**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.**

**Advertisement no. NABI/Admin/5(09)/2024-25/ACAD-1**

**Walk-In-interview for the temporary positions of Junior Research Fellow, Senior Research Fellow, RA-I**

National Agri-Food Biotechnology Institute (NABI) is an autonomous Institute under the Department of Biotechnology, Government of India. NABI aims at catalysing the transformation of the 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 Biofortification, the development of designer crops for improved nutrition, providing sustainable and novel solutions for quality food and nutrition, and the development of evidence-based functional foods to counter malnutrition. The food and nutritional Biotechnology division at **NABI requires the following research personnel purely on a temporary basis.**

**1. Name of project:** " Functional analysis of iron homeostasis genes using genome editing” (NABI-CORE)

**Research Position (temporary) and number:** Research Associate –I - One

**Duration: 2 years**

**Essential qualification:** PhD in any branch of life sciences (if degree is awaited proof for provisional degree has to be submitted)

**Experience:** Plant Molecular biology and experience in Cloning and transformation for genome editing constructs, plant tissue culture in wheat or polyploidy crops. Acquaintance with the Basic Bioinformatics expected.

**Emolument:** Rs.58,000/-month + HRA, depending on years of experience. RA Emoluments and Eligibility conditions are as per DST OM: DST/PCPM/Z-06/2022 dated June 26, 2023;

**Age limit:** 40 year for RA

**Contact Details:** Dr. Ajay K. Pandey, **Email:** pandey.ak@nabi.res.in

**2. Project Title**: “**Microbiomes and Climate Change: Understanding Microbial Dynamics and Functional Traits in Response to Carbon and Nitrogen Fluxes in Agriculture Model**” (NABI Core)

**Principle Investigator:** Dr. Nimaichand Salam, Scientist D

**Position:** Junior Research Fellow (01)

**Funding Agency:** NABI Core Grant

**Duration:** The appointment will be initially for two years as JRF. Further up-gradation from JRF to SRF will be based on the submission of a progress report and further assessment

**Essential Qualification:**

1. MSc / MTech in Agricultural Microbiology / Biotechnology / Biochemistry / Biological Sciences or any area of life sciences or an equivalent degree.
2. 55% total marks or equivalent score in the qualifying degree (5% relaxation in marks will be given to SC / ST / OBC (non-creamy layer) / PWD as per GOI norms
3. In addition to the above, candidates applying for admission must qualify for a national-level test for pursuing the Doctor of Philosophy program. Such tests include doctoral fellowship or admission eligibility tests conducted at the national level by recognized government agencies, such as the University Grant Commission (UGC), Council for Scientific and Industrial Research (CSIR), Indian Council of Medical Research (ICMR), Department of Science and Technology (DST), Department of Biotechnology (DBT), or any other government-recognized agency.

**Desirable Experience**

1. Basic knowledge of computational biology, genomics, and translational research
2. Experience in handling molecular biology tools and techniques.

**Responsibilities**

1. Metagenome, metatranscriptome, and metabolome profiling.
2. Designing **ecosystem model using microbial functional gene traits data**.

**Age:** 28 years (Relaxation is admissible in the case of SC/ST/OBC/PWD and women candidates as per GOI instructions)

**Emoluments:** Rs. 37,000/- per month plus HRA

**Contact Details:** Dr. Nimaichand Salam, Scientist D, NABI, India **Email:** nimaichand.s@nabi.res.in **Contact no.** 0172-5221263

**3. Project Title:** Molecular characterization of tissue-specific genes and promoters in *Arabidopsis* and Sorghum (NABI Core)

**Principle Investigator:** Dr. Rita Sharma, Scientist-E

**Positions:** Junior Research Fellow (01) (NABI Core)

**Duration:** The appointment will be initially for two years as JRF. Further up-gradation from JRF to SRF will be based on the submission of a progress report and further assessment.

