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Positions available

Systems Medicine Cluster (SyMeC): Accelerating Systems Medicine using a Cluster Approach

Today, medicine is largely reactive. A medical practitioner treats the illness of a person, with varying levels of success. With the rise of genomics and the accumulation of large amounts of data on various diseases, a new systems-based approach to medicine has emerged. Clinical practitioners and researchers are increasingly realising that our bodies do not work as a set of independent components, but rather as an interacting *system*, with genes, proteins, cells and organs interacting with each other and the environment in complex ways. The understanding of this system will result in a transcendental change in medical practice; *from reactive medicine, based on disease, to a predictive and preventive one centered on health*. However, to effect this transition, complementary multi-domain expertise and experience are necessary.

In conformity with the national priority of stimulating investment in biotechnology, a Biocluster has been created. The Biocluster is a platform – both intellectual and logistical – for generating required biological and medical evidence to accelerate systems medicine. The Biocluster comprises six institutions:

- Bose Institute,
- CSIR-Indian Institute of Chemical Biology,
- Indian Institute of Science Education & Research,
- Indian Statistical Institute,
- National Institute of Biomedical Genomics,
- Tata Medical Centre;

with the National Institute of Biomedical Genomics serving as the co-ordinating institution.

We are looking for motivated and bright individuals interested to explore career opportunities in this innovative multi-organization initiative in Systems Medicine at NIBMG in the positions mentioned as below:

Project	Name of the position	No. of position(s) vacant	Consolidated Retainer Fee [INR] Per Month	Essential Qualifications	Desirable Qualifications	Nature of Duty
SyMeC	Experimental Laboratory Manager	1	60,000/- to 80,000/-	(1) PhD in Genomics or a related discipline, (2) Minimum 5 years of experience of working on high-throughput genomics platforms, (3) Past experience in management of biological laboratory, (4) Strong letters of recommendation from previous employers/supervisors	(1) Degree/ Diploma in Management; (2) Conversance with Quality Assurance and GLP; (3) Proven track record of independent academic work and leadership; (4) Two years' experience in management of a service laboratory	(1) Management and coordination (including hands on work) of laboratory facilities, execution of projects in time bound manner, (2) Implementation of Quality Assurance and GLP measures
	Database Manager	1	60,000/- to 80,000/-	(1) B.Tech/M. Tech/MCA degree or equivalent in computer science/bioinformatics or a related discipline, (2) Proven track record of experience (minimum 2 years) in management of large relational databases (MySQL) in UNIX cluster environment and proficiency in scripting languages	(1) Experience in high performance cluster computing (2) Experience in development of genomic databases and LIMS. (3) Experience in designing database schema and optimizing query structures.	(1) Operations and management of all database, software, server and systems (2) Creation of large databases.

Data Analyst Tier-2	2	25,000/- to 40,000/	(1) M.Tech, MSc or equivalent in Bioinformatics /Computer Science/Computer Applications or a related discipline (2) Proficiency in programming in C/C++, Java or python (3) Proficiency in UNIX command line scripting and (4) Minimum ONE year experience in high-throughput data (NGS) analysis (5) Strong communication skills and the ability to work as part of the team is essential -	(1) Handling of software packages and genomic databases (2) Experience in handling large volume DNA sequence / genotyping data in large projects	(1) QA/QC and analysis of raw sequence data generated by massively parallel DNA sequencing platforms, (2) Programming, design and operation of massively parallel DNA sequencing data analysis pipelines and (3) Report writing DNA sequencing data analysis pipelines
Technical Specialist Tier-2	2	25,000/- to 40,000/	(1)MSc or equivalent (or BSc with 3 years laboratory experience) in Genetics/Life Sciences/Biochemistry/related discipline; (2) Minimum 3 years of experience of working with high-throughput genomics platforms.	(1) Experience in whole genome/targeted sequencing, RNA-Seq, GWAS and Methylation Array (2) Experience in DNA and RNA isolation from archived bio specimens e.g. FFPE tissue	Hands-on massively parallel sequencing, microarray laboratory work and instrument operations as well as other related laboratory activities

International Cancer Genome Consortium – India Project (ICGC)

The International Cancer Genome Consortium (ICGC) has been launched to coordinate large-scale cancer genome studies in tumours from 50 different cancer types that are of clinical and societal importance across the globe. The Indian initiative of the ICGC is on gingivo-buccal oral cancer (GBOC). The ICGC Laboratory of the National Institute of Biomedical Genomics is the site of genomic analyses of the initiative, which consists of next generation sequencing, genome wide scan and related activities. We are looking for motivated and bright individuals interested to explore career opportunities in these high throughput cutting edges laboratory technologies in genomics for the technical positions as follows:

