Department of Microbiology
Dhaka Medical College
Departmental Organogram with Faculty

The Department of Microbiology at Dhaka Medical College is a center of excellence for education, research, and diagnostic services in the field of microbiology. From time of its establishment in the year 1965, it succeeded to meet the demands of growing number of patients and simulsimultaneously offer comprehensive academic programs for undergraduate and postgraduate students, equipping them with in-depth knowledge and practical skills in microbiological sciences. It is equipped with state-of-the-art laboratories and facilities for advanced research, focusing on infectious diseases, antimicrobial resistance, and immunology. The department also provides diagnostic support to the hospital, ensuring high-quality services for patient care. Committed to innovation and collaboration, the Department of Microbiology strives to contribute to public health and scientific advancements on both national and global scales.

Daily No Of Patients receiving Services: Around 350

Number of Services provided on regular basis: Currently 52 different diagnostic tests are being performed daily

Organogram

Designation	Number of Post	Name of Doctors
Professor	01	Prof. Dr. Sazzad Bin Shahid MBBS, M.Phil. (Microbiology) Professor & Head
Associate Professor	01	Dr. Mahbuba Chowdhuri MBBS, MD (Microbiology) Associate Professor (CC) Department of Microbiology Dhaka Medical College
Assistant Professor	03	Dr. Kakali Halder MBBS, MD (Microbiology) Assistant Professor Department of Microbiology Dhaka Medical College
		Dr Rozina Aktar Zahan Assistant Professor Department of Microbiology Dhaka Medical College
		Dr. Nadira Akter MBBS, M.Phil. (Microbiology) Assistant Professor (CC) Department of Microbiology Dhaka Medical College
Lecturer	09	Dr. Azmeri Haque MBBS, M.Phil. (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr. Md. Faizur Rahman MBBS, M.Phil. (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr. Noor-E-Jannat Tania

		MBBS, M.Phil. (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr. Rubaiya Binte Kabir MBBS, M.Phil. (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr. Nusrat Noor Tanni MBBS, MD (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr. Farjana Binte Habib MBBS, M.D. (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr. Rubaiya Binte Kabir MBBS, M.Phil. (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr. Md. Asaduzzaman MBBS, M.Phil. (Microbiology) Lecturer Department of Microbiology Dhaka Medical College
		Dr Ishtiaque Ahmed Lecturer Department of Microbiology Dhaka Medical College
Medical Officer	02	Dr. Maherunnesa MBBS, MD (Microbiology) Medical Officer Department of Microbiology Dhaka Medical College
		Dr. Avizit Sarker MBBS, MD (Microbiology) Medical Officer Department of Microbiology
Clinical Pathologist	01	Dr Umme Saoda MBBS, M.Phil. (Microbiology) Pathologist Department of Microbiology Dhaka Medical College

Under Graduate Course : MBBS

Post Graduate Course : Academic activities for MD (Microbiology) residents , M.Phil, FCPS students in microbiology and as well as other faculties – MD (Virology), MD (Pathology), MD (Forensic Medicine) etc.

Research

Department research activities:

Completed research :

1. Isolation and identification of Aspergillus species by culture and molecular method with their antifungal susceptibility pattern and detection of antifungal resistant gene in Dhaka Medical College.

2. Detection of antibiotic resistance genes in multidrug resistant Escherichia coli and evaluation of antigen against which protective antibody is produced following vaccination in mice model

3. Detection of antibiotic resistance genes in multidrug resistant Proteus mirabilis from patients admitted in Dhaka medical college hospital with evaluation of protective antibody response following vaccination in mice

4. Detection of multidrug resistance gene among Klebsiella pneumoniae isolated from patients admitted in Dhaka medical college hospital and identification of antigens against which protective antibody is produced

5. Rectal carriage of group B Streptococcus among pregnant women attending outpatient department of Gynecology and Obstetrics of Dhaka medical college hospital and pattern of antibiotic sensitivity among them

6. B cell response after intradermal inoculation of MRSA in mice and identification of antigen to which immune response develops

7. Detection of antibiotic resistance genes in multidrug resistant Acinetobacter baumannii and evaluation of antigen against which protective antibodies are developed following vaccination in mice

8. B cell response after intradermal inoculation of multidrug resistant Enterococcus faecalis in mice and identification of antigen to which immune response develops

9. Molecular identification and conventional detection of rapid grower mycobacteria isolated from patient with persistent surgical wound infection of Dhaka medical college hospital, Dhaka

10. Detection of antibiotic resistance genes in multidrug resistant Pseudomonas aereginosa from patients in Dhaka medical college hospital with evaluation of protective antibody response following vaccination in mice

11. Detection of antibiotic resistance genes in multidrug resistant Citrobacter freundii isolated from patients in Dhaka medical college hospital with identification of protein against which protective antibodies are formed

12. Isolation of Morganella phenotypically and by molecular method and evaluation of antibiotic combination efficacy against multidrug resistant isolates both in vivo and in vitro

13. Detection of antibiotic resistance gene in multidrug resistant Enterobacter cloacae isolated from patients admitted in Dhaka medical college hospital with evaluation of protective antibody response following vaccination

14. Virulence factor and quorum sensing genes detection among Acinetobacter baumannii isolated from clinical samples in Dhaka medical college hospital

15. Identification of different species of Candida by culture and PCR with their antifungal susceptibility pattern in vitro and in vivo

16. Identification of different Acinetobacter species by PCR, RFLP and efficacy of antibiotic combination therapy in MDR Acinetobacter baumannii both in vitro and in vivo

Ongoing Researches :

01 Isolation and identification of trychophyton species with molecular detection of trychophyton rubrum and detection of resistant gene Tru MDR 2 and ERG11 with their antifungal susceptibility pattern in a tertiary care hospital,in Bangladesh.

