NC STATE UNIVERSITY

College of Agriculture and Life Sciences
NC Research Campus
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POST DOCTORAL POSITION

Position Description
Dr. Iorizzo lab at NCSU is looking for a highly motivated post-doc that will lead a pioneering project aiming at using NGS (Illumina and PacBio) to develop a local pan-genome spanning QTL regions associated with quality related traits (color, bioactive content and profile, chemical composition), with ultimate goal to identify candidate mutation controlling trait of interest. The candidate must have a strong motivation and proficiency for publications.

The position will work as part of a laboratory team, will interact closely with collaborating laboratories, and must be able to coordinate activities and reports within a diverse team of individuals. The position will be responsible for writing of publications and prepare presentations, contribute with preparation of technical reports, as well as contribute on grant proposal development to support research funding initiatives. The position will assist/participate in PHHI and University sponsored programs. The position will also assist in the training and mentoring undergraduate and graduate students. Crops of interest in this project will include blueberry and carrot.

Apply here: https://jobs.ncsu.edu/postings/153354
Qualifications

Ph.D. or equivalent doctorate (e.g., M.D., D.V.M., Sc.D.) in appropriate field awarded no more than five (5) years from initial date of postdoctoral appointment.

Departmental required skills

- PhD in Plant Breeding and Genetics, Plant Biology, or a degree in biological science with demonstrated experience in quantitative genetics, bioinformatics and biochemistry.
- Strong backgroung in analysis of next generation sequencing including short and long reads technology, comparative genome or pan genome construction and analysis;
- Familiar with molecular biology techniques (DNA, RNA extraction, PCR), preparation of library for DNA/RNA sequencing;
- Background in quantitative genetics, (GWAS) in diploid plants, is essential;
- Experience in integrating quantitative genetic data and whole genome data for candidate genes identification is preferred;
- Must be familiar with NGS and high-throughput genotyping technologies and identification of candidate genes/mutation affecting traits of interest;
- Experience in population genetic analysis (e.g. phylogenetic, PCA, structure, nucleotide diversity);
- 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.

- 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 RNAseq data analysis

Salary range: $50,000 – $54,000

Other Work/Responsibilities

The position will be responsible for coordinating/perform sample collection, phenotyping, processing, data analysis, and data interpretation. Task will include sample collection, phenotyping, DNA/RNA extraction, bioinormatic analysis including sequence assembly, annotation, comparative analysis, SNP and SV analysis and Genome Wide Association Analysis. Ultimate goal will be to identify candidate genes/candidate mutations underlying the trait of interest.

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 research 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