

ESCMID Funded Observership in
Clinical Microbiology at Tata Medical
Center, Kolkata, India

<https://tmckolkata.com/in/microbiology/>

<https://www.escmid.org/education/exchange-programmes/observership-programmes/funded-observership/>



ESCMID Funded Observership in Tata Medical Center, Kolkata, India

The Tata Medical Center is a collaborative center of the European Society of Clinical Microbiology and Infectious Diseases (ESCMID).

The ESCMID supports funded observerships in its collaborative centers in many countries and it includes:

Tata Medical Center in Kolkata, West Bengal, India

This Observership is in Clinical Microbiology



ESCMID





Details about this observership

- The details about the ESCMID observership can be found in the following websites:
- Tata Medical Center- ESCMID funded observership: <https://tmckolkata.com/in/microbiology/>
- ESCMID website: <https://www.escmid.org/education/exchange-programmes/observership-programmes/funded-observership/>



ESCMID Funded Observership in Tata Medical Center, Kolkata, India



- **ESCMID gives out:**

- 100 observerships per year, hosted across 123 ESCMID Collaborative Centres (ECCs).
- Tata Medical Center in Kolkata, West Bengal, India is one of these collaborative centers

- **Duration of observership:** Five days to one month. (28 days).

- **Funding:**

- Participants of observerships can receive funding of up to EURO 2000 to help ensure a smooth observership journey.

Objectives of the ESCMID funded Observership in Clinical Microbiology



1. To gain experience and exchange knowledge with colleagues across the fields of Clinical Microbiology (CM) and Infectious Diseases (ID).
2. To facilitate international training
3. To facilitate collaboration among Medical Microbiology/ Infectious Disease doctors and Young Scientist Members (YSM) fulfilling the criteria of Young Scientist Member.
4. To engage experts in Clinical Microbiology and Infectious Diseases through an international exchange program
5. To enable participants to improve clinical and laboratory practice in their host institutions through a dynamic synergy of shared knowledge and expertise.

Eligibility- Application-Selection- Funding- Report

- Interested applicants are advised to apply through ESCMID regarding:
 - <https://www.escmid.org/education/exchange-programmes/observership-programmes/funded-observership/>
- A. Details of the ESCMID Collaborative Centers
 - B. Eligibility criteria
 - C. Important dates
 - D. Application Process
 - E. Selection
 - F. Funding
 - G. Report



ESCMID

Temporary Registration of Foreign Medical Graduates from National Medical Commission of India

- This is in line with: “**Registration of Medical Practitioners and Licence to Practice Medicine Regulations, 2023**” of the **National Medical Commission** notification dated 10th May 2023 with reference to Chapter IV {Temporary Registration to Foreign Medical Practitioners}
- **Apply for temporary Registration under section 34 NMC Act:**
<https://www.nmc.org.in/ActivitiWebClient/open/registerftpfc>
- **Interested candidates are advised t:**
 - Discuss with ESCMID Collaborate Centre (ECC) before applying to NMC
 - Pay necessary registration fees and administrative charges (as applicable)
 - Start application process as soon as possible
 - Note: application process is time consuming and final decision is with NMC
 - ECC (in this case Tata Medical Center, Kolkata) will facilitate application to NMC
- **For details please refer to:**
- <https://www.nmc.org.in/MCIRest/open/getDocument?path=/Documents/Public/Portal/LatestNews/Public%20Notice%20-%20Guidelines%20on%20Temporary%20Registration%20regarding.pdf>

Observership opportunities at Tata Medical Center, Kolkata, India



Observership in Clinical Microbiology

www.tmckolkata.com ;

<https://tmckolkata.com/in/microbiology/>



WELCOME TO TATA MEDICAL CENTER

Committed to deliver Cancer care with cutting-edge technology & world renowned healthcare professionals.