**Essential Qualification:**

1. MSc/ M.Tech in Botany/Biotechnology/Biochemistry/Agriculture/Plant Molecular Biology/Bioinformatics or allied sciences
2. 55% total marks or equivalent score in the qualifying degree (5% relaxation in marks will be given to SC/ST/OBC(non-creamy layer)/PWD as per GOI norms)
3. In addition to the above, candidates applying for admission must qualify a national-level test for pursuing the Doctor of Philosophy program. Such tests include doctoral fellowship or admission eligibility tests conducted at the national level by recognized government agencies, such as the University Grants Commission (UGC), Council for Scientific and Industrial Research (CSIR), Indian Council for Medical Research (ICMR), Department of Science and Technology (DST), Department of Biotechnology (DBT), or any other government-recognized agency.

**Desirable Experience:**

General plant molecular biology and plant tissue culture-related techniques, plant transformation.

**Responsibilities:**

1. In silico analysis of gene functions and construct preparation
2. Transformation in Arabidopsis
3. Optimize regeneration and transformation in Sorghum
4. Phenotypic and biochemical analysis of transgenic plants

**Age:** 28 years (Relaxation is admissible in the case of SC/ST/OBC/PD and women candidates as per GOI instructions)

**Emoluments:** Rs. 37000/- per month Plus HRA.

**Contact details:** Dr. Rita Sharma, Scientist-E, NABI, India

**Email:** rita.sh@nabi.res.in

**4. Project Title:** Molecular dissection of noncoding RNAs and their biogenesis machinery in *Arabidopsis* and Sorghum **(NABI Core)**

**Principle Investigator:** Dr. Rita Sharma, Scientist-E

**Positions:** Research Associate –I (01) (NABI Core)

**Duration:** 2 years

**Essential qualification:** PhD in any branch of life sciences (if degree is awaited proof for provisional degree has to be submitted)

**Experience:** Plant Molecular biology and experience in Cloning and transformation for genome editing constructs, plant tissue culture in sorghum or other crops. Acquaintance with the Basic Bioinformatics expected.

**Emolument:** Rs.58,000/-month + HRA, depending on years of experience. RA Emoluments and Eligibility conditions are as per DST OM: DST/PCPM/Z-06/2022 dated June 26, 2023;

**Age limit:** 40 year for RA

**Contact details:** Dr. Rita Sharma, Scientist-E, NABI, India
**Email:** rita.sh@nabi.res.in

**5. Project Title: “**CRISPR-mediated editing and transformation in sorghum to enhance agronomic traits**” (Own Fellowship)**

**Principal Investigator:** Dr. Rita Sharma, Scientist E

**Positions:** Junior Research Fellow (01) (Own Fellowship)

**PhD registration:** IISER-Mohali/DBT-RCB, Faridabad/Punjab University, Chandigarh

**Duration:** 5 years (Two years of JRF and will be converted to SRF after evaluation as per the funding agency guidelines)

**Essential Qualifications:**

i) MSc/ M.Tech in Botany/Biotechnology/Biochemistry/Agriculture/Plant Molecular Biology/Bioinformatics and allied sciences and

ii) Having own fellowship for 5 years from different funding agencies such as UGC, CSIR, DST, DBT, etc.

**Area of research:** Plant Biotechnology, Molecular Biology, Computational Biology, Genome Editing, Crop improvement

**Age limit:** 28 Years (Relaxation is admissible in case of SC/ST/OBC/PD/EWS/ women and as per GOI Instructions).

**Contact details:** Dr. Rita Sharma, Scientist-E, NABI, India
**Email:** rita.sh@nabi.res.in

**6. Project Title:** “Nutritional enrichment of plants by using modern biotechnological approaches”

**Principle Investigator:** Dr. Siddharth Tiwari, Scientist F

**Position:** Junior Research Fellow (01) having own funding fellowship

**Funding Agency:** Own fellowship

**Duration:** 5 years

**Essential Qualification:**

a) MSc/ MTech in any area of life sciences or an equivalent degree.

b) 55% total marks or equivalent score in the qualifying degree (5% relaxation in marks will be given to SC/ST/OBC(non-creamy layer)/PWD as per GOI norms)

c) In addition to the above, candidates applying for admission must qualify a national-level test for pursuing the Doctor of Philosophy program. Such tests include doctoral fellowship or admission eligibility tests conducted at the national level by recognized government agencies, such as the University Grants Commission (UGC), Council for Scientific and Industrial Research (CSIR), Indian Council for Medical Research (ICMR), Department of Science and Technology (DST), Department of Biotechnology (DBT), or any other government-recognized agency.

