Senior Research Scholar- Plant functional and structural genomics

To apply: https://jobs.ncsu.edu/postings/128377

Posting Information

Vacancy Type: EHRA Non-Faculty
Is Internal Transfer Only: No
Working Title: PHHI Senior Research Scholar- HPC Cluster
Salary Range: $65,000 - $72,000 (Commensurate with experience)
Position Number: 00106640
Work Schedule: Monday - Friday / 8:00 am - 5:00 pm
Full Time Equivalent (FTE): 1.00
Department: 110308 - Kannapolis Research
Department: Kannapolis Research
Job City & State: Kannapolis, NC
Primary Function of Organizational Unit: The NC State University Plants for Human Health Institute (PHHI) is an established Institute located on the NC Research Campus in Kannapolis, NC. The NC Research Campus was created to have all aspects of human health and nutrition in one place complimented by multiple state and private entities providing the academic and research resources. The PHHI currently houses researchers and staff from various departments including Horticulture Science, Food Bioprocessing and Nutrition Sciences, Plant and Microbial Sciences, Animal Science, Cooperative Extension, and NCARS.

Essential Job Duties: Plants for Human Health Institute (PHHI) Small Fruit and Vegetable Breeding and Genomics Faculty member, Dr. Massimo Iorizzo, is seeking a highly motivated individual with expertise in bioinformatics and plant genomics to join the lab as a Senior Research Scholar. The Senior Research
Scholar is expected to conduct advanced research in the group to develop genomic resources and reconcile, analyze complex multi-omics datasets to study genes and metabolic pathways affecting accumulation of health-promoting, phytoactive compounds in fruit and vegetable crops.

The successful incumbent of this position must be familiar with plant genome assembly (de-novo), gene prediction and annotation with an emphasis on genes involved in plant metabolic pathway, and comparative genomic analysis (e.g. Pan-genome analysis).

This research position is expected to coordinate and/or conduct multiple, concurrent assignments or a multi-faceted project. This position will engage in collaborative projects with other lab members and external collaborators that have expertise in plant and molecular biology, quantitative genetics, crop breeding and metabolomics.

The position will also develop and maintain new analytical pipelines and computational/statistical approaches to analyze data, and provide training to other lab members including students, on bioinformatics and computational applications and tools in an HPC environment. The position will lead and assist in preparation technical reports, grant proposal, manuscripts and presentations, including development of independent research objectives. Depending on academic productivity, opportunity for career advancement exists within the Iorizzo lab.

**This position is located in Kannapolis, NC.**

**Other Work/Responsibilities**

The position will also perform general computing resources management (Windows and Linux environment) including but not limited to; HPC server maintenance, ordering and management of supplies and work flows needs for the computing resources. This position will need to travel off-site on occasion alone to observe research and must independently be able to travel from location to location without reliance on others or the advanced notice that is often required of alternative means of transportation. The administrative role of Kannapolis IT Server Manager Support will act as a liaison between the researchers at PHHI and their IT support staff with regards to the on-site High-Performance Computing (HPC) system and its usage. This position will provide first-tier installation and support of
software on the HPC system and work with IT staff to assess the compatibility and security of the software before and after installation.

**Minimum Education/Experience**
- Ph.D. (or relevant terminal degree) in Computational Biology, Bioinformatics or related field with at least 5 years of formal “Post-Doc” training and/or post-degree professional work experience with a demonstrated record of research achievement, OR
- Relevant Master’s degree, plus at least 8 years of exceptional relevant professional work experience and a record of research achievement.

**Departmental Required Skills**
- Procurement and management of computational resources (HPC cluster).
- Management of laboratory staff including assisting in the mentorship of undergraduate and graduate students with PI.
- Experience with advanced (such as Illumina, PacBio, Nanopore, Hi-C) sequence technologies to study plant genomes and characterize genes involved in secondary metabolite accumulation. This includes genome assembly, gene prediction, gene annotation, quantitative transcriptome analysis and integration of multi-omics data to perform gene network analysis.
- Strong written and oral communication skills with ability to develop manuscripts, grant proposals and presentations.
- Must be able to lift (with or without reasonable accommodations) up to 30 lbs on a frequent basis.

**Preferred Experience, Skills, Training/Education**
- Strong communication skills demonstrated through first authorship in manuscripts, grant proposal, and/or presentations.
- Working knowledge of metabolic pathways and database development and management. This includes knowledge of advanced programming and other computational skills as appropriate for advanced plant genomic studies.
- 5 years of relevant bioinformatics/plant genomics experience.
- Experience with database development and management.