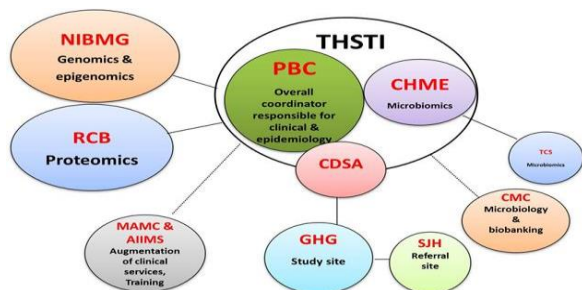
Project	Name of the position	No. of position(s) vacant	Consolidated Retainer Fee [INR] Per Month	Essential Qualifications	Desirable Qualifications	Nature of Duty
ICGC	Project Manager-1	1	83,000/- to 90,000/	(1) M.Sc. (preferably in an area of life sciences)/M.B.A., with experience in management and co-ordination of large multi-centre projects, liaising with international organizations.		(1) Management of administrative and financial aspects of the project, (2) Coordinating financial and administrative activities with the Department of Biotechnology, (3) Preparation, Collation and submission of reports, and co-ordination with member countries of the international consortium
	Project Manager-2	1	83,000/- to 90,000/	(1) PhD in life sciences or a related discipline with demonstrated track record and experience in high throughput sequencing and genotyping platforms, management of large genomics projects. (2) Experience in management of genome-scale sequence and variant data (3) Demonstrated skills in data analysis and interpretation		(1) Management of all scientific activities of the project, (2) Quality assurance, adherence to international protocols in respect of experiments, (3) Data generation, timeline tracking, data transfer and computational analyses

Senior Technical Specialist	2	28,000/- to 35,000/	(1)MSc or equivalent (or BSc with 3 years laboratory experience) in Genetics/Life Sciences/Biochemistry/related discipline; (2) Minimum 3 years of experience of working with high-throughput genomics platforms.	(1) Experience in whole genome/targeted sequencing, RNA-Seq, GWAS and Methylation Array (2) Experience in DNA and RNA isolation from archived bio specimens e.g. FFPE tissue	(1) Management of the experimental laboratory team and hands-on second generation flow cell sequencing and genome wide scan laboratory work, (2) Instrument operations and management, QA/QC as well as all other experimental laboratory activities
Technical Specialist	2	23,000/- to 30,000/	(1) MSc or equivalent (or BSc with 3 years laboratory experience) in Genetics/Life Sciences/Biochemistry/related discipline; (2) Minimum 1 year of experience in genomics laboratory work	(1)Hands-on experience in massively parallel sequencing/ Sanger-CE sequencing/ microarray based genotyping or gene expression	Hands-on massively parallel sequencing laboratory work and instrument operations as well as other related laboratory activities
Technical Assistant	2	11,000/- to 18,000/	(1)MSc/BSc (with two years' experience) in any life science/Biochemistry or related discipline	(1) Basic experience in DNA & RNA laboratory work	(1)Preparation of reagents, maintenance of equipment, autoclaving, providing assistance in laboratory work and related routine activities

Inter-Institutional Program for Maternal, Neonatal and Infant Sciences- A translational approach to studying Preterm birth (PTB)

Globally, Preterm Birth (PTB) is the single largest cause of neonatal deaths. A birth that takes place before the mother has been pregnant for at least 37 weeks construes a preterm birth. In India, among the total 27 million babies born annually, 3.6 million babies are born preterm, and over 300,000 of these preterm babies die each year because of associated complications. India, with its highest number of PTBs and the highest number of preterm deaths worldwide, contributes 25% of the overall global preterm related deaths. Under its Grand Challenge Programme, the Department of Biotechnology, Ministry of Science and Technology, Govt. of India, has initiated a large multi-institutional and multi-phase research programme on PTB as below. This inter-institutional program on maternal and infant sciences is a multidisciplinary research effort to predict & diagnose Preterm Birth (PTB) by increasing the understanding of the underlying pathophysiological mechanisms, which would facilitate use of existing or novel therapeutic agents & appropriate timing of clinical intervention. In the PTB Program, NIBMG

will undertake genomic and epigenomic analyses and also statistical analyses of all data generated by the participating organizations. NIBMG is looking for motivated and bright individuals interested to explore career opportunities in the positions mentioned as below in this project:



Project	Name of the position	No. of position(s) vacant	Consolidated Retainer Fee [INR] Per Month	Essential Qualifications	Desirable Qualifications	Nature of Duty
PTB	Data Analyst	2	23,000/- to 30,000/	(1) First Class B.Tech/M. Tech/MSc degree or equivalent in computer science / Bioinformatics/Statistics, (2) Experience in programming - C/C++, Java, R or python	(1) Handling of bioinformatics software packages and genomic databases (2) Experience in QA/QC and analysis of data generated by massively parallel DNA sequencing platforms, DNA methylation or SNP genotyping microarray (3) Good communication skills and the ability to work as part of the team is essential	(1) QA/QC and analysis of data generated by massively parallel DNA sequencing platforms and DNA methylation and SNP genotyping microarray, (2) Programing, design and operation of massively parallel DNA sequencing and DNA methylation and SNP genotyping microarray data analysis pipelines

Virtual National Oral Cancer Institute (VNCI-Oral Cancer)

