

For website



Sanjay Gandhi Post Graduate Institute of Medical Sciences
Raebareli Road, Lucknow 226014, India

Applications are invited for one post of Project technical support III in ICMR extramural project titled "Developing TRIMs and associated co-expressed genes panel in Tumor educated monocytes (TEMo) of breast cancer patients for monitoring progression and response to therapies" Emoluments (monthly): Rs. 28000 + 20% HRA (Total Rs. 330600.00) per month. Hostel accommodation may be available, as per availability and rules of the Institute. Qualification & Experience: Master's degree in natural (life) sciences or Bachelor degree in medicine from a recognized university or equivalent. Preference will be given to candidates with experience in biomedical research, those with published research work, and those who have qualified any national eligibility tests e.g., CSIR-UGC NET or GATE or equivalent examinations of central govt. departments/agencies/institutions.

General Conditions:

1. The initial appointment is for one year which may be extended subject to the satisfactory performance of the candidate till the duration of the project.
2. Applicants are required to submit their detailed resume/CV along with qualification and experience certificates by email to Prof. Gaurav Agarwal, P.I. (Email.gauravbsi@gmail.com) latest by 22/10/2025 (two weeks from the date of publishing). Depending on number of applications received, applicants may be asked to take an online screening test for shortlisting. Shortlisted candidates shall be notified regarding personal/zoom interview by email.
3. No TA/DA will be paid for attending the interview.

Principal Investigator: Prof. Gaurav Agarwal, Dept of Endocrine Surgery

Advt. no. R/19/2025-25

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Detailed Advertisement for the Post of a Project technical support III in a ICMR funded project.

Online applications are invited for the post of a "Project technical support III" in an ICMR funded research project.

Title of the project: "Developing TRIMs and associated co-expressed genes panel in Tumor educated monocytes (TEMo) of breast cancer patients for monitoring progression and response to therapies".

Short description of the research project: Breast cancer is the common malignancy in women globally and in India. It can metastasize to lymph nodes, bones, lungs, liver and brain and is cause of mortality in females. Emerging data suggests the critical role of inflammation in cancer initiation and progression. Tumor and stromal cells synthesize cytokine CCL2 and the inflammatory monocytes that express CCR2 (the receptor for chemokine CCL2) are recruited at the sites of metastasis. This strongly suggests that circulating monocytes sense the gradient of key cytokines like which bind to its receptor and alter the gene expression pattern in these specific monocyte populations. Tumor cells interact with circulating monocyte and alter their gene expression and reprogram them for tumor progression. The altered monocytes in this manner have recently been described as tumor educated monocytes (TEMo). In a recent study, TEMo in breast and breast cancer show distinct signature pattern of inflammatory genes which includes a positive regulatory loop between cancer cells and TEMo through CSF1 and TNF- α , which upregulates characteristic signature of genes involved in NF-kB and IFN pathways. Ubiquitination plays important role in regulation of inflammation, specifically inflammatory pathways either through NF-kB and IFN pathways important for tumor progression. The selectivity of the process of ubiquitination is through the recruitment of specific E3 Ligases in given condition that recognizes the substrate and determines the pattern of ubiquitination on substrate. TRIMs, a sub-class of RING family E3 Ligases are characterized by tri-partite motif consisting of N-terminal RING domain, B-Box and coiled-coil (CC) domain, can act as oncogenes/ tumor suppressors in breast cancer. TRIMs are known as regulator of both NF-kB and IFN pathways. Hence the expression pattern of TRIMs and other inflammatory genes in TEMo may regulate NF-kB and IFN pathways which in turn may affect their recruitment to tumor site and modulate inflammation in TME. Moreover, the education of monocytes can be based on the subtypes of breast cancer and chemotherapy and endocrine resistance patients and regulate inflammatory pathways differentially. Therefore, we want to define a definite blood-based biomarker signature pattern for tumor progression specially based on the subtypes and after therapeutic treatment in breast cancer patients. The proposed molecular, pre-clinical approach to prediction of disease progression, metastasis and thus possible pre-emptive interventions can be seen as a disruptive one. It is radically different from the conventional and currently practiced approach, which largely relies on the anatomic or structural progression of disease, which in reality is a rather late manifestation, by which time curative interventions no longer remain effective.

Investigators: Professor Gaurav Agarwal, (PI); Dr Rajesh Singh (Co-PI)

Monthly emoluments: Rs. 28000 + 20% HRA (Total Rs. 330600/-). Hostel accommodation may be available, subject to availability and as per Institute rules.

Minimum Qualifications, desired experience: Master's degree in natural (life) sciences or Bachelor degree in medicine from a recognized university or equivalent. Preference will be given to candidates with experience in biomedical research, those with published research work, and those who have qualified any national eligibility tests e.g., CSIR-UGC NET or GATE or equivalent examinations of central govt. departments/agencies/institutions.

Duration: Initial appointment of one year, to be extendable annually till the period of the study. The selected candidate has to join immediately.

Age Limit: Maximum 35 years as on the date of advertisement.

How to apply: Interested and eligible candidates may apply with an updated resume (in DOC or PDF file) mentioning personal details and academic qualifications with the file name "ICMR_(first name)_(Last name)" and email to the ID gauravbsi@gmail.com. (The subject line of the email should be 'Application for the post of Project technical support III'). The candidate should clearly mention the details about the academic qualifications, NET/GATE qualification (Year, rank etc.) and work experience, if they have, in the resume.

Important Dates: 1. Last date of resume submission (two weeks from the date of advertisement) 2. Merely fulfilling the eligibility requirement does not guarantee shortlisting for interview; additional criteria may be imposed for shortlisting. The shortlisted candidates will only be informed about the date and time of the online interview. (No information or communication will be made with candidates who are not shortlisted.) 3. Depending on number of applications received, an online screening test may conduct, based on which a list of shortlisted candidates will be prepared. Date of online interview will be intimated to shortlisted candidates. (Applicants should have all documents in original to support their resume and the same will be verified at the time of joining, if the candidate is selected). Note: Project investigator will not be responsible for any miss communication/ connectivity issue during online-interview session. Schedule of such session once decided will not be changed. It will be responsibility of the candidate to ensure good quality internet connectivity at the time of online interview, and be present (connected) during allotted time frame. The online interview committee will call the student during their allotted slot.

For further information and queries, the PI may be contacted on gauravbsi@gmail.com. Please refer to SGPGI website for general information about the institute, and the ICMR website for conditions of appointment and other general conditions governing the Project technical support III appointments under ICMR project.