**Desirable Experience:**Theoretical and general practical understanding of plant molecular biology-related techniques such as cloning and qPCR and Plant tissue culture

**Responsibilities:**

1. Development of new tools and techniques for genetic engineering of plants

2. Establishment of plant tissue culture and genetic transformation protocols.

3. Implementation of genetic engineering approach for specific trait improvement

4. Functional characterization of genes and genetically engineered plants

**Age:** 28 years (Relaxation is admissible in the case of SC/ST/OBC/PD and women candidates as per GOI instructions)

**Emoluments:** The selected student should have his/ her own fellowship from any of the recognized granting agencies

**Contact Details: -** Project Investigator: Dr. Siddharth Tiwari, Scientist F Email: - siddharth@nabi.res.in; Contact no. 0172-5221138

**7. Project Title:** “**CRISPR/Cas9-mediated genome editing of rice bran lipases to enhance the shelf-stability of rice bran oil (SERB/SRG/GAP70)**

**Principle Investigator:** Dr. Rupam Kumar Bhunia, Scientist-E

**Position:** Junior Research Fellow (01)

**Duration:** The appointment will be for two years as JRF.

**Essential Qualification:**

1. MSc/ M.Tech in Biotechnology/ Biochemistry/ Agriculture/ Botany/ Zoology/ Microbiology
2. 55% total marks or equivalent score in the qualifying degree (5% relaxation in marks will be given to SC/ST/OBC(non-creamy layer)/PWD as per GOI norms)
3. In addition to the above, candidates applying for admission must qualify a national-level test for pursuing the Doctor of Philosophy program. Admission eligibility tests conducted at the national level by recognized government agencies, such as the GATE, University Grants Commission (UGC), Council for Scientific and Industrial Research (CSIR), Indian Council for Medical Research (ICMR), Department of Science and Technology (DST), Department of Biotechnology (DBT), or any other government-recognized agency.

**Desirable: -** 1. Experience in molecular biology, genome editing, GC/GC-MS

 2. Expertise in rice tissue culture techniques will be given preference.

**Responsibilities:**

i. Multiplex genome-editing of genes involved in rice bran oil degradation

ii. Transformation of CRISPR constructs

iii. Screening of edited rice lines and lipid analysis using GC FID

**Tenure of the project**: 2 years

**Age:** 28 years (Relaxation is admissible in the case of SC/ST/OBC/PD and women candidates as per GOI instructions)

**Emoluments:** Rs. 31000/- per month Plus HRA.

**Contact details:** Dr. Rupam Kumar Bhunia, Scientist-E, NABI, India
**Email:** rupam.bh@nabi.res.in

**8. Project Title:** “**CRISPR/Cas9-mediated genome editing of rice bran lipases to enhance the shelf-stability of rice bran oil (SERB/SRG/SSR/GAP70)**

**Principle Investigator:** Dr. Rupam Kumar Bhunia, Scientist-E

**Position:** Student Internship (01)

**Duration:** Two months

**Essential Qualification:**

1. Students should be undergraduate in engineering or postgraduate in Botany/ Biochemistry/Agriculture/Biotechnology

**Emoluments:** Rs. 5000/- per month (Fixed).

**Contact details:** Dr. Rupam Kumar Bhunia, Scientist-E, NABI, India
**Email:** rupam.bh@nabi.res.in

**9. Project Title: “**Deciphering the role of transsulfuration pathway (TSP) in innate immune response” (Own Fellowship)

