



Sanjay Gandhi Post Graduate Institute of Medical Sciences

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Applications are invited for one post of **Project Associate-1** in a SERB-DST extramural project titled "**Breast tumor Educated Monocytes (Br-TeMo)**" : **Signature pattern of TRIMs (Innate Immune Regulators) as Biomarkers for Early Prediction of Breast Cancer Progression and Metastasis"**

Emoluments (monthly) : Rs. 25,000.00 +HRA(16%) per month.

Qualification & Experience : Masters 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 01.03.2021**. 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 / skype/ zoom interview by email.
3. No TA/DA will be paid for attending the Interview.

The full Details are available on the following websites : 1. www.sgpqi.ac.in

2. www.sgpqi.edu.in / Research Cell.

Prof. Gaurav Agarwal
Principal Investigator,

Advt. No. R / 45/ 2020-21

Dept. of Endocrine & Breast Surgery

Advertisement for the Post of a Project Associate in a SERB Funded Project

Online applications are invited for the post of a "Project Associate- I" in a SERB funded research project.

Title of the project: ***"Breast Tumor Educated Monocytes (Br-TeMo)": Signature pattern of TRIMs (Innate Immune Regulators) as Biomarkers for Early Prediction of Breast Cancer Progression and Metastasis"***

Short description of the research project: Breast cancer, the commonest malignancy in women can metastasize to lymph nodes, bones, lungs, liver and brain. Emerging data suggests the critical role of inflammation in cancer initiation and progression. Study of inflammation and innate immune modulators seems critical for understanding cancers to find novel diagnostic, prognostic and therapeutic strategies. Studies have reported consistently high levels of various cytokines, macrophage migration inhibitory factor (MIF), and C-X-C motif chemokine receptor 4(CXCR4), suggesting their role in cancer progression. The source of inflammation is either the tumor cells, or the immune cells recruited in the tumor microenvironment (TME). The recruitment of the circulating monocytes in the breast cancer is important determinant of the inflammatory tumor microenvironment (TME) which also determines the breast cancer metastasis. CCL2 and possibly other cytokines educate/modulate the circulating monocytes gene expression which determines its recruitment to the TME. CCR2 positive circulating monocytes are recruited in the TME and at the metastatic site. The inflammatory pathways in tumor educated monocytes (TeMo) and tumor cells plays important role in the cross talk. Ubiquitination through TRIMs plays important role in NF- κ B and IFN pathways. These proteins also act as potent tumor suppressors and oncogenes. Expression of this unique family of proteins in TeMo's may help in predicting prognosis and monitoring the response to therapy in breast cancer patients. The proposed work aims at developing the TRIMs in TeMo as a potential bio-marker for early prediction of tumor progression and metastasis. This will be possible by study on the peripheral blood, and thus will be a practical and less invasive strategy aimed at individualizing treatment of breast cancer patients, early initiation of therapy, and thus improving their outcomes.

Investigators: Professor Gaurav Agarwal, (PI); Dr Rajesh Singh (Co-PI), Dr Rohit A Sinha (Co-I), and others.

Fellowship emoluments: Rs. 25,000/- + 16% HRA per month (consolidated), subject to fulfilling eligibility criteria

Minimum Qualifications, desired experience: Masters 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 (total three years). The selected candidate has to join immediately. The selected staff may be provided with an opportunity to pursue Ph.D. degree subject to fulfilling the eligibility criteria and satisfying the academic selection norms. Age Limit: Maximum 35 years as on the date of advertisement. (SC/ST/OBC and

physically handicapped candidates will be entitled for the relaxation in age limit as per the government norms).

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 "SERB_(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 associate-I'). 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: **01.03.2021**. 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, which is likely to be held in 1st week of March 2021. (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 be conducted, 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 SERB-DST website for conditions of appointment and other general conditions governing the Project associate -1 appointments under SERB-DST projects.