

WSU Plant Pathology Seminar Series

De-worming the Mystery of *Meloidogyne chitwoodi* Pathotypes and Their Distribution in Washington State

Jessica Franco, Postdoctoral Research Associate

WSU, Department of Plant Pathology

April 4, 2022, 4:10 pm Pacific Time

The Columbia root knot nematode, *Meloidogyne chitwoodi*, is a serious potato pest that can infect potato roots and tubers. Visible blemishes on the tuber flesh greatly reduce potato marketability. Current management strategies include crop rotation and the use of nematicides. However, *M. chitwoodi* has a broad host range, including crops such as tomato, maize, and wheat; and nematicides are costly and environmentally toxic. In addition, there are no resistant plants that are available commercially, which contributes to the difficulty in managing *M. chitwoodi*. There are three *M. chitwoodi* pathotypes present in the Pacific Northwest that are morphologically identical but differ in their host range. Dr. Franco's research focus is on diagnostic tool development for nematode control. She has successfully developed PCR markers to detect and differentiate the three *M. chitwoodi* pathotypes, and assessed their distributions in Washington State.



Dr. Jessica Franco is a postdoctoral researcher in Dr. Cynthia Gleason's lab in the Department of Plant Pathology at Washington State University. She is originally from Yuma, Arizona, and received her undergraduate degree in Microbiology from the University of Arizona. Her Ph.D. is from the University of California, Davis where she studied the role of citrus immune proteases during citrus greening disease progression. Currently, Dr. Franco is interested in developing diagnostic tools against the root knot nematode, *Meloidogyne chitwoodi*, to aid growers identify and effectively control its incidence. She is also characterizing root knot nematode effector proteins and identifying their role in parasitism. Overall, her goal is to combine basic and applied research to develop multipronged strategies to manage root knot nematode diseases.

4:10 PM | April 4, 2022 | PL P 515 Seminar Series

Zoom Link: <https://wsu.zoom.us/j/95784966313?pwd=YUpybkxkcR0ZU1hMEY5N2RLa29udz09>

Meeting ID: 957 8496 6313

Passcode: 2996

Call in number: 1 253 215 8782



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