**IMAS MASTER Academic Year 2023 - 2024**

**Proposal of M1 or M2 Internship**

**PROJECT TITLE AND SUMMARY:** **Discovery of barley resistance to bacterial plant pathogens**

This internship is part of a long-term project to define resistance sources in barley to the bacterial plant pathogen *Xanthomonas translucens*. The intern will study both natural and engineered resistance strategies of barley to hopefully provide resistance sources to malting barley breeding programs.

**HOST UNIT:**

The Emerging Infectious Disease Ecology Laboratory (TEIDEL), The Ohio State University, Columbus, OH, USA

**MAIN ACTIVITIES:**

This student will work on resistance screening in diverse panels of barley and using a global collection of historical and current isolates of bacterial leaf streak pathogen *X. translucens*. Moreover this student will learn exciting molecular biology tools to uncover resistance in barley. This student will work closely with a senior TEIDEL team member, and this individual will be expected to clearly prepare, setup, carry out and document experiments. Specific experimental tests will include plant cultivation, disease evaluation and rating, bacterial culturing and inoculation and molecular biology to develop tools for resistance gene discovery. This student will be expected to gather and analyze data and present regularly in one-on-one and group meetings.

**EXPECTED SKILLS:**

5 years of higher education (engineer or master's degree), with experience in biology, microbiology, plant science or a related field. This individual will need strong organizational and project management skills. Clear success will include strong work ethic, autonomy, personal initiative, organizational, technical and interpersonal skills and willingness to critically think about agricultural problems.

**CONTACT:**

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Organization:

Location: Columbus, OH, USA

Duration: 3 (M1) or 6 (M2) months

Dates: March 2023 to July 2023 (M1); January 2023 to July 2023 (M2)

Level: Master 1 or 2

Internship profile: Research