OpenAlex | Works search

Mohammad MURSHED | Professor (Full) | PhD | Holy Family Red Crescent Medical College, Dhaka | Department of Microbiology | Research profile

mohammad murshed - Google Scholar

Turn It In Molecular Identification of Extended Spectrum an Wiwiek Tyasningsih.pdf

Name: **Dr. Mohammad Murshed**

Date of birth: March 20,1974.

Present Profession: **Professor of Microbiology** in Holy Family Red Crescent Medical College and Hospital, Dhaka; Bangladesh

Marital status: Married. Two children.

Father's name: Prof. Dr. Mohammad Kamruzzaman.

Mother's name: Mrs. Nargis Bahar.

Educational qualification

MBBS(Bachelor of Medicine and Surgery) from University of Dhaka, Bangladesh---------- 2000

MSc (Biomedical science-Microbiology) from University of Wales, UK --------- 2004

PhD (Microbiology) from University of Dhaka, Bangladesh---------- 2010

Administrative carrier

Vice Principal of HFRCMC from April 1st 2021 to August 10th 2024

Director HFRCMCH from December 1st 2020 to March 31st 2021

Professional carrier (Twenty years teaching experience)

Professor of Microbiology in Holy Family Red Crescent Medical College and Hospital, Dhaka; from September 1st 2018 to till date.

Professor (CC) of Microbiology in Holy Family Red Crescent Medical College and Hospital, Dhaka; from June 2013 to August 2018.

Associate Professor of Microbiology in Holy Family Red Crescent Medical College and Hospital, Dhaka; from August 2006 to May 2013.

Assistant Professor of Microbiology in Holy Family Red Crescent Medical College and Hospital, Dhaka from August 2004 to August 2006.

Lecturer of Microbiology in Holy Family Red Crescent Medical College and Hospital, Dhaka from January 2004 to July 2004.

Research Fellow, in University of Wales College of Medicine, UK from January 2003 to December 2003.

Professional Examiner: Since, 2005 I have been conducting various professional examinations of MBBS and Post graduate examinations in various disciplines of Microbiology. I am an internal and external examiner and question setter of various examinations of University of Dhaka, Bangabandhu sheikh Mujib Medical University and other undergraduate and postgraduate medical institutes.

Organizational Position

General Secretary of BSMM (Bangladesh society of Medical Microbiologist)

Senior Consultant, American Society of Microbiologist along with CDC-USA. 3 years starting 2020

General Secretary of ICPPB (Infection Control and Prevention Program in Bangladesh) from 2005 to till date.

Exceptional ability:

1. General Secretary, Bangladesh Society of Medical Microbiologists. 2018-2021…. membership main organization. Key position

2. Senior Consultant, American Society of Microbiologist along with CDC-USA. 3 years Worked in key US stake holders
3. Executive editor; Bangladesh Journal of medical science and research.
4. Job offers from USP united states pharmacopeia to work on AMR in Fleming fund country grant.
5. Progressive professional development. Lecturer to Professor to Director to Vice Principal. (Establishment of PCR lab in our hospital to work on antibiotic resistance as lab coordinator) ….20 years progressive experience
6. Establish ICPPB funded by Drexel University to Fight AMR. Conduct two international seminars on AMR and infection control. worked with US universities
7. Institute of Epidemiology Disease control and research (IEDCR) closely working with their sector working group…Main govt organization working on AMR…working with govt
8. MSc research done in university hospital lab, Cardiff, UK...worked in foreign lab 6 months

Scientific paper presentation

Two International seminars on infection control were held in Bangladesh (2005 and 2006) by ICPPB. I presented two scientific papers there and one of the key people to conduct the seminar.

Paper presented at 5th international conference on Microbiology of food, health and environment: problems and Prospects in developing countries; was held in University of Dhaka in 2010.

Besides this, as scientific and publication secretary of BSMM; I am involved in publication of Bangladesh journal of Medical microbiology; Editor of ICPPB newsletter; etc.

I did actively participate in developing three national guidelines. 1. Standard Treatment Guidelines (STG) on Antibiotic Use in Common Infectious Diseases of Bangladesh. 2.National guidelines on infection control. 3. Curriculum for MBBS students in Microbiology

1. 5th International seminal on microbiology, Food, Health and Environment
2. International conference on emerging infectious disease. 2002
3. Infection control and prevention control program 2006.
4. International conference of emerging infectious diseases August7-10 2022
5. World antimicrobial resistance congress 2023

Thesis and dissertation

PhD Thesis: " Nosocomial infection in post operative care unit of different hospitals". Supervised by Prof M A Malek and Prof M Majibur Rahman of Department of Microbiology of University of Dhaka; Bangladesh.

MSc dissertation: "The role of acyltransferaces in the responses of monocytes to lipopolysaccharide". Supervised by Dr. S. K. Jackson of Department of Microbiology, University of Wales College of Medicine, UK.

Interest

In Genetics, bioinformatics, Infection control etc.