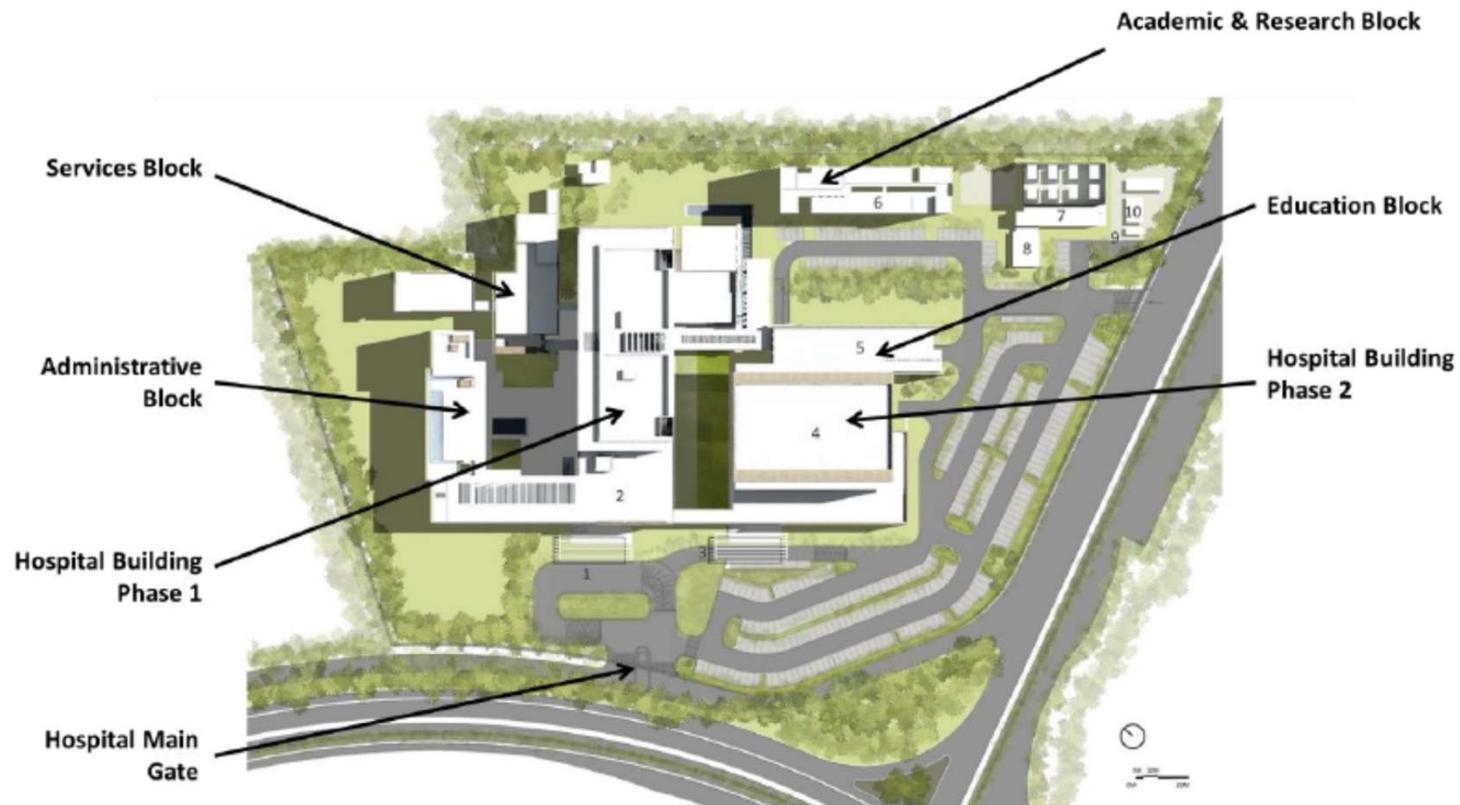
[ADULT IMMUNISATION CLINIC](#)

[PLEASE CLICK FOR YOUR FEEDBACK](#)



Tata Medical Center at Kolkata: a birds eye view

Hospital Infrastructure



About the Hospital: Tata Medical Center

- Tertiary care oncology hospitals
 - Comprehensive cancer care center
 - Bone Marrow Transplantation center
 - Not for Profit hospital
 - General and private rate tariffs for healthcare provision
 - Established in May 2011 and owned by the Tata Medical Centre Trust
 - Bed strength: 437
 - In-patient numbers: ~2000 per month
 - Out patient numbers: ~850 per day
 - Surgery: ~500 per month
- Clinical Specialties:
 - Clinical Hematology and Cellular Therapy
 - Medical Oncology
 - Digestive Diseases
 - Pediatric Oncology
 - Surgical Oncology: Breast, GI-HPB, Thoracic, Urology, Gynecology, Plastic
 - Onco-anesthesia
 - Radiation Oncology
 - Critical Care
 - Nuclear Medicine
 - Palliative Care
 - Psycho-Oncology

Support Services: Tata Medical Center

- Department of Lab Sciences:
 - Hematology
 - Microbiology
 - Histopathology and Cytology
 - Biochemistry
 - Cytogenetics
 - Molecular Pathology
 - Flow Cytometry
- Imaging and radio-diagnosis
- Nuclear Medicine
- Transfusion Medicine
- Endoscopy services
- Hemodialysis
- Physiotherapy
- Nutrition
- Central Sterile Supply Department
- Food and beverages
- Laundry
- Water Treatment Plant
- Sewage Treatment Plant
- Effluent Treatment Plant
- Cleaning and Housekeeping
- Customer Care Services
- Security Services
- Bio-medical Engineering
- Materials Department
- Maintenance Engineering
- Information Technology

