Address: 5355 Via Donoso, Riverside 92507, CA, USA
Phone number: +1 (951) 824-0136
Email: agustinadefrancesco@gmail.com
Website: https://agustinadefrancesco.github.io/

Education

- **BS, Biotechnology and Molecular Biology**, Universidad Nacional de La Plata, La Plata, Buenos Aires, Argentina. 2005-2010.

  Dissertation grade: "Challenge and analysis of transgenic lines resistant to citrus psorosis" Qualification: 10 (ten).

- **PhD, Biological Sciences**, Universidad Nacional de La Plata, La Plata, Buenos Aires, Argentina. 2010-2015.

  Doctoral Thesis: "Study of the resistance mechanism of transgenic hybrid *Citrus sinensis* plants against *Citrus psorosis virus"*. Director: PhD María Laura García. Defence date: 30/3/15. Qualification: 10 (ten, outstanding).

Employment history

- **University of California Riverside. Postdoctoral Researcher** 2016-Present.

  Developing detection methods for the causal agent of Citrus Huanglongbing (HLB) while studying effectoromics, in Wenbo Ma lab, Department of Plant Pathology and Microbiology.

- **Universidad Nacional de La Plata. Postdoctoral Researcher** 2015-2016.

  My research focused on Control of bacterial diseases of citrus by acquired resistance and pathogen control, in María Laura Garcia lab, Instituto de Biotecnología y Biología Molecular (IBBM) CCT-La Plata, UNLP.

- **Universidad Nacional de La Plata. Teaching assistant** 2010-2016. See teaching and mentoring experience.

- **Universidad Nacional de La Plata. Ph.D. Student** 2010-2015

  Main goal of my research was screening transgenic citrus lines against *Citrus psorosis virus* and the transmission of the resistance through the graft. In María Laura García lab, Instituto de Biotecnología y Biología Molecular (IBBM) CCT-La Plata, Argentina.

- **Universidad Nacional de La Plata. Forest School. Undergraduate researcher** 2008-2009
  Internship in micropropagation of Populus deltoides spp. In Dr Sandra Sharry and Walter Abedini lab. Center for Plant Propagation (CEPROVE), La Plata, Argentina.

Research experience

During my career, I have worked and assisted in the molecular laboratory, performing PCR, RT-qPCR, ELISA, Southern, Northern and Western blotting, microscopy, cloning, protein purification, antibody development, data analysis, statistical tests, NanoString technology, transcriptomics, plant transformation and plant *in vitro* culture. However, my research required a fair amount of field and greenhouse work, where I learned citrus management practices (e.g. grafting, irrigation, fertilization requirements, insect control, virus inoculation, disease recognition for several pests, symptom evaluation and sample collection).

Extension experience

- Member of the Group representing Argentina in the Ibero-American Network of Education in food Biotechnology. "Bioeducar" - CYTED- Fundación REDBIO Internacional. 2007-2010. File No. 200-0318 / 09. Project approved by the Honorable Academic Council of the Faculty of Agricultural and Forestry Sciences of the UNLP.
- Citrus diagnosis in UNLP, Argentina (citrus psorosis detection) and UC Riverside (citrus Huanglongbing detection). 2010-2016 and 2016-current, respectively.

Teaching and Mentoring Experience

Teaching

- **Universidad Nacional de La Plata. Teaching Assistant** 2016. 1st semester.
  Biotechnology for Superior organisms. Lectured seminar, led discussion sessions, and supervised the laboratory sessions.
- **Universidad Nacional de La Plata. Lab professor (jefe de trabajos prácticos)** 2015. 2nd semester.
  Biochemistry I. Planned and lectured laboratory sessions, coordinated duties for teaching assistants.

- **Universidad Nacional de La Plata. Teaching Assistant** 2012-2014. 1st and 2nd semesters. 2015. 1st semester.

