rot on 'Hass' Avocado Fruit Imported From California. *Plant Disease* 100: 1951- 1951; doi: 10.1094/PDIS-12-15-1495-PDN

34. Valencia D, C Torres, R Camps, E Lopez, JL Celis-Diez & **X Besoain** (2015) Dissemination of Botryosphaeriaceae conidia in vineyards in the semi-arid Mediterranean climate of the Valparaíso Region of Chile. *Phytopathologia Mediterranea* 54: 394-402
35. **Besoain X**, E Bertolini, R Camps, F Ramella, MT Gorris, M Torres & M Cambra (2015) Aggressive Citrus tristeza virus isolates in Chile are MCA13-positive and VT type, while mild isolates are MCA13-negative and T30 type. *Ciencia e Investigación Agraria* 42: 251-262; doi: 10.4067/S0718-162020150002000011
36. Polanco R, C Pino, **X Besoain**, J Montealegre & LM Perez (2015) Enhanced secretion of biocontrol enzymes by *Trichoderma harzianum* mutant strains in the presence of *Rhizoctonia solani* cell walls. *Ciencia e Investigación Agraria* 42: 243-250; doi: 10.4067/S0718-162020150002000010

II. EXPERIENCIA EN PROYECTOS DE INVESTIGACION (2015 – presente)

Proyectos con fondos concursables

2021 – 2023 **Co-investigadora FONDEF IdeA Nº ID21I10162**. Formulados de nanoemulsiones de exudados vegetales nativos para el control de enfermedades de patógenos asociados a suelo (*Phytophthora cinnamomi*, *Fusarium oxysporum* sp. *Lycopersici*, *Clavibacter michiganensis* subsp. *Michiganensis*) en nogal y tomate.

2021 – 2024 **Directora FONDECYT**. Effects of tissue age and endophytic microbiome of *Botryosphaeria dieback* caused by *Diplodia seriata* in cv. Cabernet Sauvignon in Central Chile, and biocontrol studies in plant.

2020 – 2024 **Directora FIA PYT-2020-0218**. Nuevo Servicio De Detección De Virus Y Viroides Para Determinar La Sanidad De Plantas De Cítricos En Chile.

2017 – 2019 **Directora CONICYT, ID17AL0028**. Consorcio biológico PUCV-VBL para el control de hongos en postcosecha de uvas para exportación.

2015 – 2018 **Co-investigadora FONDEF IDEA DOS ETAPAS**. KIWI PHAGE: Desarrollo de un antimicrobiano natural contra el cancro bacteriano del kiwi utilizando bacteriófagos

2014 – 2018 **CORFO - INNOVA**. Empaquetamiento y transferencia de producto biológico (PUCV-VBL), para el control de pudrición gris y del racimo en vides.

Proyectos no concursables (Empresas, ONG e instituciones)

gubernamentales)

- 2015 IR BASF CHILE S.A. Evaluación de la eficacia del fungicida/Bactericida (QLPT) como tratamiento al suelo para el control de tres especies fungosas y una especie bacteriana, en comparación a un tratamiento testigo sin inocular y un tratamiento testigo inoculado.
- 2015 IR Summit Agro Chile. Evaluación de la sensibilidad in vitro de los agentes acausales de cancrisis en vid al fungicida Hymexazol.
- 2015 IR ANASAC CHILE. Ensayo in vivo para establecer eficacia de diferentes formulaciones de Fenhexamid sobre *Botrytis cinerea* en flores y frutos de tomate.