What the ESCMID observership offers in Tata Medical Center, Kolkata, India

1. Management of MDR/XDR Gram- negative bacterial infections
2. Infection Prevention and Control (IPC) challenges in settings with high prevalence of MDR/XDR pathogens
3. Antimicrobial stewardship challenges in immunocompromised cancer patients
4. Antimicrobial stewardship challenges in settings with high prevalence of MDR/XDR Gram negative bacterial infections
5. Use of Laboratory Developed low cost PCRs for detection of XDR pathogens
6. Use of DNA Sequencing in identification of pathogens
7. Air and water quality monitoring in hospitals
8. Management of tuberculosis in cancer patients
9. Management of infections in Pediatric Oncology, Bone Marrow Transplantation, Surgical Oncology and Critical Care Units

Microbiology Department: Staffing

- Clinical Microbiology Consultant: 2
- Infectious Disease Physician: 1
- Clinical and Molecular Microbiology Fellowship trainees: 3
- Scientific Officer: 5
 - PhD with training in Molecular Biology: 3
 - Bioinformatics trained: 1
 - Environmental Microbiology: 1
- Lab technologist: 7
- Infection Control Nurse: 2
- Antibiotic Pharmacist: 1 (research project)
- Research project staff: 6

Microbiology department Diagnostic Services:

1. Bacteriology
2. Mycobacteriology
3. Mycology
4. Serology
5. Virology
6. Parasitology
7. Environmental Microbiology: air and water quality monitoring
8. Sterility Testing: blood products, stem cells, bone marrow, medicines

Notable tests offered by Microbiology department:

1. 16S rRNA sequencing for bacterial identification (LDT)
2. ITS gene sequencing for fungal identification (LDT)
3. Carbapenem resistance gene PCR (Lab developed test)
4. Staphylococcus aureus, MRSA and van A PCR (Lab developed test)
5. Candida auris PCR (Lab developed test)
6. Beta D glucan assay
7. MALDI-TOF mass spectrometry for identification of bacteria, mycobacteria and yeasts
8. Surveillance culture for MDRO bacteria: stool, throat swab
9. Multiplex PCR for respiratory pathogen: Qiastat and Biofire
10. Microbroth dilution Test for colistin and antifungal susceptibility (yeast)
11. Identification of atypical Mycobacteria by DNA sequencing
12. Human Papilloma Virus Testing and Genotyping

Bacteriology: Diagnostic Services

- Gram stain
- Blood culture: Bact/ALERT system (Biomerieux)
- Bacterial ID: Vitek- 2 Compact system
- Antibiotic susceptibility testing:
 - VITEK-2 Compact system
 - Micro-broth dilution Test: Colistin
 - E-test
 - Disc diffusion (CLSI guidelines)
- Real- time PCR: Staph aureus, MRSA (mec A gene), VRE (vanA gene)
- End- point multiplex PCR: Carbapenem resistance gene detection:
 - NDM-1, OXA-48, KPC, IMP, VIM, OXA-23, OXA-24, OXA- 58
- Biofire (Biomerieux): pneumonia, meningitis/encephalitis, gastro-enteritis panel
- Atypical pathogen (Bordetella, Legionella, Mycoplasma): Qiastat (Qiagen)
- Clostridioides difficile ELISA (VIDAS) and PCR (BioFire)
- 16S rRNA sequencing: Sanger sequencer (Applied Biosystems 3500)

Mycobacteriology: Diagnostic Services

- Ziehl- Neelsen stain
- Mycobacterial culture: Bact/ALERT system (Biomerieux)
- Cartridge Based Nucleic Acid Amplification Test:
 - GeneXpert Ultra (Cepheid): MTB and Rifampicin resistance detection
- MPT64 antigen test
- Identification of atypical Mycobacteria using:
 - 16S rRNA sequencing: Sanger sequencer (Applied Biosystems 3500)

Mycology: Diagnostic Services

- Microscopy:
 - KOH wet count and Calcofluor White wet mount
 - India ink wet mount for Cryptococcus
 - LPCB wet mount for fungal ID from colonies
- Fungal Culture:
 - Blood Culture, SDA (37C and 25C)
- Anti-fungal susceptibility testing for yeasts:
 - Vitek and Microbroth Dilution
- Real-time PCR:
 - Pneumocystis jirovecii
 - Candida and Candida auris
 - Aspergillus
 - Cryptococcus in CSF (BioFire, Biomerieux)
- Antigen detection:
 - Beta- D glucan assay (serum)
 - Galactomannan (serum and BAL)
- Therapeutical Drug Level monitoring: Voriconazole (by Mass Spectroscopy)
- Fungal Identification by ITS gene sequencing: colony or FFPE tissue
 - Sanger sequencer (Applied Biosystems 3500)