**Principal Investigator:** Mohit Kumar (PhD), Scientist-C

**Positions:** Junior Research Fellow (02) (Own Fellowships)

**PhD registration:** IISER-Mohali/DBT-RCB, Faridabad/Panjab University, Chandigarh

**Duration:** 5 years (Two years of JRF and will be converted to SRF after evaluation as per the funding agency guidelines)

**Project Summary:** The project activities are given below:

1. To use mono and co-culture *in-vitro* infection models to examine the role of TSP in immune-immune and neuro-immune cross-talk.
2. To perform pharmacological or genetic approaches such as enzyme inhibitors, RNAi, CRISPR-Cas9 or AAV to modulate TSP in immune cells and perform downstream assays such as ELISA, phagocytosis assay, western blot and RT-PCR.
3. To perform brain-targeted drug/RNAi/AAV delivery targeting cell-specific TSP using a stereotaxic technique and perform behavioral assays in mice models of infection-induced depression, anxiety and cognitive deficits.
4. To look into the transcriptome profiling of the immune cells especially macrophages and brain resident microglia.
5. To screen broccoli microgreen water extract for its potential to modulate TSP, macrophages and microglial immune response against infection.

**Essential Qualifications:**

i) Postgraduate degree in basic Science OR Graduate /Post Graduate Degree in professional course and

ii) Having own fellowship for 5 years from different funding agencies such as UGC, CSIR, DST, DBT, etc.

**Area of research:** Immunology, Biochemistry, Biotechnology, Molecular Biology, Neuroscience

**Age limit:** 28 Years (Relaxation is admissible in case of SC/ST/OBC/PD/EWS/ women and as per GOI Instructions)

**Contact**: Dr. Mohit Kumar, Scientist -C **Email**: mohit.ku@nabi.res.in

**10. Project Title: “Improvement of nutritional and processing quality of wheat ”**

**Principle Investigator**: **Dr. Monika Garg**

**Sponsoring Agency**: NABI Core

**Position available**: Senior Research Fellow (01)

**Duration:** The appointment will be for 1 year or till the termination of the project whichever is earlier.

**Objective**: The objective of the research project is to enhance the processing and nutritional quality of wheat through a multifaceted approach. This includes fieldwork focused on breeding, genetics, and genomics to identify and develop wheat varieties with improved nutritional profiles. Additionally, cell line studies will be conducted to elucidate the underlying mechanisms of nutritional enhancement. Furthermore, animal studies will be performed to evaluate the functionality and health benefits of the improved wheat products. Through these integrated efforts, the project aims to contribute to the development of wheat varieties that offer enhanced nutritional value and functionality for human consumption.

**Essential qualifications:**

Post Graduate Degree in Basic Science OR Graduate /Post Graduate Degree in professional course selected through a process described through any one of the following: - Scholars who are selected through National Eligibility Tests-CSIR-UGC-NET including Lectureship (Assistant Professorship) or GATE Additionally, candidate will be eligible for interview if they have qualified National Level examinations conducted by central government departments and their agencies and institutions such as DST, DBT, DAE, DOS, DRDO, MHRD, ICAR, ICMR, IIT, etc.

The qualification prescribed above with **two years** of research experience. (DST OM No. SR/S9/Z-08/2018 dated 30.01.2019).

**Desirable: -** 1. Experience in molecular biology and plant breeding

 2. Expertise in animal studies will be given preference.

 3. Relevant research publications in peer-reviewed journals

**Emoluments:** Rs. 42000/- per month plus HRA as per project.

**Age:** 32 years (Relaxation is admissible in the case of SC/ST/OBC/PD and women candidates as per GOI instructions)

**Contact details:** Dr. Monika Garg, Scientist-F, NABI, India
**Email:** monikagarg@nabi.res.in

**11. Project Title:** **“Improvement of nutritional and processing quality of wheat”**

**Principle Investigator:** Dr. Monika Garg, Scientist F

**Position:** Junior Research Fellow (02) having own fellowship

**Funding Agency:** Own fellowship

**Duration:** 5 years

**Essential Qualification:**

a) MSc/ MTech in any area of life sciences or an equivalent degree.

