Call for Applications:
Post-doctoral Fellows in Crop Genomics and Phenomics
by the Bangabandhu Research Chair in Food Security
at the Global Institute for Food Security

Background

The Global Institute for Food Security (GIFS) is a rapidly expanding Institute based at the University of Saskatchewan in Canada. Our Vision is a world where everyone has access to safe and nutritious food. This is a bold vision, one that we will strive to achieve through investing in our talent. In line with our Mission, we will work with our employees, partners and stakeholders to discover, develop and deliver innovative solutions for the production of globally sustainable food. We are guided by core values of Innovation, Excellence, Collaboration and Integrity in our programs of work that are combined with a promise of supporting the principles of Equity, Diversity and Inclusion (EDI) in our working practices.

Initially, three post-doctoral fellows (PDFs) will conduct plant genomics and/or phenomics research in support of the new Bangabandhu Research Chair in Food Security held by Dr. Andrew Sharpe, based at GIFS and jointly funded by GIFS and the Bangladesh Agricultural Research Council (BARC) as part of a broader initiative between the organizations to develop strategically relevant research for Bangladesh agriculture. This includes the recent award of funding to the initiative from the Krishi Gobeshona Foundation to the ‘Omics Food and Nutritional Security – Platform Technologies to Enhance Crop Genetic Resources and Food Value Chains in Bangladesh (OFANS)’ project.

Educational Qualifications

(i) Crop Pangenomics: PhD degree in Plant Genetics/Genomics or related disciplines pertinent to the needs of the project from a recognized university together with significant experience in Bioinformatics.

(ii) Genomics of Post-harvest Processing Traits: PhD degree in Plant Genetics / Genomics or related disciplines pertinent to the needs of the project from a recognized university together with significant experience in Bioinformatics.

(iii) ‘Omics Tools to Reduce Postharvest Losses: PhD degree in Plant or Microbial Genetics / Genomics or Digital Phenotyping or related disciplines pertinent to the needs of the project from a recognized university together with significant experience in Bioinformatics.

The main research objectives for the different positions will be:

(i) Crop Pangenomics: Development of genomics and pan-genomic resources in key Bangladeshi field crops (including rice, wheat, lentil and Brassica spp. canola/mustard). The position will manage the capture of natural genetic variation in germplasm collections of each crop using state-of-the-art short and long read sequencing technologies to profile natural diversity including structural variation. The newly characterized diversity will then be leveraged to generate new breeding germplasm with unique genomic profiles and phenotypic characteristics. The genetic information, markers, alleles of target genes, and the tools used to generate them will be made available to breeders.

(ii) Genomics of Post-harvest Processing Traits: Application of genomic driven molecular breeding and phenotyping to target crop traits needed for post-harvest processing and value addition (i.e., moving beyond yield and pathogen resistance). Establish genomic and molecular genetic resources for Bangladesh jackfruit and cotton (‘phuti karpus’) germplasm to enhance key production, processability and quality traits impacting value chain including year-round production and post-harvest shelf life (jackfruit) and fibre quality (cotton).

(iii) ‘Omics Tools to Reduce Postharvest Losses: Reduction of post-harvest commodity/food losses and add value from harvest, storage, processing and retail chain (current Bangladesh losses range from 15-50%). The position will establish mobile long read sequencing platform technology for the detection and monitoring of pathogen contamination and identification from the field to grain storage and processing. The position will also establish small cost efficient digital environmental sensors for monitoring targeted Bangladeshi crops during key steps in value chain such as storage, transport processing and retail.

The three positions will involve the technical management and training of PhD students who will also be working on the projects and will also involve the coordination of training workshops for the research program in plant genomics, bioinformatics and associated research areas.
Eligibility

1. The work is complex and requires a strong understanding of different ‘omics disciplines as they pertain to each of the strategic research areas.
2. The successful candidates will be based in Bangladesh at National Agricultural Research System (NARS) Institutes and expected to have multiple years of post-doctoral experience and an excellent command of spoken and written English.
3. The positions will be full time for a period of two years with the possibility of extension.
4. The volume of work is high and may require off-hours efforts.
5. The selected researchers will be expected to work effectively, both independently and as a team member, and to exercise discretionary day to day decision making, while strategy decisions are made with direction from the supervisor. Work occurs in an environment which requires a high level of accuracy and significant judgement is required with errors resulting in a moderate to a high level of impact resulting in lost time, resources or impacts to external clients.
6. You will be part of a team that fosters a work atmosphere that is collaborative, open, positive, supportive, responsive, and transparent. Our commitment to meet the requirements of our EDI principles will be reflected in the selection of candidates for the positions, particularly with respect to ensuring gender equality.
You will demonstrate a strong safety acumen.
7. The positions will involve research both in Canada and Bangladesh and will involve travel periodically between the two countries to carry out the research. This will require appropriate travel documentation and approval to be obtained.
8. The stipend for the PDF positions will be provided as per the Chair provisions.
9. Mid-level NARS scientists preferably SSO and PSO with maximum age of 50 years- are encouraged to apply.

How to Apply

Applications are invited through the proper channel from potential NARS scientists in Bangladesh who should submit an application including a supporting Curriculum vitae that includes relevant information (personal details, educational profile, research experience, knowledge and skills, papers, invited talks, poster abstracts, short notes, reviews, bulletins, books or book chapters published) together with attested copies of educational certificates (doctoral, postgraduate and basic degree certificates, mark sheets, report cards, medals, scholarships and peer recognition) to the Executive Chairman, BARC (contact details below) with soft copy to Mr. Md. Mustafizur Rahman, Principal Technical Officer, BARC (email: m.rahman@barc.gov.bd) on or before April 7, 2022.

(The format of CV attached herewith may be followed for furnishing the required information).

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