Virology: Diagnostic Services

- Quantitative PCR:
 - CMV viral load (Qiagen)
 - HBV viral load (Cepheid GeneXpert)
 - HCV viral load (Cepheid GeneXpert)
 - BK viral load (True PCR)
- Qualitative PCR:
 - Influenza- A/B, RSV
 - SARS CoV-2
 - Human Papillomavirus
 - Adenovirus
- PCR for vesicular rash: HSV and VZV PCR
- Biofire (Biomerieux): pneumonia, meningitis/encephalitis, gastro-enteritis panel
- QiaStat (Qiagen): upper respiratory pathogen panel
- Viral antigen tests for gastro-enteritis viruses: Rota, Adeno, Astro, Noro

Serology: Diagnostic Services

- Vitros 7600 system (Ortho Clinical Diagnostics):
 - HIV- Ag+ Ab
 - HBsAg
 - HCV antibody
 - Hep B core Antibody (total)
 - Hep B surface antibody titer
 - CMV IgG and IgM
- VIDAS system (Biomerieux):
 - Dengue panel: NS1 antigen, IgM and IgG
 - VZV IgG
 - HBeAg and HBeAb

Parasitology: Diagnostic Services

- Peripheral smear for Malarial parasites
- Antigen test for malaria (*Plasmodium vivax* and *P. falciparum*):
 - Immuno-chromatography test
- Stool examination by Microscopy:
 - Ova- cyst parasites
 - Modified acid fast stain: for *Cryptosporidium*, *Isospora*, *Cyclospora* detection
- Multiplex PCR: Biofire (Biomerieux)
 - *Entamoeba histolytica*
 - *Giardia lamblia*

Tools for monitoring air quality



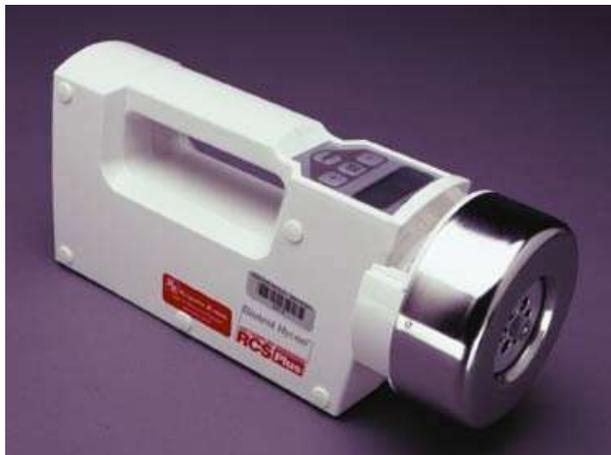
Air Particle Counter



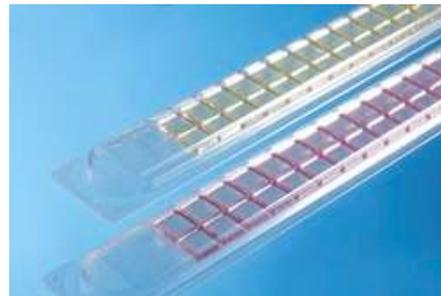
Anemometer



Agar plates- settle plates



Microbiological Air Sampler



Agar Strips for MAS



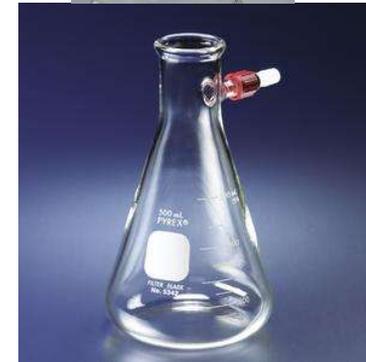
Water quality monitoring



**Water chlorine level-
Colorimeter
O-toluidine/
Electronic
Target: 0.2-0.5 ppm**



**Water TDS-
total dissolved solids-
Conductivity meter;
CSSD target < 10 mg/L**



**Water microbiology
Membrane filtration
Target:
Coliforms- 0/100 ml
Pseudomonas- 0/100 mL**

Clinical Services provided by Microbiology Department:

1. Antimicrobial Stewardship (AMS)
2. Diagnostic Stewardship (DS)
3. Infection Prevention and Control Stewardship (IPC)
4. Critical Care Unit daily ward rounds
5. Positive Blood Culture communication and ward rounds
6. Referral services: AMS, vaccination, occupational health
7. Telephonic consultation (24 x 7) on AMS, IPC, DS
8. Urgent and rapid testing services: 24 x 7:
 - Respiratory Virus PCR
 - HIV, HBV, HCV serology
 - Malaria and Dengue serology

Infection Prevention and Control services:

