

## **Research Internship on greenhouse gas fluxes from subtropical bioenergy crops**

Starting date: beginning/mid October 2020; Application due: October 1, 2020.

Ideal for Students with Undergraduate Degree Contemplating Graduate School

Includes independent research project. Provides Weekly stipend and Room

Internship at Archbold Biological Station's Buck Island Ranch (BIR), in south-central Florida in the Agro-Ecology Program.

The successful intern will be supervised by Dr. Nuria Gomez-Casanovas (University of Illinois), Dr. Elena Blanc-Betes (University of Illinois), Ms. Hannah Van Zant (BIR) and Dr. Elizabeth Boughton (BIR). The intern will be exposed to research in biogeochemistry, crop and grassland ecology, and disturbance ecology (harvesting, grazing, fire, flooding). Primarily, the intern will work on a project investigating the environmental sustainability of sugarcane for biofuel production. This project is a collaborative effort between the Center for Advanced Bioenergy and Bioproducts Innovation (CABBI, Institute for Sustainability, Energy, and Environment, University of Illinois) and Archbold's BIR.

Internships offer an opportunity for providing novel insights into some of the most profound issues challenging our world: securing food and energy in a sustainable way; and for learning how research works. The intern's independent research project will improve understanding of how changes in land use affect the exchange of greenhouse gases (CO<sub>2</sub>, CH<sub>4</sub>) between the atmosphere and subtropical bioenergy crops and pastures. The successful intern will be trained to use a variety of instruments to measure ecosystem CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O fluxes from ecosystems. Other fieldwork will include aboveground and belowground biomass, and soil and water collection. Labwork will include drying and weighing biomass, grinding biomass using a Wiley Mill, soil sieving, acid washing etc. Long days and work on weekends may be required during intense data collection campaigns. Preference will be given to candidates who demonstrate experience with similar measurements or a strong background (coursework) in biogeochemistry, but all are encouraged to apply. Field work regularly consists of long days of moderately demanding physical labor in hot and humid conditions. Candidates with experiences that demonstrate proficiency working outdoors will be considered.

Interns receive room and a weekly stipend of \$245, subject to deductions for Social Security and Medicare (paid bi-weekly). Free of charge lodging ending no later than three days after the conclusion of the internship, as residing on Ranch property is a requirement for this position. Please note that lodging includes communal kitchen, living space, and bathroom, but interns have their own bedroom. Interns typically work 20 hours per week as research assistants and the remainder on their research project. Internships run for 6 months but are flexible in their duration. Interns are required to give an oral presentation based on their independent research project. The format of this presentation will likely be a Zoom Webinar due to Covid-19.

The intern must be able to tolerate living on a remote cattle ranch and provide their own transportation for personal activities. BIR is a division of Archbold Biological Station with ten

research staff and four operations staff, located 11 miles away from the main field station. BIR is operated as a commercial cattle ranch which serves as a research platform to investigate ecological and economic dynamics on working landscapes.

Archbold Biological Station is active in research, conservation, and education. Facilities include a 5000 ha preserve, an outstanding regional library and a GIS lab. The station has a staff of about 50 with many visiting scientists, an active seminar program, and a relaxed biological station atmosphere. Applications from members of underrepresented groups are encouraged. The Station cannot hire people without legal status to work in the U.S.

To apply for this internship, please provide the following: a cover letter stating research interests, a description of previous research experience, a resume or CV, a summary of grades, and two letters of recommendation by October 1, 2020. Please email applications to: Dr. Nuria Gomez-Casanovas, [ngomezca@igb.illinois.edu](mailto:ngomezca@igb.illinois.edu).

Due to Covid-19, we require new staff and interns to quarantine for 2 weeks in a visiting researcher cabin, prior to transferring to the permanent shared housing. Limited interaction with staff will occur in the first two weeks. Masks are required indoors, except when sitting at a personal desk, and during field work if maintaining 6 foot distance is not possible.

Should you require further information please email Dr. Gomez-Casanovas.