



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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Walk In Interview for the temporary Positions of Research Associate & Junior Research Fellow.

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 research personnel purely on temporary basis.**

1. Name of project:

"High resolution QTL mapping from iron(Fe), zinc(Zn), grain protein, and phytate content and their introgression in high yielding wheat cultivators"

Name of Principal Investigator:-

Dr. Joy K. Roy, Scientist-F National Agri-Food Biotechnology Institute (Mohali)

Research Positions (Temporary):-

Research Associate (RA-I),

Duration:-

Till 17 March, 2022

Project Summary:-

This is a NABI's flagship program, which is funded by Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India. The network project "Development of Bio-fortified and Protein-rich Wheat" will be executed in collaboration among seven networkpartners. The project will include i) evaluation of wheat germplasm for Fe, Zn, folate, and grain protein content, starch quality and antinutritional factors, ii) Validation and characterization of available genes/QTLs/markers for micronutrients, iii) Development of mapping populations (F2, RILs, NILs, BCs) for genetic analysis, iv) Development of high density linkage maps and QTL maps using high throughput SNPs, v) Epistatic interactions (QTLxQTL, QTL x environment) analysis, and vi) development of wheat varieties with enhanced micronutrient content and enhanced bioavailability and bio-accessibility.

Essential qualification:-

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

Desired Experience:-

Experience in plant or agricultural biotechnology, classical breeding & molecular breeding, marker (SSR & SNP) development, QTL mapping, association mapping, gene introgression, genomics and functional genomics tools such as NGS data analysis and gene expression analysis.

Emoluments:-

47,000/- + 16% HRA

Responsibilities:-

Experience candidates are required for RA positions for Gene introgression and development of pre-breeding materials for QTL mapping for high iron, zinc, low phytic acid and grain protein content; SNP identification, linkage and association analysis; Bioinformatics and biostatistical analysis of sequence data and phenotypic data in wheat; etc.

Age-

40 years for RA (Relaxation is admissible in case of SC/ST/OBC/PD as per GOI instructions)

2. Project Title:

"Development of Glycoconjugates based site directed fluorescent sensor for the detection of bacteria"

Principle Investigator:

Dr. Nitin Kumar Singhal, Scientist E

Positions:

Junior Research Fellow (01)

Duration:

Till 25th February, 2023.

Project summary:

In this project, we will develop gold nanoparticles fluorescent silica core-shell (GFCS) as scaffolds to anchor multivalent glycans and establish a model system for the quantitative study of the multivalent binding between glycan functionalized GFCS and bacteria. GFCS will readily synthesized by mixing gold nanoparticles, porphyrin containing silicon alkoxide, TEOS and APTES in ammonia water. Enclosure of TCPP in a silica matrix exhibit longitudinal surface plasmon resonance (LSPR), which is forsaken via radiative and nonradiative channels. The nonradiative removal of the GFCS endow them to absorb light effectively and release heat into the vicinity. Taken together, GFCS endow microscopic and spectroscopic detection and quantification of the binding event, and they will be used for photothermal killing of bacteria. We will first confirm the multivalency effect of glycan modified GFCS with lectin binding assay. Glycan microarray will be also developed after all confirming the role in GFCS in bacterial detection and ablation. This combination of glycans and nanoparticles will be a promising platform for fast and efficient detection and ablation of bacteria. Research work responsibility: This project involves nanoparticle synthesis, fabrication and bacterial work. Candidate should have some basic knowledge in one of the area.

Qualification:-

Post graduate degree in Basic Science Or Graduate/Post Graduate in professional course 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 and eligibility is as per DST OM SR/S9/Z-08/2018 dated 30th January, 2019.

Responsibilities:-

JRF will work synthesis of nanoparticles, fabrication of nanoparticles, and development of biosensor to detect the food borne bacteria.

Desirable qualifications:

Organic synthesis work experience will be considered as a plus.

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

Emoluments:

Rs. 31000/- per month Plus HRA.

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 **26.03.2021 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 26.03.2021**.
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