Post-Doctoral Fellow - Quantitative Geneticist, Data Curator and Outreach Specialist

The Small Fruit Breeding Program at Auburn University is seeking a quantitative geneticist/data curator/outreach specialist (Post Doc Fellow) to support the research activities of a recently funded four-year USDA Specialty Crops Research Initiative Program award to Washington State University, Clemson University, University of Florida, Auburn University, University of Queensland, and USDA ARS. This highly collaborative project includes a diverse team of researchers working on crop breeding, genomics, genetics, curation, and bioinformatics. This is a benefit eligible, non-tenure track position available for two and a half years.

The project will expand the Rosaceae, Citrus, Vaccinium and Pulse crop databases to meet community demand for resources with usable big data aggregated, analyzed, integrated, and visualized, as well as data management and analysis tools. Objectives of the project are to: (1) collect, curate, and integrate all types of genomics, genetics, and breeding big data in easy-to-use and robust crop-specific databases, (2) develop and integrate tools to promote the collection, integration, and utilization of big data by scientists and breeders, and (3) provide scientists/breeders with personalized training for field data collection software, big data management and analysis, and use of database resources, quantify impact of databases on genomics-assisted breeding, and broadly disseminate project activities and outcomes.

This quantitative geneticist/data curator/outreach specialist based at Auburn University will support the activities (1) and (3) of the proposal for blueberries. Additionally, the specialist will work closely with the blueberry breeder at Auburn University to collect and analyze phenotypic, genotypic, and environmental data to build prediction models for key traits of blueberry such as flowering time, yield, and fruit quality. The ideal candidate for this position will have a strong background in plant breeding and quantitative genetics, research and/or scientific data management experience in an agricultural or related field, and familiarity with programing and preferably bioinformatic tools. The specialist, in collaboration with the project team, will curate and analyze genomic, genetic, and breeding data obtained from authors, publications, and/or other data repositories including historical data in breeding programs; create outreach and training materials; provide webinars and on-site training on how to use their crop community databases, the breeding information management system (BIMS), breeding data management tools; and be responsible for mass communications to database users.

The position is a part of a Crop curator team that is composed of curators for Genome Database for Rosaceae (https://www.rosaceae.org/) , Citrus Genome Database (https://www.citrusgenomedb.org/), Genome Database for Vaccinium (https://www.vaccinium.org/), and Pulse Crop Database (https://www.pulsedb.org/) . This position reports to Dr. Sushan Ru at Auburn University and the PDs of the Washington State University Drs. Dorrie Main and Sook Jung and will closely work together with their cohort of other crop curators and outreach specialists. This position requires frequent travel including driving.

Essential Duties and Responsibilities include the following:
- Collect and curate genomic, genetic, and breeding data (check the necessary metadata, standardize the names, associate with ontologies, enter into data template, and upload to the Genome Database for Vaccinium)

- Perform quantitative genetics analysis of collected and curated data to better understand the heritability, breeding values, and genotype-by-environment interactions for key blueberry traits such as flowering time, yield, and fruit quality.
- Help create outreach and training materials for specialty crop breeders and researchers
- Provide webinars and on-site training on how to use the Genome Database for Vaccinium and the Breeding Information Management System (BIMS)
- Manage mass communication to database users including newsletters and social media
- Help organize and participate in workshops at conferences
- Participate in preparation of scholarly publications

The minimum qualification is an earned Ph.D. in Plant Breeding, Quantitative Genetics, or closely related field at the time employment begins. Selected candidates must have the following essential skills:

- Strong background in plant breeding and quantitative genetics.
- Proficiency in one or more programing languages, e.g., R, Python, C++.
- Knowledge in genomics, genetics, and breeding in plant research and attention to detail. This position requires the ability to scan scientific literature to extract necessary information for uploading data into databases.
- Outstanding interpersonal and teamwork skills. This position requires interacting with researchers and collaborating with the project team. A strong candidate for this position will be expected to be respectful of other cultures, identities, and backgrounds.
- Excellent verbal and written scientific presentation skills. This position requires preparation of webinars, in-person training, communications, and help developing manuals and instructional videos.
- Demonstrated ability for time management and use of informed judgment to make independent decisions. This position requires extensive curation of scientific literature as well as outreach duties.

Desired qualifications include the following:
- Familiarity with collaborative communication tools.
- Experience with large scale data/data analysis, data curation, familiarity with FAIR data management concepts.
- Familiarity with bioinformatics for genomic data analysis.

Application: Applicants must complete an on-line application process at the following link: **https://www.auemployment.com/postings/40934** and attach the following: 1) cover letter stating research interests and career goals, 2) current curriculum vita, and 3) copies of all academic transcripts. When prompted, please provide names, phone numbers, and email addresses of three professional references. Only **COMPLETE** application materials will be considered. Active review of applications will begin October 9, 2023 and continue until the position is filled. Salary will be commensurate with education and experience.

For questions regarding the position, please contact Dr. Sushan Ru at sushan.ru@auburn.edu

The Program: The Small Fruit Breeding Program at Auburn University is located in Auburn, Alabama, U.S. The program was established in 2021 to develop elite blueberry cultivars for Alabama and the broader Southeastern United States using a combination of traditional and molecular breeding technologies. Our research focuses on multi-environment cultivar evaluation, dissection of the genetic basis of important traits, and high-throughput phenotyping in blueberries and potentially other small fruit crops.

The University: Auburn University is an R1 land-grant institution organized into twelve academic colleges and schools. Auburn is ranked 40th among public universities in the U.S. News and World 2021 Report. For 2020, 24,505 undergraduates as well as 6,232 graduate and professional students were enrolled. The University is nationally recognized for its academic excellence, commitments to community engagement, positive work environment, flourishing student life programs, and beautiful campus. To learn more about the University, please visit: www.auburn.edu.

The Community: Auburn is recognized as one of America's best small towns with a moderate climate and easy access to major cities, beaches, and mountains. The city is situated along the rapidly developing I-85 Atlanta, Georgia, and Montgomery, Alabama corridor. The combined Auburn-Opelika Metropolitan Statistical Area boasts a growing population of over 160,000. The City of Auburn grew 43% in the past decade and is known for an excellent public school system and a local medical center acknowledged as among the best in the region. The City of Auburn website has information on the community and services that can be accessed at: https://www.auburnalabama.org/