- Air quality monitoring: air particle count, settle plate (bacterial and fungal culture)
- Water quality monitoring: TDS, chlorine, microbiology
- Healthcare Associated Infection surveillance
- Outbreak control and management
- IPC audits: e.g. hand hygiene, toilet cleanliness, bio-medical waste segregation and management, food services and kitchen
- Infection Control Team: monthly meeting
- Hospital Infection Control Committee: quarterly meeting

Infectious Disease services

- Out-patient clinics- 5 days a week- by Infectious Diseases Consultants
- Vaccination clinics weekly
- Out-patient and in-patient services for the management of:
 - Tuberculosis
 - Malaria
 - Dengue
 - COVID
 - HIV
 - Complicated Bacterial and Fungal infections
 - Antimicrobial Stewardship

Occupational Health

- Staff are screening at the time of joining:
 - HIV-Ag+Ab
 - HBsAg
 - HCV antibody
 - Hepatitis B surface antibody titer
 - VZV IgG antibody
- Vaccinations recommended for staff:
 - Hepatitis B (provided free), Influenza, varicella
- Post exposure prophylaxis and follow up offered for:
 - HIV, HBV, HCV exposure
- Staff Health Department:
 - Annual health check up
 - Vaccination services
 - Post exposure assessment and follow up

Laboratory Infrastructure: Microbiology Department

- BSL- 2 Laboratory
- BSL-2 plus facility for Mycobacteriology
- Information Technology support: Hospital Information System (HIS) and Laboratory Information System (LIS)
- BACT/ALert system (blood and mycobacterial culture)
- Vitek- 2 Compact system
- MALDI-TOF: Bruker
- Automated Serology analyzers: Vitros (Ortho Clinical Diagnostics), VIDAS (Biomerieux)
- Lyophiliser

Molecular Microbiology infrastructure:

- Automated DNA/ RNA extraction systems: 2
- Real- time PCR systems: 4
- End point PCR systems: 2
- GeneXpert systems: 2 (Cepheid)
- Automated multiplex cartridge based PCR systems: 2 (QiaStat and BioFire)
- Gel- electrophoresis and gel documentation systems: 2
- Sanger DNA sequencer: 1 (Applied Biosystem: 3500)
- Next Generation Sequencer: 2 (MiSeq, Ion Torrent)
- Nanodrop, Qubit, Tape Station

Number of Lab Reports authorized by the Microbiology Department

Microbiology Section	2024	2023	2022	2021
Bacteriology	21086	18887	18361	14203
Bacteriology Stain	1667	1464	1302	1082
Serology	43841	40162	38065	34759
Virology	6491	5805	8891	20397
Mycology	2843	2433	2488	1735
Mycobacteriology	3042	2656	2618	1792
Parasitology	637	806	677	390
Total	79607	74236	72402	74398

Teaching and training programs offered:

- Fellowship program in Clinical and Molecular Microbiology: for medically qualified doctors with post-graduate (MD) degree in Medical Microbiology
- Molecular Medical Microbiology: MSc program with IIT- Kharagpur: 2 years
- PhD in Molecular Medical Microbiology: with IIT- Kharagpur
- Diploma in Medical Laboratory Technology: DMLT: 2 years
- Masters in Medical Laboratory Technology: 2 years

Research activities: Microbiology

1. Antimicrobial Resistance Surveillance with Indian Council of Medical Research
2. Healthcare Associated Infection Surveillance: CDC
3. Fungal PCR development: Department of Biotechnology (Govt of India)
4. Development of quantitative real-time PCR: CMV viral load (intra-mural)
5. Epidemiology of Infection in oncology and bone marrow transplantation (Clinical audits)
6. Genotyping of Human Papilloma Virus (HPV): DBT
7. Gut microbiome (Tata Trust)

Accreditations and certifications received by Tata Medical Center, Kolkata, India

- NABL: National Accreditation Board for Testing and Calibration Laboratories
- NABH: National Accreditation Board for Hospitals and Healthcare Providers:
 - Blood Bank
 - Nursing Excellence
 - Infection Control
 - Hospital
 - Institutional Review Board
- DSIR: Department of Scientific and Industrial Research (Govt of India)- as a Scientific Industrial Research Organization

Collaborations

- **Tata Memorial Centre, Mumbai**
 - **Staff training**
- **Indian Institute of Technology at Kharagpur**
 - **Molecular Medical Microbiology: MSc PhD program**
- **St. Jude Children's Research Hospital, Memphis, USA**
 - **Infection Control Course**
- **Duke University, USA**
 - **Nursing**
- **Christie Hospital, Manchester, UK**
 - **Translational Research**
- **Ramakrishna Mission Vivekananda Educational and Research Institute**
 - **Medical Laboratory Technology, MSc MLT course**

Selected Publications from the
Department of Microbiology at
Tata Medical Center,
Kolkata, India



Contents lists available at [ScienceDirect](#)