  Biological chemistry/ Biotechnology for Superior Organisms. Lectured seminar, led discussion sessions, and supervised the laboratory sessions.
- **Universidad Nacional de La Plata. Teaching Assistant** 2010 2nd semester. 2011. 1st and 2nd semesters.

  Microbiology. Lectured seminar, led discussion sessions, and supervised the laboratory sessions.
- **Universidad Nacional de La Plata. Teaching Assistant** 2010. 1st semester.

  Plant biology. Lectured seminar, led discussion sessions, and supervised the laboratory sessions.

Mentorship

- **University of California Riverside. Undergraduate Research Assistant** Jan 2020-present. Emily Ong (3rd year undergrad).
- **University of California Riverside. UC graduate school candidate** 2019. Jessica Thrin (Rotation in the Microbiology graduate program).
- **University of California Riverside. Undergraduate Research Assistant** Jan-Aug 2018. Beatrice Diep (first-year student orientation).
- **University of California Riverside. Undergraduate Research Assistant** 2017-present. Francisco Hernandez (paid internship).
- **University of California Riverside. Undergraduate Research Assistant** 2017. Co-mentor of Thomas Forest (Research in Science and Engineering, RISE) Summer Program.

Publications

Peer-reviewed Journal articles

1- **De Francesco, A.**, Simeone, M., Gómez, C., Costa, N., García, M.L. (2020) Transgenic Sweet Orange expressing hairpin CP-mRNA in the interstock confers tolerance to Citrus psorosis virus in the non-transgenic scion. Transgenic Research, 2:1-14. https://doi.org/10.1007/s11248-020-00191-1

2- Thapa, S., **De Francesco, A.**, Trinh, J., Gurung, F., Pang, Z., Vidalakis, G., Wang, N., Ancona, V., Ma, W., Coaker, G. (2020) Genome-wide analyses of Liberibacter species provides insights into evolution, phylogenetic relationships and virulence factors. Molecular Plant Pathology (in press). doi: 10.1111/mpp.12925

3- Pagliaccia, D., Shi, J., Pang, Z., Hawara, E., Clark, K., Thapa, S. B., **De Francesco, A.**, Liu, J., Tran, T. T., Bodaghi, S., Folimonova, S. V., Ancona, V., Mulchandani, A., Coaker, G., Wang, W., Vidalakis, G., Ma, W. (2017) A Pathogen Secreted Protein as a Detection Marker for Citrus Huanglongbing. *Frontiers in Microbiology*, 8: 2041.

4- De Francesco, A., Costa, N., Garcia, M.L. (2017) Citrus psorosis virus coat protein-derived hairpin construct confers stable transgenic resistance in citrus against psorosis A and B syndromes. *Transgenic Research* 26 (2): 225-35.

5- Reyes, C.A., **De Francesco, A.*** (equal contribution), Ocolotobiche, E.E., Costa, N., Garcia, M.L. (2016) Uncontrolled Citrus psorosis virus infection in Citrus sinensis transgenic plants expressing a viral 24K-derived hairpin that does not trigger RNA silencing. *Physiological and Molecular Plant Pathology*. 94:149–55.

6- De Francesco, A., Costa, N., Plata, M.I., Garcia, M.L. (2015) Improved Detection of Citrus psorosis virus and Coat Protein-Derived Transgenes in Citrus Plants: Comparison between RT-qPCR and TAS-ELISA. *Journal of Phytopathology*, doi: 10.1111/jph.12392.

7- Ben Guerrero, E., **De Francesco, A.**, Garcia, M.L., Balatti, P.A., Dal Bó. E. (2013) First Report of Tomato rugose yellow leaf curl virus Infecting Tomato in Argentina. *Plant Disease*, 97 (12): 1662.

8- De Francesco, A., Reyes, C.A, Robles Luna, G., Ocolotobiche, E.E., Borniego, M.B., Costa, N., García, M.L. (2011) Estudio del movimiento sistémico del virus de la psorosis de los cítricos desde un pie transgénico resistente a una copa no resistente. *Revista Argentina de Microbiología*, 42 (Supl 1):32.