02 Isolation and identification of Candida spp and Aspergillus spp with their antifungal susceptibility pattern among the patients with Otomycosis and detection of antifungal resistant genes by polymerase chain reaction".

03 Identification of Rickettsia Infection in Febrile Patients and Molecular Detection of gltA, ompA and 17kDa Genes of Rickettsia felis in Tertiary Care Hospital.

04 Identification and antifungal susceptibility pattern of Malassezia species from Pityriasis versicolor patients and detection of antifungal resistant genes CYP51and PDR10 among the isolated Malassezia furfur in a tertiary Care Hospital.

05 The Assessment of Association Between Urinary Tract Infection and Premature Rupture of Membrane in pregnant women and isolation of uropathogen with their antibiotic susceptibility pattern and detection of drug resistance gene in tertiary care hospital.

06 Detection of Intestinal protozoa in stool samples and Identification of Assemblage A and B genotypes of Giardia lamblia in a Tertiary Care Hospital, Bangladesh.

07 Isolation and identification of Burkholderia species from clinically suspected patient and detection of drug resistant penA gene of Burkholderia pseudomallei and bla-CTX-M gene of Burkholderia cepacia in tertiary care hospital .

08 Isolation, identification & antibiotic susceptibility pattern of pathogenic bacteria from diabetic foot ulcers, detection of methicillin-resistant Staphylococcus aureus (MRSA) with detection of EDIN (Epidermal cell differentiation inhibitor) gene among the isolated Staphylococcus aureus.

09 Isolation and identification of different organisms in vulvovaginitis patients in reproductive age group of women and molecular detection of vly and sld genes in Gardnerella vaginalis in a tertiary care hospital.

Departmental Academic/Clinical Activity

Every Wednesday , Monday and Saturday in Morning Sessions, Presentations on different topics are given as a part of regular Departmental activity. Journal Presentation on recent articles relevant to ongoing researches are also arranged on every Tuesday which is attended by all teachers and students. Besides all that weekly lecture as well as tutorial classes are taken by the Faculty members.

Faculty Publications :

1. Sarker, A., Islam, M. I., Nigar, I., Juyee, N. A., Ahmed, S. A., Chakrobortty, T., ... & Roy, C. K. (2024). Diagnosis of primary immunodeficiency diseases by flow cytometry: Experience from Bangladesh. *Indian Journal of Allergy, Asthma and Immunology*, *38*(1), 13-23.

2. Sarker, A., Islam, M. I., Nigar, I., Ali, M. E., & Roy, C. K. (2023). Diagnosis of a case of X-linked agammaglobulinemia with juvenile idiopathic arthritis and recurrent pneumonia in Bangladesh. *Indian Journal of Allergy, Asthma and Immunology*, *37*(2), 56-59.

3. Kabir, R. B., Zaman, R., Tania, N. E. J., Asaduzzaman, M., Haque, A., Habib, F., ... & Shamsuzzaman, S. (2023). Bacterial communities associated with the surfaces of the fresh fruits sold around Dhaka Medical College and Hospital and their anti-microbial profiles. *International Journal of Infectious Diseases*, *130*, S92-S93.

4. Halder, Kakali, Nusrat Noor Tanni, Rubaiya Binte Kabir, Maherun Nesa, Md Faizur Rahman, Rizwana Zaman, Farjana Binte Habib et al. "Postoperative wound infection by nontuberculous mycobacteria; case series in Dhaka Medical College Hospital of Bangladesh." *Clinical Case Reports* 11, no. 12 (2023): e8264.

5. Haque, Azmeri, Nafisa Jabin Mishu, H. M. Khaleduzzaman, S. M. Shamsuzzaman, Avizit Sarker, MD Zabed Ahmed Mitu, Rizwana Zaman, Rubaiya Binte Kabir, and M. D. Asaduzzaman. "Detection of antibiotic resistance genes of multidrug resistance Enterobacter Cloacae and Enterobacter Aerogenes isolated from the patients of Dhaka medical college hospital." *Archives of Microbiology & Immunology* 7, no. 3 (2023): 143-149.

Departmental Activities :

Alongside detection of anti microbial resistance pattern, selection of appropriate therapies and educating clinicians by holding antibiogram based discussion our department also organises anti microbial awareness programs each year. Our department is also able to start Fungal Surveillance centre under in association with Oxford for the first time in DMC. It is also currently conducting surveillance programs with Fleming Fund, I,CCDRB.