Indian Journal of Medical Microbiology

journal homepage: www.journals.elsevier.com/indian-journal-of-medical-microbiology



A systematic review and meta-analysis to develop a landscape map of antibiotic resistance for six WHO priority pathogens in east and north-east India from 2011 to 2022

Simran Malik^{a,b}, Chetan Mahadev Shirvankar^a, Rahul Kurian Jacob^a, Debashree Guha Adhya^a, Subir Sinha^c, Sanjay Bhattacharya^b, Kamini Walia^d, Sangeeta Das Bhattacharya^{e,*}

^a School of Medical Science and Technology, Indian Institute of Technology, Kharagpur, West Bengal, India

^b Department of Microbiology, Tata Medical Center, Kolkata, West Bengal, India

^c Department of Statistics, Tata Medical Center, Kolkata, West Bengal, India

^d Indian Council of Medical Research (Headquarters), New Delhi, India

^e Christiana Care Health System, Newark, DE, USA

Letter to the Editor

Rapid and economical detection of eight carbapenem-resistance genes in *Enterobacteriaceae*, *Pseudomonas* spp, and *Acinetobacter* spp directly from positive blood cultures using an internally controlled multiplex-PCR assay

Surojit Das MSc, PhD¹, Subhanita Roy MSc¹, Samadrita Roy MSc¹, Gaurav Goel MD, DNB¹, Kamini Walia PhD, MPH², Sudipta Mukherjee MD, IDCCM, FNB, EDICM³, Sanjay Bhattacharya MD, DNB, FRCPath¹  and Mammen Chandy MD FRCPA, FRACP, FRCP⁴

¹Department of Microbiology, Tata Medical Center, Kolkata, India, ²Indian Council of Medical Research, New Delhi, India, ³Department of Critical Care, Tata Medical Center, Kolkata, India and ⁴Department of Clinical Hematology, Tata Medical Center, Kolkata, India

Received: 25 December 2022

Revised: 19 April 2023

Accepted: 15 May 2023

DOI: 10.1111/tid.14072



ORIGINAL ARTICLE

Hematopoietic stem-cell transplantation in a zoo of multidrug-resistant organisms: Data from a cancer center in eastern India

Shouriyo Ghosh¹  | Sanjay Bhattacharya² | Gaurav Goel² |
Rasika Avinash Deshmukh² | Rizwan Javed¹ | Mita Roychowdhury¹ | Subir Sinha³ |
Maitrayee Sarkar De⁴ | Arijit Nag¹ | Jeevan Kumar¹ | Saurabh Jayant Bhawe¹ |
Reena Nair¹ | Mammen Chandy¹ 



Multi-drug resistant (MDR) and extensively drug-resistant (XDR) bacteraemia rates among cancer patients in an oncology hospital in eastern India: an 11-year retrospective observational study

Satyam Mukherjee^a, Maitrayee Sarkar De^b, Gaurav Goel^a,
Arpita Bhattacharyya^c, Indranil Mallick^d, Deepak Dabkara^e, Jaydip Bhaumik^f,
Manas Kumar Roy^g, Piyali Bose Majumdar^b, Soumyadip Chatterji^h,
Sudipta Mukherjeeⁱ, Sanjay Bhattacharya^{a,*}, Mammen Chandy^j

> [Indian J Med Microbiol.](#) 2015 Oct-Dec;33(4):482-90. doi: 10.4103/0255-0857.167351.

How to develop an in-house real-time quantitative cytomegalovirus polymerase chain reaction: Insights from a cancer centre in Eastern India

[Anusha Harishankar](#), [Mammen Chandy](#), [Sanjay Bhattacharya](#) ¹

Affiliations + expand

PMID: 26470952 DOI: [10.4103/0255-0857.167351](#)

Observational Study

> Indian J Med Microbiol. 2023 Jan-Feb;41:104-110.

doi: 10.1016/j.ijmmb.2022.09.010. Epub 2022 Oct 13.

Molecular epidemiology of SARS-CoV-2 in healthcare workers and identification of viral genomic correlates of transmissibility and vaccine break through infection: A retrospective observational study from a cancer hospital in eastern India

Sanjay Bhattacharya¹, Soumyadip Chatterji², Mammen Chandy³, Aseem Yogishwar Mahajan⁴, Gaurav Goel¹, Deepak Mishra⁵, Priyanka Vivek⁶, Parijat Das¹, Sudipto Mandal¹, Anup Chugani⁷, Antra Mittal⁷, Rajadurai Chinnasamy Perumal⁷, Vedam L Ramprasad⁷, Ravi Gupta⁷

Affiliations + expand

PMID: 36244851 PMCID: PMC9558092 DOI: 10.1016/j.ijmmb.2022.09.010

› [Indian J Med Microbiol. 2020 Jul-Dec;38\(3 & 4\):457-460. doi: 10.4103/ijmm.IJMM_19_478.](#)

Arterial blood gas as a prognostic indicator in patients with sepsis

Sayan Mukherjee ¹, Suvrajyoti Das ¹, Sudipta Mukherjee ², Pralay Shankar Ghosh ²,
Sanjay Bhattacharya ¹

Affiliations + expand

PMID: 33154263 DOI: [10.4103/ijmm.IJMM_19_478](#)

➤ [Infect Control Hosp Epidemiol](#). 2019 Jan;40(1):122-124. doi: 10.1017/ice.2018.284.

