

Bioinformatician – Radiation Oncology

About the Position

An interesting opportunity to reshape the way breast cancer therapy could be personalised is available in an internationally funded project at Tata Medical center, Kolkata. The project is looking at identifying targetable mutations and compiling targets for future use including prognostication following deep sequencing. We are seeking an experienced **Bioinformatician / Computational Biologist** with a strong track record in **next-generation sequencing (NGS) data analysis**, particularly in the analysis of **whole-genome sequencing (WGS) data derived from solid tumour and blood samples**.

The successful candidate will work closely with clinicians, molecular biologists, and translational researchers to perform comprehensive genomic analysis and interpretation of cancer-related sequencing data.

Key Responsibilities

- Working with the clinicians and liaising with the sequencing partners and managing the data generated.
- Processing, quality control, and analysis of **WGS datasets** generated from solid tumour and matched blood samples.
- Development and implementation of reproducible bioinformatics workflows for NGS data analysis.
- Analysis of **somatic and germline genomic alterations** from paired tumour–blood samples.
- Identification and interpretation of:
 - Single nucleotide variants (SNVs)
 - Insertions/deletions (indels)
 - Copy-number alterations (CNAs)
 - Structural variants (SVs)
 - Mutational signatures
 - Tumour mutational burden (TMB), where applicable
 - Loss of heterozygosity (LOH) and other genomic features
- Processing and analysis of **tumour-normal paired (germline and somatic) WGS data**.
- Assessment of tumour purity, ploidy, and genomic complexity.
- Integration and interpretation of genomic findings in the context of **solid tumours and cancer biology**.

- Annotation of genomic variants using appropriate public databases and resources.
- Generation of high-quality analysis reports, figures, and publication-ready datasets.
- Maintaining well-documented, reproducible, and version-controlled analysis pipelines.
- Collaborating with experimental and clinical research teams to address project-specific analytical requirements.
- Contributing to research publications, presentations, and scientific reports.

Essential Qualifications & Experience

- PhD/MSc/MTech or equivalent qualification in **Bioinformatics, Computational Biology, Genomics, Biotechnology, Computational Science, or a related field.**
- Demonstrated hands-on experience in **NGS data analysis**, preferably WGS.
- Strong experience in analysis of **solid tumour sequencing data.**
- Experience with **paired tumour–normal/blood WGS analysis** will be highly desirable.
- Proficiency in Linux/Unix environments and command-line-based bioinformatics analysis.
- Strong programming/scripting skills in one or more of:
 - **Python**
 - **R**
 - **Bash**
- Experience with commonly used bioinformatics tools and workflows for variant calling, CNV/SV detection, annotation, and genomic analysis.
- Familiarity with NGS quality-control, alignment, variant calling, annotation, and downstream interpretation.
- Ability to independently troubleshoot bioinformatics pipelines and analyse large genomic datasets.

• Enquiries

- For further details refer to TMC website, visit www.tmckolkata.com
- Submission of applications by post or by e-mail to:
- 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
- For informal enquiries,
- Ms Arpita Dutta Das : das.arpita.puja@gmail.com