9- Robles Luna, G., Peña, E.J**., De Francesco, A.**, Ocolotobiche, E.E., Borniego, M.B., Reyes, C.A, García, M.L. (2011) Las proteínas 54K y 55K de los ophiovirus CPsV y MLBVV interaccionan in vivo con la proteína Plasmodesmata Located Protein 1 (PDLP1). *Revista Argentina de Microbiología,* 42 (Supl 1): 31-2.

10- Reyes, C.A., **De Francesco, A.**, Peña, E.J., Costa, N., Plata, M.I., Sendin, L., Castagnaro, A.P., Garcia, M.L. (2011) Resistance to Citrus psorosis virus in transgenic sweet orange plants is triggered by coat protein-RNA silencing. *Journal of Biotechnology,* 151(1):151-8.

Peer-Reviewed Conference Abstracts

11- Clark, K., Franco J., Pang, Z., **De Francesco, A.**, Hawara, E., Trinh, J., Ancona, V., Wang, W., Coaker, G.L., Ma, W. Effectoromics of Citrus Huanglongbing, in International Society for Molecular Plant-Microbe Interactions XVIII congress, Glasgow, Scotland, 2019.

12- De Francesco, A., Clark, K., Lee, K., Ge, X., Ma, W. Antibody-based detection of Huanglongbing (HLB)-associated pathogen, in VI International research conference in Huanglongbing, Riverside, USA, 2019.

13- De Francesco, A., Clark, K., Liu, J., Pagliaccia, D., Tran, T.T., Mulchandani, A., Vidalakis, G., Ma, W. ELISA detection for HLB using a pathogen-secreted protein as the biomarker, in V International Research Conference on Huanglongbing (IRCHLB), Orlando, USA, 2017.

14- De Francesco, A., Costa, N., Garcia, M.L. ihpCP Sweet Orange transgenic lines are resistant to Psorosis A and Psorosis B, in XX Conference of the IOCV, International Organization of Citrus Virologists, Chongqing, China, 2016.

15- De Francesco, A., Costa, N., Plata, M.I., García, M.L. Nuevas metodologías de diagnóstico para Citrus psorosis virus, en Congreso Argentino de Citricultura, Bellavista, Argentina, 2015.

16- De Francesco, A., Reyes, C.A., Costa, N., Garcia, M.L. Variedades cítricas transgénicas resistentes a psorosis y estrategias de transmisión de la resistencia a copas no transgénicas**,** en Congreso Argentino de Citricultura, Bellavista, Argentina, 2015.

17- De Francesco, A., Reyes, C.A., Costa, N., Plata, M.I., García, M.L. Naranjo dulce Pineapple transgénico resistente al virus de la psorosis de los cítricos: estudio de la transmisión de la resistencia hacia el pie y copa, en V Congreso de Agrobiotecnología, Propiedad Intelectual y Políticas Públicas, Paraná, Argentina, 2014.

18- De Francesco, A., Reyes, C.A., Costa, N., Garcia, M.L. Grafting and its behavior on CPsV-resistant transgenic oranges, in IXX Conference of the IOCV, International Organization of Citrus Virologists, Mpumalanga, South Africa, 2013.

19- Reyes, C.A., **De Francesco, A.**, Costa, N., Garcia, M.L. Gene Silencing of viral 24K- gene induces uncontrolled infection of Citrus psorosis virus (CPsV) but not of the unrelated Citrus tristeza virus (CTV), in IXX Conference of the IOCV, International Organization of Citrus Virologists, Mpumalanga, South Africa, 2013.

20- De Francesco, A., Reyes, C.A., Costa, N., Garcia, M.L. Improvement in diagnosis for citrus Psorosis in Argentina by qRT-PCR, in International Citrus Congress, Valencia, Spain, 2012.