The economics of managing tuberculosis in cancer patients in an oncology center in eastern India

Zoe Bennett ¹, Raja Dhar ², Kingshuk Dhar ³, Krishnendu Das ³, Anusha Harishankar ³, Sanjay Bhattacharya ³, Mammen Chandy ⁴

Affiliations

Affiliations

- 1 London School of Economics, London, United Kingdom.
- 2 Department of Pulmonology, Tata Medical Center, Kolkata, India.
- 3 Department of Microbiology, Tata Medical Center, Kolkata, India.

Short Communication

Access this article online

Quick Response Code:



Website:

www.jacmjournal.org

DOI:

Blood stream infections as a predictor of length of hospital stay and cost of care in patients with cancer

Sara Devereux, Gaurav Goel¹, Kasturi Sengupta¹, Sanjay Bhattacharya¹

Abstract:

> [Indian J Med Microbiol. 2020 Jul-Dec;38\(3 & 4\):457-460. doi: 10.4103/ijmm.IJMM_19_478.](#)

Arterial blood gas as a prognostic indicator in patients with sepsis

Sayan Mukherjee ¹, Suvrajyoti Das ¹, Sudipta Mukherjee ², Pralay Shankar Ghosh ²,
Sanjay Bhattacharya ¹

Affiliations [+](#) expand

PMID: 33154263 DOI: [10.4103/ijmm.IJMM_19_478](#)

› [J Infect Public Health](#). 2017 Nov-Dec;10(6):901-902. doi: 10.1016/j.jiph.2016.10.005.

Epub 2017 Feb 10.

Relative potency of different generic brands of Piperacillin-Tazobactam: Implications for public health

Parijat Das ¹, Rajkumar Mahto ¹, Gaurav Goel ¹, Mammen Chandy ², Sanjay Bhattacharya ³

Affiliations

Affiliations

¹ Department of Microbiology, Tata Medical Center, Kolkata, India.

Review

➤ [Indian J Med Microbiol. 2024 May-Jun;49:100482. doi: 10.1016/j.ijmmb.2023.100482.](#)

Epub 2023 Sep 29.

How to write a research grant proposal

[Sanjay Bhattacharya](#)¹, [Vaskar Saha](#)²

Affiliations + expand

PMID: 37778964 DOI: [10.1016/j.ijmmb.2023.100482](#)

Observational Study

> [Eur J Clin Microbiol Infect Dis](#). 2017 Dec;36(12):2533-2535.

doi: [10.1007/s10096-017-3078-5](#). Epub 2017 Aug 11.

Mortality associated with candidemia in non-neutropenic cancer patients is not less compared to a neutropenic cohort of cancer patients

G Goel ¹, M Chandy ², A Bhattacharyya ³, S Banerjee ⁴, S Chatterjee ⁵, S Mullick ⁶, S Sinha ⁷,
K Sengupta ¹, K Dhar ¹, S Bhattacharya ⁸, S Rudramurthy ⁹, A Chakrabarti ⁹

Affiliations + expand

PMID: 28801726 DOI: [10.1007/s10096-017-3078-5](#)

Case Reports

> *J Mycol Med.* 2022 Aug;32(3):101279. doi: 10.1016/j.mycmed.2022.101279.

Epub 2022 Apr 22.

Pythiosis in a patient with Acute Myeloid Leukemia: Diagnosis and clinical course

Parijat Das ¹, Arpita Bhattacharyya ², Parthasarathi Bhattacharyya ², Kingshuk Dhar ³,
Krishnendu Das ³, Sanjay Bhattacharya ³

Affiliations + expand

PMID: 35490571 DOI: 10.1016/j.mycmed.2022.101279

Observational Study

> Indian J Pathol Microbiol. 2014 Jul-Sep;57(3):435-8.

doi: 10.4103/0377-4929.138745.

Role of water quality assessments in hospital infection control: experience from a new oncology center in eastern India

Ramkrishna Bhalchandra, Mammen Chandy, Venkata Raman Ramanan, Aseem Mahajan, Jeeva Ratnam Soundaranayagam, Subrata Garai, Sanjay Bhattacharya¹

Affiliations + expand

PMID: 25118738 DOI: 10.4103/0377-4929.138745

› [Infect Control Hosp Epidemiol.](#) 2015 Sep;36(9):1115-7. doi: 10.1017/ice.2015.157. Epub 2015 Jul 8.

