



National Agri-Food Biotechnology Institute (NABI)
(Dept. of Biotechnology, Ministry of Science & Technology, Govt. of India)
Sector-81, Knowledge City, Manauli P.O, S.A.S. Nagar-140306, Punjab, India.
Website: www.nabi.res.in

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Temporary positions of Research Associates, Project Associate-II & Project Fellow-I

National Agri-Food Biotechnology Institute (NABI) is an autonomous Institute under Department of Biotechnology, Government of India. NABI aims at catalysing the transformation of Agri-food sector in India by being a nodal organization for knowledge generation and translational science leading to value-added products based on Agri-Food biotech innovations for improved household nutritional security. Since its inception in 2010, NABI is involved in research activities for the Bio fortification, development of designer crops for improved nutrition, providing sustainable and novel solutions towards quality food and nutrition, and development of evidence based functional foods to counter malnutrition. Food and nutritional Biotechnology division at **NABI requires following personnel purely on temporary basis**

1. Temporary position: Research Associate-I (NABI Core Fund)

Project: Gene discovery for improvement of processing and nutrition quality (starch-based) in wheat

Principle Investigator: Dr. Joy Kumar Roy, Scientist-F

Duration: The appointment will be initially for a period of one year. Further extension from 1st Year to 2nd Year will be subject to submission of progress report submitted by selected candidate and satisfactory assessment remarks given by the reporting officer/ availability of funds. It will not exceed beyond two years from date of joining.

Project summary:

In this project, variation in amylose content, which is otherwise narrow in wheat germplasm, is induced via non-transgenic approach by random modification of nucleotides in genomes through chemical treatment, ethyl methyl sulphonate (EMS). The mutant lines showing variation in amylose content and resistant starch are identified in the EMS-treated lines. Some of high amylose mutants are being used for introgression of high amylose into high yielding varieties as well as for molecular and genetic basis of high amylose. Genomics approaches will be implemented to identify single nucleotide polymorphisms (SNPs) which can be used

along with microsatellites on a diverse wheat germplasms, mutant population, and biparental mapping populations to identify markers for QTLs (quantitative trait loci). Candidate QTL regions will be further saturated using SNPs to identify causal genes. Validation of the associated genes will be done using functional genomics tools. In the long term, pyramiding will be done by combing high amylose/resistant starch with other important biomolecules such as high grain protein content.

Research work responsibility:

1. Helping the research staffs involved in the development of mapping populations, analysis of starch and amylose content and properties, data analysis of mapping populations grown at multi-locations
2. Construction of linkage maps, QTL mapping, QTL x environment interaction study
3. Data analysis of yield related parameters and agronomical important traits in mapping populations
4. Helping in student training, manuscript writing, project writing, field experiment.

Essential Qualifications:

PhD/MD/MS/MDS or equivalent degree or having three years of research, teaching and design and development experience after MVSc/M.Pharma/ME/M.Tech with at least one research paper in Science Citation Indexed (SCI) journal.

Desirable:

Research experience in mutant and mapping populations' development, molecular markers such as SNPs development, QTL mapping in wheat will be preferred. Preference will be given to candidates with good academic record and research experience.

Emoluments:

The RA-I will be hired as per the emoluments' guidelines and service conditions notified by DST (OM No.SR/S9/Z-08/2018 dated 30.01.2019) (Rs. 47,000/month + HRA)

Age Limit:

The age limit of applicants for RA will be 40 years. (Relaxation is admissible in case of SC/ST/OBC/women/physically disabled as per government of India instructions).

2. Project Title: Identification and Functional analysis of Histidine acid phosphatase (HAPs) encoding genes in microalgae.

Principle Investigator:

Dr. Gulshan Kumar, Inspire Faculty, DST

Sponsoring agency:

DST, Government of India.

Position available:

Research Associate-I (01-position).

Duration:

The appointment will be for a period of three months from date of Joining.

Essential qualifications:

PhD/MD/MS/MDS or equivalent degree or having three years of research, teaching and design and development experience after MVSc/M.Pharma/ME/M.Tech with at least one research paper in Science Citation Indexed (SCI) journal.

Desirable:

Experience in plant and agricultural biotechnology, genomics and functional genomics, NGS data analysis and gene expression analysis.

Age Limit:

The age limit of applicants for RA will be 40 years. (Relaxation is admissible in case of SC/ST/OBC/women/physically disabled as per government of India instructions).

Emoluments:

The RA-I will be hired as per the emoluments' guidelines and service conditions notified by DST (OM No.SR/S9/Z-08/2018 dated 30.01.2019) (Rs. 47,000/month + HRA).

