

Research Biologist (Computational/Bioinformatics) (Research Associate)

USDA ARS, South East Area, Sugarcane Production Research Unit, Canal Point, FL 33438

Accepting application for the above position.

Grade 11

Appointment type – Temporary (initially 13 months and possible to extent up to 4 years)

Work Schedule – Full Time

Salary and benefit - \$68,864 with all federal benefit (i.e. health insurance, annual leave, sick leave, life insurance, 401K, retirement plans).

Telework eligible – Yes, determining by the agency policy

Major Duties and Responsibilities -

Incumbent will Perform bioinformatics and statistical analysis in genetics, genomics, and molecular breeding research. Develop an extensible pipeline for NGS based whole genome sequencing, genotyping for highly polyploid and complex genome sugarcane using both DNA and RNA. Perform analysis related to genomic selection, QTL mapping, genome wide association study (GWAS) and transcriptome analysis using latest bioinformatics and statistical software. Lead implementation of application of machine learning methodologies in plant phenotyping and genotyping for sugarcane molecular biology lab. Provide technical support, guidance, and training in computational analysis using bioinformatics and statistical tools. Conduct phenotype trial related to sugarcane genetics and genomics. Help scientist to conduct trial for CP sugarcane breeding genotype selection.

Actively participates in the modification of existing methods of analyses or the development of new techniques in order to improve accuracy and efficiency or to overcome difficulties in dealing with sugarcane molecular research problems. Modifies methods, if necessary, to solve problems or make improvements.

Searches scientific literature for principles, methods, and procedures and selects the most appropriate approach selected for the research goals determined by the lead scientist in molecular biology in the unit.

Maintains official laboratory and field notebooks, recording methods and procedures used, any procedural modifications, observations, data in the database, and results obtained from the CP program.

Participates in the preparation of data for scientific technical reports and manuscripts.

Writes periodic research reports including discussion on experimental design, field plot arrangement, data collection, principles, procedures, and results.

Organizes experimental progress in the form suitable for oral presentation or posters for scientific meetings. Makes oral presentations to stakeholder groups regarding the research in the absence of the supervisor.

Keeps abreast of current scientific advancement by reading literature, review articles, and attending supervisor approved meetings, workshops, and conferences.

Performs other duties as assigned.

Travel Required

Occasional travel - Local and domestic travel travel will be required for field work and to attend training and scientific meetings and conferences.



United States Department of Agriculture
Research, Education and Economics
Agricultural Research Service

Promotion Potential – 12 grade

Who can apply - U.S. citizens, nationals or those who owe allegiance to the U.S.

Requirements:

Conditions of Employment -

- Males born after 12/31/1959 must be Selective Service registered or exempt.
- Subject to satisfactory adjudication of background investigation and/or fingerprint check.
- Direct Deposit: Per Public Law 104-134 all Federal employees are required to have federal payments made by direct deposit to their financial institution.
- Successfully pass the E-Verify employment verification check.
- Appropriations Law and Immigration Law requirements must be met.

Education and Knowledge Required - A recent Ph.D. (within last four years) in Biological Sciences, Genetics, Agriculture, Natural Resource Management, Chemistry or a related field of study that has equipped the applicant with the necessary knowledge, skills and abilities to perform the duties and responsibilities of the position. Knowledge and experience in multiple programming languages and platforms (eg Python, perl, C/C++, R, and SAS). Familiarity with NGS based sequence analysis including cleaning, alignment, variant calling, and filtering is highly desirable. Working experience on R scripting, analytical pipe line developing, and interpreting is desirable. Skills in GWAS, QTL, genomic selection, and transcriptome analysis is required. Research experience related to genetics, genomics and molecular biology will be plus.

How to Apply: Please email a CV, three references, and a cover letter to Dr. Md S. Islam (md.islam@usda.gov) as early as possible. Further contact as below

Md Sariful Islam, PhD
Research Molecular Biologist
Sugarcane Production Research Unit
USDA ARS SEA
12990 US Hwy 441 N
Canal Point, FL 33438, USA
Tel: 561-924-5227 Ext. 123
Fax: 561-924-6109
Email: Md.Islam@usda.gov



Sugarcane Field Station
12990 U.S. Hwy 441 N.
Voice: 561-924-5227 ☐ Fax: 561-924-6109 ☐
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