Importance of Air Particle Counts in Hospital Infection Control: Insights From a Cancer Center in Eastern India

Ramkrishna Bhalchandra ¹, Sanjay Bhattacharya ¹, Jeeva Ratnam Soundaranayagam ²,
Subrata Garai ², Mammen Chandy ³

Affiliations + expand

PMID: 26152406 DOI: [10.1017/ice.2015.157](#)

➤ [Infect Control Hosp Epidemiol.](#) 2016 May;37(5):619-20. doi: 10.1017/ice.2016.18. Epub 2016 Feb 9.

Low Incidence of Central Venous Catheter-Related Bloodstream Infections in Stem Cell Transplant Patients in Eastern India Despite High Community Burden of Multidrug-Resistant Pathogens

Mita Roychowdhury¹, Jeevan Kumar², Anupam Chakrapani², Saurabh Jayant Bhawe²,
Shekhar Krishnan³, Robin Thambudorai⁴, Sanjay Bhattacharya⁵, Mammen Chandy²

Observational Study

> [Asia Pac J Clin Oncol](#). 2025 Jun;21(3):319-327. doi: 10.1111/ajco.14156.

Epub 2025 Feb 14.

Pneumocystis jirovecii Pneumonia in Cancer Patients, a Lethal Yet Fully Preventable Disease: Insights From a Tertiary Cancer Center in East India

S Chatterji ¹, V Franchi ², A J Konnakottu ³, P Das ⁴, S Mukherjee ⁵, S Bhattacharya ⁴,
A Chatterjee ⁶

Affiliations + expand

PMID: 39953677 PMCID: [PMC12033038](#) DOI: [10.1111/ajco.14156](#)

> [BMC Infect Dis.](#) 2025 Oct 9;25(1):1263. doi: 10.1186/s12879-025-11679-8.

Phenotypic and potential virulence features of *Salmonella enterica* serotypes from cancer patients in Kolkata, India

Goutam Chowdhury^{1 2}, Sanjay Bhattacharya³, Gaurav Goel³, Soumyadip Chatterji³,
Kei Kitahara⁴, Ayumu Ohno⁴, Melissa Glenda Lewis⁵, Shin-Ichi Miyoshi⁶,
Thandavarayan Ramamurthy⁷, Asish K Mukhopadhyay⁸

► [Ecancermedicalsecience](#). 2025 Aug 19;19:1970. doi: [10.3332/ecancer.2025.1970](#) 

A prospective cohort study of the incidence, etiology and outcome of pneumonia among cancer patients in an oncology intensive care unit from Eastern India

[Simran Malik](#)^{1,2}, [Sudipta Mukherjee](#)³, [Pralay Shankar Ghosh](#)³, [Santanu Bagchi](#)³, [Gaurav Goel](#)²,
[Soumyadip Chatterji](#)⁴, [Saugata Sen](#)⁵, [Debashree Guha Adhya](#)¹, [Sangeeta Das Bhattacharya](#)⁶, [Sanjay
Bhattacharya](#)²

► [Author information](#) ► [Article notes](#) ► [Copyright and License information](#)

PMCID: PMC12665900 PMID: [41333356](#)

Home / Research / Long-Form / Special Reports

Public Awareness on Antimicrobial Resistance: Results of a Community-Based Survey and Implications for Policy

[AUTHORS : KAMINI WALIA | SUBHABRATA CHAUDHURI | RINA SINHA | SUBHA SANKAR GHOSH | ABHIRUP CHOWDHURY | SOUVIK MANNA |](#)

[SANJAY BHATTACHARYA](#)

Contact details

- **Dr. Sanjay Bhattacharya, MBBS, MD, DNB, FRCPath, CCT (UK)**
 - Consultant in Microbiology, Tata Medical Center, Kolkata, India
 - Email: sanjay.bhattacharya@tmckolkata.com
- **Dr. Gaurav Goel, MBBS, MD, DNB, MNAMS**
 - Consultant in Microbiology, Tata Medical Center, Kolkata, India
 - Email: gaurav.goel@tmckolkata.com
- **Dr. Soumyadip Chatterji, MBBS, MD (Tropical Medicine), DM (Infectious Diseases)**
 - Consultant in Infectious Diseases, Tata Medical Center, Kolkata, India
 - Email: soumyadip.Chatterji@tmckolkata.com



Observerships & Collaborative Centres

❑ [For further details:](#)

<https://www.escmid.org/profession-career/observerships-collaborative-centres>

<https://www.escmid.org/membership-organisation/european-cooperation/collaborative-centres>

<https://tmckolkata.com/in/microbiology/>