



**Leonardo De La Fuente, Ph.D.**

Professor

Dept. of Entomology and Plant Pathology

209 Life Sciences Building

Auburn, AL 36849-5413

Phone: 334-844-2582

E-mail: [lzd0005@auburn.edu](mailto:lzd0005@auburn.edu)

### **Graduate student search:**

A Graduate Research Assistantship at the Ph.D. level starting as soon as Fall 2025, is available at the De La Fuente laboratory in the Auburn University Department of Entomology and Plant Pathology (<https://agriculture.auburn.edu/about/directory/faculty/leonardo-de-la-fuente/>). The successful candidate will conduct fundamental research in the framework of the international collaborative project “*Xylella fastidiosa* infection in a hybrid microfluidic model of plant-microbe interactions”. For this research we will develop microfluidic chambers (‘xylem-on-a-chip’) containing both the pathogen and elements of the plant host, that will be used to answer basic plant-microbe interactions questions. Studies will be focused on the devastating bacterium *X. fastidiosa* that is causing damage to agriculture and landscape vegetation mainly in the Americas and Europe. The graduate student will further the knowledge of lines of research ongoing in the lab (see *Phytopathology* <https://doi.org/10.1094/PHYTO-12-23-0476-KC>; *PLoS Pathogens* <https://doi.org/10.1371/journal.ppat.1011154>; *Annual Review of Phytopathology* <https://doi.org/10.1146/annurev-phyto-021021-041716>; *ISME Journal* [doi: 10.1038/s41396-019-0423-y](https://doi.org/10.1038/s41396-019-0423-y); and *AEM* [doi: 10.1128/AEM.06501-11](https://doi.org/10.1128/AEM.06501-11) ). Some of the lines of research that will be pursued include understanding the effect of calcium during biofilm formation and plant-pathogen interactions, elucidating the molecular responses of plant cells to the pathogen, and the use of antimicrobial peptides and other active compounds to control plant diseases. These research projects allow close collaboration with multiple universities, researchers and engineers with a great range of expertise from the US and Israel. Experience in microfabrication, molecular biology, microbiology and bioinformatic analyses is desirable but not required. The position will be ideal for a self-motivated person interested in the advancement of scientific knowledge of plant-associated bacteria. The successful candidate will work within a collaborative, diverse and multi-disciplinary environment. The student will be enrolled in a program towards obtaining a Ph.D. in Plant Pathology. The position will remain open until it is filled.

### **Requirements:**

A B.S. degree in a Biological Sciences-related discipline is required. Experience working in a research laboratory is preferred and skills in microfabrication, microbiology, molecular biology, bioinformatics and/or microscopy techniques are desired but not required. Strong communication skills and the ability to work as part of a team are essential for a successful candidate.

### **Instructions for sending job materials:**

The candidate should contact Dr. Leonardo De La Fuente directly at [lzd0005@auburn.edu](mailto:lzd0005@auburn.edu), and send him a current CV and a letter of interest addressing their motivation to join our program. After pre-selection, the candidate should apply to the Auburn University Graduate School at <https://graduate.auburn.edu/prospective-students/general-admission-requirements/>. Transcripts and TOEFL scores (if applicable), and letters of recommendation from 3 references will need to be submitted with the application.

*Owing much to the past, Auburn's greater debt is ever to the future*