3. Temporary position: Project Associate-II (GAP-25 Project)**Project:**

"Genome-wide mapping of QTLscontrollinghealthy amylose starch variation in wheat"

Principle Investigator:

Dr. Joy Kumar Roy, Scientist-F

Duration:

Till September 11, 2021

Project summary:

High density linkage maps and QTL maps showing QTL regions controlling amylose and resistant starch variation shall be developed in wheat. More than 10 high amylose (amylose content >50% in wheat grain) mutant lines have been developed in the genetic background of a good chapatti variety, 'C 306' through EMS mutagenesis. Few high amylose mutant lines (>65% amylose content) have been crossed with the present high yield variety, 'WH 1105' and F2/RILs/BC populations are growing. This population will be advanced to develop recombinant inbred line (RIL) population and backcross population will be advanced to make

near isogenic lines (NILs). The advance generation of mapping population will be used for QTL mapping. The genotyping will be done using wheat SNPchips or microarrays and microsatellites. It will also include epistatic interactions such as QTL x QTL, QTL x environment interactions.

Research work responsibility:

1. Development of RIL, BC, and NIL populations.
2. Measurement and analysis of starch and amylose content and properties
3. Evaluation of mapping populations at multi-locations
4. Genotyping of mapping populations using microsatellites and SNPs
5. Data analysis such as construction of linkage maps, QTL mapping, QTL x environment interaction study

Essential qualifications of Project Associate-II:

(Eligibility criteria as DST OM No.SR/S9/Z-05/2019 dated 21.08.2019)

- (i) Master's degree in Natural or Agricultural Sciences/ MVSc or Bachelors degree in Engineering or Technology or Medicine from a recognized University or Equivalent;
and
- (ii) 2 years' experience in Research and development in Industrial and Academic Institutions or Science and Technology organizations and scientific activities and services.

Desirable qualifications:

Research training in molecular breeding, DNA-based molecular marker development, linkage and association mapping, QTL mapping, mapping population development (RIL, F2, backcross); experience in microarrays and SNPchips, nextgen sequencing and data analysis

Age: 35 years (Relaxation is admissible in case of SC/ST/OBC/PD as per GOI instructions)

Emoluments:Rs. 35,000/- per month (Plus HRA) And other criteria and conditions as per DST OM No.SR/S9/Z-05/2019 dated 21.08.2019.

4. Project Title:

“Molecular and functional analysis of seed specific DOF transcription factor(s) in rice.

Principle Investigator:-

Dr. Prafull Salvi, Inspire Faculty, DST

Sponsoring agency:

DST, Government of India.

Position available:

Project Fellow-I (01-position)

Duration:

The appointment is co-terminus with the project along with availability of funds. It will not exceed beyond project.

Essential qualifications:

Post Graduate degree in Science or Bachelor degree in engineering and technology with minimum 55% marks.

Desirable:- Research experience in plant molecular biology & plant tissue culture

Age:

28 years (relaxation will be given as per Government of India norms)

Emoluments:-

Rs. 12,000/- per month Plus HRA as applicable at Mohali.

Application and Selection Process:-

1. All interested candidates may appear for **walk-in-interview** at National Agri-Food Biotechnology Institute located at Knowledge city, Sector-81, Mohali- 140306, Punjab on **10th Nov, 2020 at 09:00 AM** along-with the duly filled application form available on the website www.nabi.res.in.
2. Incomplete application form and applications that are not in proper format may be summarily rejected.
3. The applications should be submitted strictly as per prescribed format that can be downloaded from the NABI website.
4. Candidates applying for more than one position can give their preference in the same application by ticking multiple positions. No need to submit separate application form for each position.
5. Candidates should ensure that information mentioned in application form is accurate. Once the application form is submitted no further request regarding any changes/information in the application form will be considered.
6. The duly filled application form must be submitted at the time of registration at NABI from **09:00 AM to 10:00 AM on 10th Nov, 2020.**
7. The candidates must ascertain their eligibility before applying, as ineligible candidates will not be interviewed.
8. All the candidates are requested to appear for the interview with full CV, thesis/project report, experience certificates, publications and original degree certificates and transcripts.
9. No TA/DA will be paid for appearing in the interview.
10. Canvassing in any form or bringing influence, political or otherwise, will lead to disqualification of the candidate(s).
11. **Candidates should strictly adhere with guidelines issued by World Health Organization and Centre Govt/State Govt on Covid-19**

Manager Administration