PhD Candidate – Banana Genomics and Metabolomics

We are seeking a highly motivated PhD student to join the Plant Pathways Elucidation Project (www.p2ep.org) based at the North Carolina Research Campus in Kannapolis, NC. The Plant Pathways Elucidation Project (P2EP) is a dynamic, multi-institutional, public/private research initiative which leverages plant systems biology to mine plant-based solutions for human health. Overall, the P2EP seeks to elucidate the metabolic pathways involved in the production of nutritionally - important phytochemical compounds (phytoactives) in economically important, functionally-relevant crops, in addition to other relevant traits of interest, such as disease resistance and drought tolerance. The successful candidate will be enrolled in NC State University’s Department of Horticultural Science, and its PhD program will include a minor in Nutrition. The PhD program will be supported through the Dole Nutrition Research Institute.

Within the P2EP team, the PhD student will establish genomic resources and develop new genomic tools for the banana crop, and use these assets to: 1) characterize pathways that lead to important metabolites accumulated in banana and 2) determine the genetic basis of resistance to relevant fungal diseases and/or nematodes. Dole has access to a vast range of banana biodiversity to facilitate this research quest, and these plant materials will be fully available to the selected candidate.

PhD students entering the P2EP program immerse themselves in a multifaceted team environment unlike an average graduate assistantship. Selected candidates employ Horticulture, Nutrition, Food Science, Genetics, Statistics, Bioinformatics, Plant Science and Agronomic research techniques throughout their project. PhD students direct a team of four to five undergraduate interns assigned to their project during the summer months, who streamline the research by contributing to the investigative mission. This doubles as an educational outreach program, which exposes undergraduate students to high level research they would not experience at non-research based institutions. Individuals interested in this assistantship must be organized, have relevant research experience, be teamwork oriented, demonstrate strong leadership qualities, and be comfortable with learning new computer based technologies.

International students must have a GRE and TOEFL exam to be admitted in the graduate school. See graduate admission for more information
https://cals.ncsu.edu/hort_sci/teaching/degrees/grad-programs/graduate_admissions.php
See minimum course requirements for a Minor (Ph.D.) in Nutrition:
https://fbns.ncsu.edu/acdprg/
Visit the P2EP web page for more information: http://p2ep.org/
Application deadline: June 30/2016
Start date – Winter 2016/Spring 2017

For further information, contact: Dr. Massimo Iorizzo, Department of Horticultural Sciences, Plants for Human Health Institute, North Carolina State University, miorizz@ncsu.edu.