21- De Francesco, A., Reyes, C.A, Robles Luna, G., Ocolotobiche, E.E., Borniego, M.B., Costa, N., García, M.L. Estudio del movimiento sistémico del virus de la psorosis de los cítricos desde un pie transgénico resistente a una copa no resistente, en Congreso Argentino de Virología, Buenos Aires, Argentina, 2011.

22- Robles Luna, G., Peña, E.J**., De Francesco, A.,** Ocolotobiche, E.E., Borniego, M.B., Reyes, C.A., García, M.L. Las proteínas 54K y 55K de los ophiovirus CPsV y MLBVV interaccionan in vivo con la proteína Plasmodesmata Located Protein 1 (PDLP1), en X Congreso Argentino de Virología, Buenos Aires, Argentina, 2011.

23- Reyes, C.A., **De Francesco, A**., Costa, N., Plata, M.I., Garcia, M.L. Hairpin RNA expression from Citrus psorosis virus 24K-gene enhances the symptoms of Psorosis in Citrus sinensis, in XVIII Conference of the IOCV, International Organization of Citrus Virologists, Campinas, Brazil, 2010.

24- Reyes, C.A., **De Francesco, A.**, Costa, N., Plata, M.I., Garcia, M.L. Transgenic Sweet orange immune to Citrus psorosis virus, in XVIII Conference of the IOCV, International Organization of Citrus Virologists, Campinas, Brazil, 2010.

25- Adema, M., Villarreal, B., Abedini, W., Galarco, S., Ciocchini, G., **De Francesco, A**., Sharry, S. Uso de Biotécnicas para la Propagación y Mejoramiento de Populus Deltoides: Australian 129-60, en XIII Congreso Forestal Mundial, Buenos Aires, Argentina, 2009.

26- Abedini, W., Adema, M., Amado Cattaneo, R., **De Francesco, A.**, Ciocchini, G., Sharry, S. In Vitro Regeneration of Populus deltoides cv Australia 129-60, in 23rd Session International Poplar Commission, Beijing, China, 2008.

Fellowships and Awards

- **Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina** 2015-2016. Post Doctoral fellowship.
- **Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina** 2013-2015. Doctoral fellowship II.
- **Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina** 2010-2013. Doctoral fellowship I.

- **International Organization of Citrus Virologists (IOCV), USA**
  2010-2016. Support to attend the IOCV meetings 2010, 2013 and 2016.
- **Argentine-Brazilian Center for Biotechnology (CABBIO), Brazil**
  2012. Support to attend to CABBIO course "Introdução a técnica de Interferência por RNA e microRNAs"
- **Instituto Valenciano de Investigaciones Agrarias (IVIA), Spain**
  2012. Support to attend the ICC (International Citrus Congress 2012)
- **Comisión de investigaciones científicas de la provincia de Buenos Aires (CIC), Argentina**
  2009-2010. Undergraduate research fellowship.

Conference and Symposium Organization

- Joint Conference of IOCV/IRCHLB (International Organization of Citrus virologists/ International Research Conference in Huanglongbing), Riverside, CA, USA, 2019. Volunteer.
- 4th Annual CEPCEB PostDoc Symposium. University of California, Riverside. Riverside, CA, USA. 2017. Organizing Committee Member. Awards jury.

Extra-curriculum activities

- Volunteer at Plant Defenders Challenge (Girlguiding challenge pack) organized by Rothamsted Research (United Kingdom), 2020.
- Responsible for Wenbo Ma lab in set up, and establishment of Standard Operation Procedures to work in a Biosafety Level -3 laboratory for Citrus Huanglongbing research (California Citrus Research Foundation facility). 2018-2020.
- Election committee member for UC Riverside campus UAW 5810, 2017-2020.
- Symposium director as part as the Riverside postdoctoral association (RPA) board, University of California Riverside, 2018-2019.

Languages

Fluent in Spanish and English. Colloquial Italian. Notions of Portuguese.