1year Fellowship in Laboratory Haematology

Conceptualized in the year 2004 as a philanthropic initiative for the Eastern and North-Eastern parts of India and the neighbouring countries, the Tata Medical Center (TMC) started operations in Kolkata on May 16, 2011. The hospital is governed by a charitable trust – Tata Medical Centre Trust. It is an integrated Oncology facility with well-trained professional staff and equipped with modern facilities and the most contemporary medical equipment. The hospital was designed by Cannon Design, a renowned architectural firm from North America. It is located on 13 acres of land at New Town in Kolkata, West Bengal.

The hospital is an integrated Oncology facility with well-trained professional staff and equipped with modern facilities and contemporary medical equipment. The Hospital, with a capacity of 437 beds, serves all sections of the society, with 75% of the infrastructure earmarked for subsidized treatment for the underprivileged sections. It provides a wide spectrum of services from diagnosis and therapy to rehabilitation and palliative support. The Institution's objective is to excel in service, education and research.

This state-of-the-art Hospital has been built on carefully landscaped grounds to emphasize the holistic approach in our crusade against cancer. The buildings were designed by Cannon Design, a renowned architectural firm from North America.

Diagnosis and treatment are characterized by a multi-disciplinary approach with Disease Management Teams, wherein experts from different streams participate in decision-making for treatment protocols, using evidence-based medical strategies and appropriate documented clinical guidelines.

Tata Medical Center, Kolkata is one of the leading cancer care and research institutions in the country and has benefited West Bengal as well as the adjoining states and neighboring countries.

The institute invites applications for the post of

Fellowship in Laboratory Hematology (Vacancy – 01)

Qualifications: -

Essential- MD or DNB in Pathology

Experience (desirable): Minimum 1 year Post MD / DNB (Pathology)

Duration of the Fellowship:- One year

ABOUT THE DEPARTMENT

The Haematology Laboratory is fully automated and equipped with state-of-the-art technology. It features two Beckman Coulter DxH 900 analyzers and one DxH 800, each integrated with automated Slide Maker Stainers. These high-throughput, fully automated differential cell counters serve as the backbone of routine haematology testing. The lab also employs Cellavision, a digital haematology imaging system, to complement the cell counters.

Coagulation testing is entirely automated, utilizing Werfen's IL Top 300 and IL Top 350 analyzers. The flow cytometry section is equipped with four instruments: one 3-laser BD FACS Canto II, two 12-colour BD FACS Lyric systems, and one 13-colour Beckman Coulter DxFlex. These systems support a wide range of diagnostic applications including immunophenotyping for leukemia and lymphoma, haematopoietic stem cell enumeration, paroxysmal nocturnal haemoglobinuria (PNH) analysis, EMA binding assay, immune cell subset analysis and cell cycle studies. High sensitivity flow cytometric Minimal residual disease (MRD) monitoring is routinely performed in B-ALL, T-ALL, AML, multiple myeloma, and CLL.

The lab also features the Sebia MiniCap capillary electrophoresis system for protein electrophoresis, including immunofixation, aiding in the diagnosis of plasma cell disorders. Immunoglobulin quantification and free light chain (FLC) assays are performed using the OPTILITE nephelometer from The Binding Site.

For platelet function testing, the lab is equipped with an advanced Chronolog platelet aggregometer (Model 700), capable of assessing both whole blood and platelet-rich plasma. Rotational thromboelastometry (ROTEM) is also available and used particularly during prolonged or complex cancer surgeries.

Despite being a cancer-focused center, the lab also performs Hb variant analysis for thalassemias and haemoglobinopathies using the BIORAD D-10 HPLC system. Additional capabilities include kinetic red cell enzyme assays (e.g., G6PD) using a spectrophotometer, automated ESR measurement with Ves-Matic, and a wide range of special stains (MPO, PAS, Toluidine Blue, Perl's, etc.) for morphological diagnosis. Furthermore, bone marrow biopsy specimens have access to an extensive panel of immunohistochemical (IHC) markers, enhancing diagnostic accuracy and depth.