b) 55% total marks or equivalent score in the qualifying degree (5% relaxation in marks will be given to SC/ST/OBC(non-creamy layer)/PWD as per GOI norms)

c) In addition to the above, candidates applying for admission must qualify a national-level test for pursuing the Doctor of Philosophy program. Such tests include doctoral fellowship or admission eligibility tests conducted at the national level by recognized government agencies, such as the University Grants Commission (UGC), Council for Scientific and Industrial Research (CSIR), Indian Council for Medical Research (ICMR), Department of Science and Technology (DST), Department of Biotechnology (DBT), or any other government-recognized agency.

**Desirable Experience:**

Theoretical and general practical understanding of plant molecular biology-related techniques, bioinformatics, biochemistry, animal biotechnology, cell-culture, plant breeding and genetics.

**Age:** 28 years (Relaxation is admissible in the case of SC/ST/OBC/PD and women candidates as per GOI instructions)

**Emoluments:** The selected student should have his/ her own fellowship from any of the recognized granting agencies as per funding agency norms.

**Contact details:** Dr. Monika Garg, Scientist-F, NABI, India
**Email:** monikagarg@nabi.res.in

**12. Project:** Bio-polymer for food preservation.

**Position:** Junior research Fellow (JRF), NABI Core (01).

**Duration for JRF position:** 5 years (JRF for 2 years and will be converted to SRF after evaluation).

**Job profile:**

1. JRF will be responsible for production and characterization of bio-polymers from agri/food biomass.
2. JRF will be responsible for development of coating/packaging materials for food preservation.
3. JRF will be responsible for analysis of the quality of perishable commodities during storage.

**Essential qualifications:**

Postgraduate degree in Chemistry/Biochemistry/Food Engineering & Technology/Food Science & Technology or Post Graduate in the professional course in above related area selected through a process described through any one of the following

a) Scholars are selected through National Eligibility Tests-CSIR UGC NET including Lectureship (Assistant Professorship) and GATE.

b) The selection process through National level examinations conducted by Central Government Departments and their agencies and institutions such as DST, DBT, DAE, DOS, DRDO, MHRD,ICAR, ICMR , IIT, IISc, IISER, etc.

**Emoluments:** Rs.37,000/- per month (plus HRA, if hostel accommodation is not available in NABI).

**Age Limit:** 28 Years (Relaxation is admissible in case of SC/ST/OBC/PD/EWS/ women and/or as per GOI Instructions)

**Contact Details:** Dr. Koushik Mazumder, Scientist-E email: koushik@nabi.res.in contact no. 0172-5221244.

**Application Procedure & Other Conditions**

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 **01-05-2024** **at 09:00 A.M.** along with the duly filled application form available on the website [www.nabi.res.in](http://www.nabi.res.in).

2. Incomplete application forms and applications that are not in proper format may be summarily rejected.

3. The applications should be submitted strictly as per the prescribed format that can be downloaded from the NABI website.

4. Candidates applying for more than one option can give their preference in the same application by ticking multiple options. No need to submit a separate application form for each option.

5. Candidates should ensure that information mentioned in the 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 01-05-2024.**

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 a Walk-In interview with an application form, experience certificates, publications, and original degree certificates and transcripts.

 9. Original mark sheets, certificates, award/fellowship, etc must be accomplished for verification at the time of the interview, and attach one set of attested copies of the documents with the application form.

10. No TA/DA will be paid for appearing in the interview.

11. Canvassing in any form or bringing influence, political or otherwise, will lead to disqualification of the candidate(s).

12. Candidates should strictly adhere to guidelines issued by World Health Organization and Centre Govt/State Govt on Covid-19.

13. In the event of special circumstances, candidates may request the project investigator (via email) to conduct their interviews online. Such requests must be submitted well in advance, preferably at least one week prior to the scheduled interview date. However, the final decision will be taken by the selection committee to ascertain the special circumstances and allow the candidate (s) for an online interview. The Institute reserves the right to conduct the interview in online/offline mode.

 **(Manager Administration)**