

ARTHROPOD VECTORS OF PLANT PATHOGENS LABORATORY



DEPARTMENT OF ENTOMOLOGY
UNIVERSITY OF NEBRASKA-LINCOLN
PI: DR. SHAONPIUS MONDAL

Main lab room: ENTO 302 (BSL1 containment facility)

Additional lab rooms: ENTO 107, PLANT SCIENCE 172

Green house: Insectary green house 108, 110, 111.

Mondal lab (Arthropod Vectors of Plant Pathogens lab) member guidelines:

Who are we? The first and foremost question that people want to know about us is “who are we?” Are we entomologists, acarologists, plant virologists? In fact, we are all of them. We have the privilege of diving deeply in all three of them. I like to classify myself as a vector biologist. My expectation is that you also will think similarly and grab expertise in all three directions.

Lab: Our lab is named “Arthropod Vectors of Plant Pathogens Lab”. This name has a vast coverage, ranging from arthropods to all of the plant pathogens. However, we only dig into the arthropods that transmit select plant pathogens, such as virus, bacteria etc.

Mission: The mission of the “Arthropod Vectors of Plant Pathogens Lab” is to be at the forefront of scientific discovery in the subject matter of vector biology and to assist the grower community in successfully managing vector-borne plant diseases. Our current emphasis is to deal with aphid- and wheat curl mite-transmitted diseases in wheat and other cereal crops. We aim to maintain a healthy and professional relationship between extension educators, growers, and other researchers and peers.

Values and ethics: The Mondal lab is a strict adherent to several core values and ethics. As a new member of the team, I always encourage you to abide by these core values and ethics.

1. **Hard work and smart work:** We believe in perseverance and dedicated effort in research and study. There is no alternative to hard work. However, along with working hard we also value time efficiency, and critical and strategic thinking. Together, hard and smart work can lead to excellence.

2. We are a team: We work as a team. Collaboration and organization within our lab and among lab mates, as well as related peers, are expected and are of great value. No one is perfect, and this also true when it comes to research. We all have diverse expertise, abilities and experience. We will try to use those in ways help us all be productive and achieve our career goals.
3. Plagiarism and data fabrication: Plagiarism and data fabrication will not be tolerated in any degree. An honest representation of your hard work is always the key to success.

Collaboration: We are a team, and we maintain a good collaborative environment with other labs on campus as well as outside of the campus. Our predominant collaborators include USDA labs, as well as UNMC labs. Apart from that, we have collaborators from many other nationally and internationally recognized universities. My expectation for you would be that you maintain good and professional relationships with the scientific community and your peers, as well and thrive in a good, collaborative environment.

Speak out: The Mondal Lab encourages productive discussions on research topics during the weekly lab meeting. In each weekly lab meeting, the lab members are required to present 3-4 slides on what they have done/accomplished during the preceding week. Other lab members are encouraged to assess the data critically and give constructive feedback as it is presented. Often these data are presented in national and international meetings/conferences and published. It is very important that we all understand and critically assess the work before offering it to the scientific community. So, please speak out... and help your fellow lab members.

Data privacy: It is extremely important that we all understand how important the scientific data is and how important it is to maintain the privacy of that data. Lab members are expected to maintain the privacy of all lab data at all times and the data should not be discussed with other labs or members under any circumstances, unless it is under my supervision. All lab notebooks should be kept in confidence and should not be left in any place except the designated labs. Students and postdocs are required to publish their data and findings as soon as they are ready. When personnel depart the lab permanently, all the lab notebooks, associated materials such as data, protocols, manuscripts, soft copies, files, and samples are to remain with the lab. These are the property of the university and not of any individual person.

Lab rules:

Lab hours: General lab hours are 8.00 AM to 5.00 PM Monday through Friday. All members are expected to work/present in lab or their office during this time. However, it is common for ongoing experiments to require additional time or work at different hours/days. All lab members will be given keys for accessing labs after hours.

Leave/absence: If you are unable to come to the lab or perform lab activities due to health/or other issues, please let Dr. Mondal know at your earliest convenience.

Lab notebook: All lab members will be given lab notebooks to record their scientific activities in the lab. It is expected that all the activities are recorded by date and with proper sample numbers. If lab notebook sample number does not match with the actual sample numbers, the data will be considered compromised. Lab notebooks will be regularly checked by Dr. Mondal for accuracy. Lab notebooks are the best friend of a scientist, and their security and accuracy are critical.

Lab computer/laptop: All lab members will be provided with a lab laptop/computer system. This system will be connected to OneDrive and all the data will be backed up in OneDrive, along with the computer hard disk. All lab members are required to use the lab computer system for their research work. NO EXCEPTIONS! The graduate students can also use the system for their degree course-related purposes. Activities such as watching TV shows or playing games etc. on the computers are strictly prohibited. Only research-related videos are permitted. The computer should be returned once students complete their project/ degree.

Lab Equipment and reagents: Our lab is equipped with serological and molecular tools. Fine microscopes are added advantage. All lab members need to go through appropriate training to use the equipment. Any unauthorized/inappropriate use of equipment will not be tolerated. It is critical to learn first and then use. If you have questions, please reach out to Dr. Mondal. All lab members will be given their own sets of reagents for conducting particular experiments, but there are common reagents that we all share.