The in-house facilities for molecular haematology and cytogenetic tests for hematological malignancies encompass the entire diagnostic algorithm. The Molecular Haematology has four state of the art NGS Platforms (Ion Torrent PGM, Ion Gene Studio S5, QIAGEN Gene Reader & Illumina MiSeq) , Digital droplet PCR (BIORAD ddPCR), Sanger Sequencer (8 capillary ABI 3500), four Real Time PCR Platforms (ABI 7500, Qiagen Rotorgene, Thermo Quant Studio 3 & Thermo Quant Studio 6). For nucleic acid extraction, the Qiagen QiaSymphony and Thermo King Fisher automated systems are available. Tape Station, Qubit & Nanodrop instruments are used for quality and quantity check of extracted nucleic acids. .Cytogenetics performs conventional G-Banding karyotyping, Stress Cytogenetics and FISH for all kinds of

haematological malignancies. Cytogenetics have 3 Metasystems (IKAROS & ISIS) analysis plarforms with Carl Zeiss automated microscopes (Axio Imager)and Metacyte Spot Counting software.The laboratory aims to provide a timely, clinically relevant, and quality assured diagnostic test results in the laboratory for in-patients, out-patients or other external clients for the laboratory at an affordable price. The entire laboratory is connected to LIMS and HMS for seamless transmission of patient reports within a paper-less environment in the hospital. The department aims to provide an intellectually stimulating, safe, secure, academically friendly work environment to its students, staff & scientific officers, and would concentrate on continuous quality improvement, research and development. The department is involved in numerous research projects with cumulative grants of nearly 10 crores.

Job Description:

Clinical Responsibilities:

The fellow will be Involved in daily slide review and sign out of cases. He will perform real-time review of cases involving peripheral blood smears, bone marrow aspirate smears and bone marrow biopsies. He will be involved in the validation processes of hemocytometry and coagulation lab parameters including internal QC / external QA processes on a daily basis. The fellow will independently review all the hematology cases first with a clinico-lab hematology correlation and make an attempt to offer diagnoses. Final discussion and sign-out with the faculty will follow on a double-head binocular teaching microscope. It is expected that the fellow will acquire gradually increasing responsibilities in signing out of cases on his own, with decreasing levels of supervision by the faculty.

Academic Responsibilities:

He will actively participate in monthly / fortnightly intra & inter-departmental conferences (Clinical Grand Rounds).The fellow will prepare, present, and discuss cases at interdepartmental conferences (MDTs) attended by the faculty and fellows of the Departments of Clinical Hematology and Medical Oncology. He will present Journal Clubs and Lab Meetings as scheduled by the division of laboratory & clinical hematology. He will be encouraged to assist in ongoing research projects and to develop their own research projects. The options for the fellow will include clinical images, clinical case reports, analysis of clinical case series, or basic science research. The candidate will also be encouraged to present papers at national conferences and be involved in haematopathology research in the department. This fellowship usually will involve around 11 months training in hemocytometry, morphologic assessment of PB / BMA / BMBx in various haemato-lymphoid malignancies, flowcytometry, hemostasis & thrombosis and red cell haematology (red cell abnormalities, hemoglobinopathies etc.) and 01 month in cytogenetics and molecular genetics.

Audit and Research:

The candidate would be expected to perform laboratory and clinical audits, as well as participate in various research programs which would involve writing research grant applications, participation in laboratory work for research, presenting papers in scientific conferences and writing articles for publication in peer-reviewed indexed journals.

Management Responsibilities:

The candidate would be expected to help other laboratory staff in writing standard operating procedures, drafting policy documents, carrying out health and safety audits, participate in equipment maintenance and quality control activities.

Prospective Candidates are encouraged to contact the following consultant in case of any query:

Dr. Deepak K Mishra, +91 9831132365 / +91 33 66057754;

Email: deepak.mishra@tmckolkata.com;

***For more details about the job positions, qualifications, eligibility and application forms, please log on to our website: www.tmckolkata.com.**

You may also Email or Post applications by **20th November 2025** to:

Mr. Suvasish Mukherjee, Head - Human Resources, Tata Medical Center, 14 MAR (EW), New Town, Kolkata – 700160.

Email – suvashish.mukherjee@tmckolka