



NATIONAL AGRI-FOOD BIOTECHNOLOGY INSTITUTE (NABI)

(Dept. of Biotechnology, Ministry of Science & Technology, Govt. of India)
C-127, Industrial Area, Phase VIII, S.A.S. Nagar, Mohali-160 071.(Pb), INDIA
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Advt no. NABI/5(1)/2012-Researcher

Junior Research Fellow

National Agri-Food Biotechnology Institute (NABI), Mohali, is an autonomous R&D Institute under Department of Biotechnology, Government of India. The institute carries out cutting edge research at the interface of food, nutrition and agricultural biotechnology. NABI invites the applications from the eligible candidates for the selection of Junior Research Fellows (JRFs) for following research projects.

Job code: JRF-001

Title: “Effect of dietary fibers on the regulation of adipogenesis and associated inflammatory markers-A nutrigenomic study”.

Principle Investigator: Dr. Kanthi Kiran

Sponsoring agency: Department of Biotechnology, Government of India

Position available: 01

Objective: The proposed project would focus on basic to translational research on the role of emerging dietary fibers aimed at managing adipogenesis and obesity. This involves understanding role of dietary fiber on body weight, inflammation, glucose tolerance and serum metabolite profiles in high fat diet induced obese small animal models. Overall goal is to understand mechanism(s) of gut microbial dysbiosis associated metabolic alterations and intentional manipulation of gut microbial communities using dietary fibers (prebiotics) as a potential preventive strategy.

Essential qualifications: Candidates must have a first class master’s degree in life sciences/pharmacology

Desirable qualifications:

1. CSIR/ICMR/DBT JRF fellowships
2. Prior research experiences using *in-vitro* cell lines and *in-vivo* animal models
3. Knowledge of molecular biology techniques such as ELISAs, RT-PCR and western blotting etc

Job code: JRF-002

Title: Studies on Transient Receptor Potential (TRP) channel mediated modulation of adipogenesis & obesity by dietary molecules

Principle Investigator: Dr. Mahendra Bishnoi

Sponsoring agency: SERC-Fast Track Scheme, Department of Science and Technology, Government of India

Position available: 01

Objective: In this proposal we will study the expression and function of TRP channels (TRPV1 and TRPA1) in commercially available human preadipocytes (HAd) and adipocytes (Ad) cells. Further, using molecular (genomics/proteomics) and pharmacological (agonist/antagonist) techniques we will study the effect of dietary components (TRPV1: capsaicin, capsiate, piperine; TRPA1: allicin, cinnamaldehyde) affecting these channels on the process of adipogenesis and the biomarkers associated with obesity in both in-vitro (HAd and Ad cell culture system) and in-vivo (diet-induced animal models of obesity) models.

Essential qualifications: Candidates must have a first class master's degree in life sciences/pharmacology

Desirable qualifications:

1. CSIR/ICMR/DBT JRF fellowships
2. Prior research experiences using *in-vitro* cell lines and in-vivo animal models
3. Knowledge of molecular biology techniques such as ELISAs, RT-PCR and western blotting etc

Job code: JRF-003

Title: Nutrigenomic approach to understand the role of Transient Receptor Potential (TRP) channel activating Food components in adipose tissue inflammation

Principle Investigator: Dr. Mahendra Bishnoi

Sponsoring agency: Department of Biotechnology, Government of India

Position available: 01

Objective: The present project aims to probe mechanisms linking TRP channel expression on adipocytes to obesity-induced inflammation. Further, using nutrigenomics approaches, we will study the effect of TRP (TRPA1 and TRPM8) channel modulating food/diet components and their bioactive constituents on molecular (transcription factors, gene and protein) markers of inflammation, upstream/downstream receptor dependent and independent signaling pathways controlling the expression of inflammatory mediators in the obesity. Based on the results, we could potentially recommend food/diet components which will be beneficial in modulating obesity-induced inflammation and associated major adverse reaction like insulin resistance.

Essential qualifications: Candidates must have a first class master's degree in life sciences/pharmacology

Desirable qualifications:

1. CSIR/ICMR/DBT JRF fellowships
2. Prior research experiences using *in-vitro* cell lines and in-vivo animal models
3. Knowledge of molecular biology techniques such as ELISAs, RT-PCR and western blotting etc

General guidelines

Duration: The appointment will be for 3 years or till the end of the project, and subject to annual review for further extension that will be granted based on the research progress and accomplishments.

Emoluments: The JRF will be hired as per the emoluments' guidelines and service conditions notified by DST (A.20020/11/97-IFD dated 31st March, 2010) varying from Rs12, 000/- to Rs18, 000/- per month plus HRA.

Age Limit: The age limit of applicants for the fellows will be 30 years (relaxable by 5 years for women and reserved category).

A walk-in interview will be conducted on 09.09.2013 at National Agri-Food Biotechnology Institute, C-127, Industrial Area, Phase VIII, S.A.S Nagar-160071, Punjab. All interested candidates may appear for interview along with duly filled application form available on the website www.nabi.res.in along with (a) a letter of recommendation from immediate supervisor (b) Master's degree thesis work dissertation. Further, interested candidates should also send the softcopy of the application form to kiran@nabi.res.in on or before 05.09.2013.

The duly filled application form must be submitted at the time of registration from 0900 Hrs to 1000 Hrs on 09.09.2013. The candidates must ascertain their eligibility before applying, as ineligible candidates would not be interviewed.

Administrative Officer