The project aims to identify both intra and inter tumour variability in profiles of driver alterations in OSCC-GB that may differ among geographical and ethnic regions of India. We propose to perform identification and recurrence-testing of 'driver' alterations, in both coding and non-coding regions of the genome in OSCC-GB and comparative analyses of driver alteration profiles among patients drawn from three regions of India that are geographically, ethnically and culturally distinct. Identification of profiles of alterations among tumour clones will be performed by single-cell sequencing to generate relevant hypotheses regarding selective basis of clonal expansion under drug pressure. NIBMG is looking for motivated and bright individuals interested to explore career opportunities in this project in the positions mentioned as below:

Project	Name of the position	No. of position(s) vacant	Consolidated Retainer Fee [INR] Per Month	Essential Qualifications	Desirable Qualifications	Nature of Duty
VNCI_Oral Cancer	Technical Specialist	1	20,000/- to 27,000/	(1)MSc or equivalent (or BSc with 3 years laboratory experience) in Genetics/Life Sciences/Biochemistry/related discipline; (2) Minimum 2 years of experience in genomics laboratory work	(1)Hands-on experience in massively parallel sequencing/Sanger-CE sequencing/microarray based genotyping or gene expression	Hands-on massively parallel sequencing laboratory work and instrument operations as well as other related laboratory activities

MULTI-OMICS ANALYSIS TO DECIPHER MECHANISMS OF HORMONE RESISTANCE IN BREAST CANCER (VNCI-Breast Cancer)

Breast cancer is the most common malignancy in women worldwide with measurable rates of recurrence to the extent of ~20-40% depending on baseline prognostic indicators including stage. It is the second leading cause of deaths in women. Notably, the incidence of breast cancer is increasing in India and it has now overtaken cervical cancer as the most common cancer in urban Indian women. This Virtual National Cancer Research Initiative seeks to characterize hormone therapy resistant breast cancer at the genomic, transcriptomic, epigenetic and phosphoproteomic levels. NIBMG is looking for motivated and bright individuals interested to explore career opportunities in this project in the positions mentioned as below:

Project	Name of the position	No. of position(s) vacant	Consolidated Retainer Fee [INR] Per Month	Essential Qualifications	Desirable Qualifications	Nature of Duty
VNCL_ Breast Cancer	Lab Technician	2	15000 + 24% HRA	(1)MSc or equivalent (or BSc with 3 years laboratory experience) in Genetics/Life Sciences/Biochemistry/related discipline; (2) Minimum 1 year of experience in genomics laboratory work	(1)Hands-on experience in massively parallel sequencing/ Sanger-CE sequencing/ microarray based genotyping or gene expression	Hands-on massively parallel sequencing laboratory work and instrument operations as well as other related laboratory activities

Core Technologies Research Initiative (CoTeRI)

To facilitate pursuit of genomics, NIBMG provides help to scientists of other publicly-funded institutions in India – primarily, but not exclusively, on a collaborative mode – by providing access to its high-end, high-throughput technology platforms through its *Core Technologies Research Initiative, CoTeRI* (<http://www.nibmg.ac.in/?q=coteri>). NIBMG is looking for motivated and bright individuals interested to explore career opportunities in CoTeRI in the positions mentioned as below:

Project	Name of the position	No. of position(s) vacant	Consolidated Retainer Fee [INR] Per Month	Essential Qualifications	Desirable Qualifications	Nature of Duty
CoTeRI	Project Coordinator	1	50,000/- to 70,000/-	(1)PhD (or MSc with 5 years laboratory experience) in Human Genetics/Genomics or related discipline; (2) Experience of working in massively parallel sequencing/microarray/Sanger- CE Sequencing based projects; (3) Strong recommendation	(1)Conversance with Quality Assurance and GLP; (2) Proven track record of coordinating and conducting project work and providing leadership; (3) Degree/Diploma in Business Administration; (4) Proficiency in oral and written communication skills in English.	(1) Management and coordination (including hands on work) of laboratory facilities, execution of projects in time bound manner, (2) Implementation of Quality Assurance and GLP measures, Communication and coordination with users of CoTeRI

Technician Tier I (Computational)	1	13,000/- to 20,000/	1) MSc or equivalent in Computer Science/Statistics/Bioinformatics/related discipline (2) Proficiency in Unix scripting (3) Experience in file handling programming using C/C++, Python	(1) Experience in handling of software packages and databases related to Genomics (2) Experience in handling DNA sequence/genotyping data/RNA-Seq/DNA Methylation Microarray data	1) QA/QC and analysis of raw sequence and genotyping data generated by massively parallel sequencing and microarray platforms
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These positions are contractual and appointments will be initially given for one year, which are extendable depending upon performance and requirements of the project.

Please apply online at <http://apply.nibmg.ac.in> (no other form of application will be accepted). The last date of application is **16 February, 2019**. Please visit our website www.nibmg.ac.in for further information. Only the shortlisted candidates will be called for Interview/Test. **No TA/DA will be provided for attending the Interview/Test.**