

Position: Post-Doctoral Fellow in Genomics

No. of positions: 1

Validity: 6/4/2024

Appointing Organisation

Tata Translational Cancer Research Centre
Tata Medical Center, Kolkata

The Tata Medical Center and the Tata Translational Cancer Research Centre

The Tata Medical Center (TMC) is a multispecialty institution for tertiary cancer care based in New Town, Kolkata. At TMC, clinical and research activities are integrated to provide state-of-the-art care for patients with cancer. This integration is enabled by the Tata Translational Cancer Research Centre (TTCRC), the research arm of TMC. TTCRC is within a dedicated academic space and spread over 3 floors. At TTCRC, a multidisciplinary team of clinicians, scientists, academics and industry professionals collaborate to develop a systems medicine approach in cancer research. This approach is focussed on developing innovative, indigenous, cost-effective and equitable strategies to improve cancer diagnosis; develop treatments that match disease characteristics and are adapted to treatment response; and, identify prognostic and predictive disease biomarkers. These strategies are multi-dimensional and involve an iterative pathway that include clinical studies, high-throughput laboratory investigations, computational strategies to integrate, analyse and model data, hypothesis-based pre-clinical studies and evidence-based translation of findings to clinical practice. For additional information on work at TTCRC, visit <https://tinyurl.com/TTCRC-systems-medicine> and <https://tinyurl.com/TTCRC-childhood-ALL>.

The Position

In this position, the candidate will work as part of the clinical genomics unit (CGU) at TTCRC. The group works in close association with the department of cytogenetics at TMC as well as with the clinical research unit (CRU) and biobank in TTCRC. It provides core sequencing facility for other TTCRC research groups like – FORE and SOLi3D. Since its inception in 2018, it has established Illumina-based platforms for RNA-Seq, targeted panel sequencing and single nucleotide polymorphism analyses (for copy number alterations). Recently it has expanded its sequencing capacity to the Oxford Nanopore Technology (ONT) platform. Output of the Genomics lab complements standard diagnostics in ALL patients treated at TMC and therefore building up a workflow for setting up the pipeline for companion diagnostics. We are working with St Jude Children's Research Hospital (SJCRH), Memphis to develop a common RNAseq-based classifier for the ICiCle network, which can be used internationally. This project is named "Diagnostic Innovations Using Value-Based Implementation Models to Increase Access" or DIVIA and is funded by SJCRH. While the Illumina-based approach is a gold-standard, we are working with a team at University of North Carolina (UNC), Chapel Hill to develop a cost-effective, ONT-based approach, using the same samples sequenced on the Illumina platform. This project, Diagnostic Applications in Resource Limited Settings Using Global Advances in Nanopore Technologies

(DARGAN) has been pump-primed by a grant from University of North Carolina, Chapel Hill.

Primary responsibility of the candidate will be to perform and supervise the Illumina RNA-Seq based workflow in TTCRC and acting as a primary point of contact for coordinating the ongoing collaboration with St Jude team in USA. The candidate is expected to have a good understanding of the high through-put genomics workflows which would include planning, execution and optimisation of experimental protocols for bulk and single-cell transcriptome sequencing, ATAC-Seq and methylation assays as well as trouble shooting and data analysis. This will also involve working closely with hospital's multidisciplinary team of clinician and technicians, and with research group leads at TTCRC. The candidate will require to actively participate in data presentations in group meetings and journal club. The candidate also needs to have good mentoring skills to train and motivate freshers or juniors and should also demonstrate some essential skills including good communication, problem-solving, decision-making, critical thinking, emotional intelligence, and ethical awareness.

Minimum required qualifications/experience

- (a) PhD in Biological Sciences with at least 2 years of experience working in wet-lab
- (b) Experience with DNA and RNA-based workflows in genomics
- (c) Strong awareness about good laboratory practices and guidelines
- (d) Good Team Player
- (e) Independent decision-making capability

Necessary qualities

- (a) Integrity, motivation, enthusiasm
- (b) Focus and commitment in carrying out tasks and duties
- (c) Clarity in career and professional development goals

Appointment and reporting

Appointment to the position will be initially for 3 (three) years including one year of probationary period. The consolidated starting monthly salary is negotiable based on qualifications and experience. The position is funded by a core CSR grant from the Tata Consultancy Services. The successful applicant will be managed by the Group Lead in Genomics and will report to the Director.

Enquiries

- (a) For further details on TMC and TTCRC, visit www.tmckolkata.com and www.ttcrc.org
- (b) Submission of applications by **e-mail to both**:

Mr Suvasish Mukherjee; Head, Human Resources; Tata Medical Center; 14 Major Arterial Road (East-West); Newtown, Rajarhat; Kolkata 700 160
e-mail: suvashish.mukherjee@tmckolkata.com

Mr. Satadru Dey; Administrative Assistant, Tata Translational Cancer Research Centre
 Tata Medical Centre- Kolkata, 14 Major Arterial Road (East-West); Newtown, Rajarhat; Kolkata 700 160
 e-mail: satadru.dey@ttcrc.tmckolkata.org

For informal enquiries,
 Mr. Satadru Dey (satadru.dey@ttcrc.tmckolkata.org)

Knowledge/ Aptitude/Skills	Requirements	Essential / desirable	Information from
1. Disposition / Attitude	a. Integrity b. Flexibility c. Motivated d. Committed e. Willing to learn new skills f. Works as part of a team g. Receptive to new ideas h. Capable of independent work & to an agreed plan i. Good time management j. Organised, able to prioritise responsibilities k. Works to high technical and quality standards	a. Essential b. Essential c. Essential d. Essential e. Essential f. Essential g. Essential h. Essential i. Essential	Application form CV Profile Interview References
2. Education / Qualifications	PhD in Biological Sciences,	Essential	Interview Application form CV
3. Experience	a. DNA and RNA technology b. Next Generation Sequencing c. Publications	a. Essential b. Desirable c. Desirable	Application form CV Interview & References
4. Skills and ability	a. Critical thinking b. Problem solving skills c. Readiness to evaluate, develop and test new approaches and strategies	a. Essential b. Essential c. Essential	Application form CV Interview References