NC STATE UNIVERSITY

College of Agriculture and Life Sciences
NC Research Campus
600 Laureate Way
Kannapolis, NC 28081
704.250.5400
704.250.5409 (fax)

RESEARCH SCHOLAR POSITION

Position Description

Dr. Massimo Iorizzo, is seeking a highly motivated individual with expertise in bioinformatics and plant genomics to join the lab as a Research Scholar. The 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, photoactive 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). Experience with marker traits association analysis such as QTL or GWAS analysis will be a plus. 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, manuscripts and presentations. Depending on academic productivity, opportunity for career advancement exists within the Iorizzo lab.

Apply here: https://jobs.ncsu.edu/postings/142938

Qualifications

Relevant Ph.D degree (or relevant terminal degree), or relevant Master's degree with at least 5 years of formal post-degree professional work experience.

Departmental required skills

- PhD Ph.D. (or relevant terminal degree) in Bioinformatics, Genetics or related field.
- 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.
- Experience to work with multiple high-performance computing platform (eg. LSF, Slurm, SGE).
- Experience with marker traits association analysis such as QTL or GWAS analysis will be a plus.

- 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).
- Programming skills using Python, R, Perl or CC+.
- Strong written and oral communication skills with ability to develop manuscripts, grant proposals and presentations.
- Proficiency to publish findings in well-recognized peer-reviewed journals.
- Ability to manage more than one project in a rapid and smooth manner while being able to interact and communicate with research personnel from diverse disciplines.
- 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.
- Must demonstrate the ability to work independently and creatively.
- Must have good communications skills, and be able to articulate clearly the scientific and technical needs in the field, as well as set clear goals, and work within an interdisciplinary team setting.
- Attention to detail and follow-through.

Preferred Qualifications
- PhD in plant genetic or related field;
- At least 3 years of relevant quantitative genetic experience;
- Experience in comparative genomic analysis (Pan-Genome) and Gene Network expression data analysis.

Salary range: $54,000 – $62,000

Primary Function of Organizational Unit
The position will be working under the supervision of Dr. Massimo Iorizzo's, Associate Professor at North Carolina State University. Dr. Iorizzo has a very active research program that aims to leverage advanced genetic and genomic resources to study the structure of the crop genomes and elucidate the genetic mechanisms and genes associated with enhanced quality characteristics including health properties. Crops of interest in his program includes blueberry, carrot, banana, pineapple, spinach, cranberry and potato. Overall, Dr. Iorizzo research is contribute to expand access to high quality genomic resources to the broader fruit and vegetable research and breeding community, and expand knowledge on genetic factors controlling quality traits. In the long term, his research will facilitate the selection of new improved cultivars of fruit and vegetables with improved quality and health promoting characteristics.
As a mentor, supervisor, Dr. Iorizzo place priority on mentoring his trainee to perform their work toward publications, which ultimately is a critical skill for future career and professional growth. The candidate must have a strong motivation and proficiency for publications.

Dr. Iorizzo lab is located at the NC State University Plants for Human Health Institute (PHHI), based at the N.C. Research Campus (NCRC) in Kannapolis, NC. The PHHI is an interdisciplinary institute comprised of both research and extension programs, which work hand-in-hand at the NCRC to further our mission of discovering and delivering innovative plant-based solutions that advance human health.

See also:
https://www.linkedin.com/in/massimo-iorizzo-1b7a16126/
https://scholar.google.com/citations?user=pjydJhoAAAAJ&hl=en