



Postdoctoral Scholar in *Phytophthora cinnamomi* genetic diversity, genomics, and molecular diagnostics

Department of Microbiology & Plant Pathology
University of California, Riverside (UCR)

*** **IMPORTANT:** DO NOT SUBMIT YOUR APPLICATION VIA THIS WEBSITE. PLEASE READ THE JOB ADVERTISEMENT BELOW TO LEARN HOW TO APPLY FOR THIS POSITION. ***

*The Manosalva laboratory at UCR is recruiting for a highly motivated postdoc to work on different projects recently funded by USDA grants to understand *P. cinnamomi* (*Pc*) genetic and phenotypic diversity, host adaptation, and to develop molecular diagnostics tools.* Phytophthora species' overall economic damage to crops in the United States (US) is estimated to be in the tens of billions of dollars, including the costs of control measures. *Phytophthora cinnamomi*, a widely distributed devastating soil-borne oomycete pathogen, causes Phytophthora Root Rot (PRR) in over 5,000 plant species including many of importance in agriculture, forestry, horticulture, and nursery industry. Avocado PRR remains the common hindrance to avocado production worldwide. This pathogen affects approximately 60-75% of California (CA) avocado growers causing losses of \$40 million annually. Despite the importance of this devastating pathogen, the mechanisms explaining the genetic and phenotypic variability as well as host adaptation are completely unknown. Moreover, the recent identification of fungicide resistant *Pc* isolates that are also more virulent in avocado argues for the development of new strategies for *Pc* management.

Description. The successful candidate will lead existing and new projects focused on elucidating the molecular basis of pathogen genotypic and phenotypic diversity by integrating molecular, biochemical, genomic, transcriptomic, and comparative genomics approaches. The appointed will also oversee the *P. cinnamomi* lab collection and will also participate in the pathogen yearly surveys with other members of the Manosalva research team. This candidate will work with and assist US collaborators on the development of isolate/clade/phenotypic-specific DNA- and protein-based diagnostic tools that will allow us to monitor the spread and distribution of more virulent and fungicide resistant isolates as well as to detect the emergence or introductions of new *P. cinnamomi* isolates, which can be detrimental for agriculture, forestry, natural communities, and biodiversity. This position entails laboratory, greenhouse, and field work. The appointee will analyze data, write progress reports, and publications in a timely manner as well as work and train graduate and undergraduate students in the lab.

Minimum qualifications

- A Ph.D. in plant pathology, microbiology, or related areas.
- Experience working with oomycete or fungal pathogens (basic laboratory culture and greenhouse inoculation methods).
- Demonstrated skills and experience analyzing Next Generation Sequencing data.
- Experience with execution of bioinformatic pipelines for genome and transcriptome sequencing analyses.
- Extensive experience with DNA- and RNA-based techniques including nucleic acid isolation and qPCR.
- Strong publication records.
- Excellent communication and writing skills, since this position involves preparing research progress reports and assisting the PI in publications and grant writing activities.
- Work independently and in a collaborative multidisciplinary environment. The appointee will interact with a big research team of ~14 Co-Project Directors with different areas of expertise including Horticulturist, Plant Pathologist, Plant Breeders, Engineers, Bioinformaticians, Farm Advisors, and Extension Faculties.

Preferred qualifications

- Candidates with dual background in *Phytophthora spp.* biology and genomics will be strongly considered.

- Experience/knowledge related to plant-oomycete molecular interactions and effectormics will be a plus.
- Experience working with pathogen diagnostic tools such as mitochondrial haplotypes, qPCR, and recombinase polymerase amplification (RPA) will be a plus.
- Knowledge of Linux and computer programming languages will be a plus.

UCR is a world-class research university with an exceptionally diverse undergraduate student body. Its mission is explicitly linked to providing routes to educational success for underrepresented and first-generation college students. A commitment to this mission is a preferred qualification.

How to Apply/Contact: The position could commence as early as November 1st, 2020 but no later than January 15th, 2021. Screening will start on September 21th and will continue until the position is filled. Salary will be competitive and commensurate with qualifications and experience. **Candidates should apply directly to Dr. Patricia Manosalva via email by submitting a single PDF file containing: cover letter and curriculum vitae (CV) indicating how you meet the minimum qualifications and listing the contact information of three references to patricia.manosalva@ucr.edu.** The subject of the email should be “Postdoctoral Scholar in *Phytophthora cinnamomi*”.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, protected veteran status, or any other characteristic protected by law.