Lab organization, cleanliness, space: When in lab, it is extremely important that we all abide by some lab rules. Lab members will be assigned a particular lab space, and they are expected to use that space only for their work. If additional space is required, let Dr. Mondal know, and he will try to arrange additional space. It is also important for lab members to understand that their lab spaces and the entire lab should be clean, sanitized every time before and after the work. The pipettors need to be stored properly and any spills need to be taken care of before leaving. Lab members are responsible for cleaning their dishes, but the lab may have additional help from undergraduate workers based on availability. Remember one thing, “your uncleanliness can ruin another’s experiment”.

Lab orders: All of the members are encouraged to reach out to Dr. Mondal for ordering reagents well in advance of running out. Failure to do so, will trigger timing and budgetary consequences and will limit your ability to complete your work in a timely fashion.

Lab closure: The last person in the lab is responsible for turning off lights, turning off the air system, and closing and locking the lab. **No Exceptions...**

Greenhouse and growth chamber space: We have three greenhouse rooms and several growth chambers to run our experiments. Lab members will be assigned bench space and growth chambers to conduct their experiments. They will be responsible for watering and managing their space and keeping it clean.

Course Enrollment (for graduate students only): Students should consult with Dr. Mondal before enrolling in courses each semester. If a student desires a lighter or heavier course enrollment for any reason, it is their responsibility to let Dr. Mondal know. His approach is to help students select courses that will satisfy their future career goals, advising the students in choosing courses that will align with and equip them in their future career paths.

Graduate committee (for graduate students only): A graduate committee will be formed for the graduate students. The committee will typically include 3 members for MS program and 4-5 members for PhD program. The committee will meet intermittently (at least annually) to supervise the progress of the student.

Undergraduate student researchers/workers: The Mondal Lab will often hire undergraduate student researchers/workers to assist members with lab and greenhouse work. However, it is important to realize that they are not graduate students and have particular times when they can come in and help. These must be scheduled with Dr. Mondal. It is never appropriate for a graduate student to instruct an undergraduate student worker to come to the lab outside of the normal work hours. Undergraduate students may assist graduate students with their research work, but it is ultimately the responsibility of the graduate student to ensure that proper procedures are being followed. If there are multiple undergraduate students working in the lab, the graduate students/postdocs will serve as their mentors. It is **never acceptable** for a graduate student/postdoc to leave an undergraduate student unattended in the lab. Graduate students are encouraged to assist the undergraduate students in constructive and professional ways and are encouraged to develop their mentoring skills.

Seminar attendance: Seminars are great way to learn and understand scientific presentation. All lab members are encouraged to attend Entomology departmental seminars as well as seminars in other departments.

Joint lab meeting: The Mondal lab jointly conducts lab meetings with Tatineni lab at USDA-ARS. These lab meetings will be held each 1-2 months and one of the members from each lab will present their research findings. This is a great way to get feedback on your research.

Conferences: All members are encouraged to attend national and regional conferences. However, this is based on their scientific data from their experiment and availability of funds.

Publish or Perish: It is very important for all of the members to learn that their data is very valuable, but it will only be valuable once it is published. So, all members are encouraged to be proactive to publish their data as soon as it is ready.

Evaluation and conflict management:

Annual evaluation: All lab members are subject to an annual evaluation and will undergo the evaluation with current policies of the Department of Entomology.

Conflict Management: It is very important for all of you to maintain a steady, friendly and collaborative environment in the lab. There are no power hierarchies. We are all students of science, and we are all here to learn. So please treat your fellows and lab mates with respect, and not based on age, gender, race, color etc. In case of any significant conflict that cannot be resolved between the involved parties, the incident must be reported to Dr. Mondal immediately. He will talk with both persons to come up with a solution and decide if further resolution is required.

Other prohibited behaviors: Some strictly prohibited behaviors include any type of harassment, intimidation, discrimination, physical, mental and verbal abuse of any type. Lab members should not be involved in any type of lab gossip or personal attacks and should focus on their own business. NO EXCEPTIONS! For a complete list of expected and prohibited behaviors, members are encouraged to go through university and department codes of conduct linked below.

University and department code of conduct:

It is expected that all lab members will follow the University of Nebraska-Lincoln and UNL Entomology Department code of conduct. Lab members should treat each other professionally and any issue and argument should be immediately notified to me first. Remember that every person and every interaction matters.

The University student code of conduct link:

<https://studentconduct.unl.edu/student-code-conduct-0/>

The department code of conduct link:

<https://entomology.unl.edu/about-entomology/entomology-code-conduct/#:~:text=Expected%20Personal%20Behaviors&text=All%20personnel%20working%20in%20the,times%20to%20promote%20constructive%20discourse.>

Work life balance and Fun times 😊 :

All members are expected to maintain a work-life balance, and to encourage one another to do so. We are not always a work-centered group - We are fun-loving folks. We want to enjoy being together socially, and will have some structured activities, such as an annual day outing (summer picnic) and frequent ice cream parties.

Questions? Contact me

Please contact Dr. Mondal by email. If you do not receive a reply, please use a text. Phone calls are last option. In case of any emergency, please do not hesitate to call him right away on his cell phone.

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