I am now working as laboratory coordinator of PCR & diagnostic and research lab of our hospital. I have also worked various famous lab in home and abroad like; international center for diarrheal disease research, Bangladesh (ICDDRB) enteric lab and University College hospital Simon Jackson lab, Cardiff; UK. I have almost 15 years extensive experience in molecular biology lab. My skills in cell culture, DNA extraction, Polymerase chain reaction (PCR), cloning, sequencing, phylogenetic analysis and other techniques help me to work elaborately in resistance pattern of antibiotics. My experience has also allowed me to be part of a team involved in detecting the role of enzyme acyltransferase in response of monocytes to lipopolysaccharide. Targeting AMR enzymes through enzyme inhibition is key to destroy bacteria.

Progressive professional development as a microbiologists

I have been working last 20 years as a medical microbiologist with progressive professional development. I was started my career as a lecturer and then continued up to Professor of Microbiology. As a matter of my professional achievement and gift I was awarded and given post of Director of the red crescent hospital. With this capacity during covid time I used to establish PCR lab in our hospital with the support of Dennis Red Cross. Along with the path, I was given chair of vice principal and gradually chair of acting principal of one of the prestigious private medical colleges in Bangladesh. As a microbiologist, I have been gifted with the post of General secretary of our society (Bangladesh Society of Medical Microbiologists) and used to committed myself in antimicrobial resistance (AMR). I developed our journal as one of the peers reviewed journal in microbiology arena and most of the articles are dedicated to antimicrobial resistance. During my tenure as General Secretary of the society; I used to conduct two national seminars on antimicrobial resistance. I am also in editorial board of our college journal and took key role in it (Journal of Medical Science and Research). At the starting of the career, with the help and funding of Drexel University College of Medicine, Philadelphia, USA; I ran a society named ICPPB (Infection control and prevention program in Bangladesh), which was the premier organization on infection control and antimicrobial resistance in Bangladesh. In 2005 and 2006,

with my colloquies from USA I conducted two international seminars on antimicrobial resistance and infection control. 500 Microbiologists, Doctors, Nurses from home and abroad attended the seminars. With my professional development and leadership, I used to do consultancy with ASM (American Society of Microbiologists) supported by CDC USA during covid time (for 3 years) and took part and lead different projects during that time and most of them were related with antimicrobial resistance (AMR). I was assigned to work with govt organization like Institute of Epidemiology Disease control and research (IEDCR), as a member of sectoral working group on antimicrobial resistance. On that time, I was offered to work in the international flaming fund from USP (United states of Pharmacopeia) on antimicrobial resistance to address one health approach; which is a key concept of AMR. During my consultancy and my jobs, I have earned handsome salaries with progressive achievements.

I have over 20 years of extensive experience in medical microbiology special focus on antimicrobial resistance (AMR) through molecular biology research, laboratory experimental procedures and applied science (biotechnology). I received my master's degree in biomedical science (medical microbiology) from University of Wales, UK with a research focus on acyltransferase in the response of monocytes to lipopolysaccharide. Later on, I have done my PhD from University of Dhaka with continues support from Drexel university of USA on nosocomial infection or hospital acquired infection and molecular characterizations on antimicrobial resistance. My skills in cell culture, DNA extraction, Polymerase Chain Reaction (PCR), spectrophotometric assay, Molecular typing like pulsed field gel electrophoresis (PFGE), plasmid analysis, latex agglutination test, coagulase typing, sequencing, Phylogenetic analysis and SDS-PAGE have resulted in the discovery of several good results. My experience has also allowed me to be take part in different Govt and private organizations working on antimicrobial resistance and enrolled myself in several phases of the different studies. These skills and experience would continue to help me progress in my future desire to identify resistance genes and ultimately solve the problem of antimicrobial resistance doing new research.

Two out standing contribution in Microbiology

I used to work on various aspects of antimicrobial resistance (AMR). In one of my studies, I used to detect (for the first time in Bangladesh) resistance gene intl1 in bacterial isolates of Gram-negative bacteria E. coli, isolated from post operative wards of different hospitals. Resistance gene was detected by RT-PCR and the source of the resistance gene was identified from surrounding environment of post operative ward. This result was established by using DNA fingerprinting technique called Pulse filed gel electrophoresis (PFGE), along with plasmid analysis. Close relationship between clinal samples and environmental samples were established. This study was supported by ICPPB with Drexel University USA.

In another research with Institute of Epidemiology Disease control and research (IEDCR) supported by American Society for Microbiology (ASM) and US-CDC; I used to analysis the use of antibiotics and their resistance pattern in 10 major hospitals of Bangladesh. The results helped us to establish countrywide watch, access and reserve group of antibiotics and formulate antibiotic stewardship. This is a "one health program" approach; which is a key element to tackle antimicrobial resistance in USA and around the world. During covid time, for early detection of infectious disease became a key element of medical industry. During that time, we validated fast antigen and antibody test kit with establish PCR test to introduce a rapid test during covid time and along with that do research on resistance and efficacy of two antiviral drugs remdesivir and favipiravir among covid patients in Bangladesh.

Almost 20 Articles in Google scholar and Research gate. Most of them are on antimicrobial resistance and peer reviewed. Besides I have 14 more published articles in various journals; but they are not in Google scholar or research gate.

I was examiner and question setter of MPhil students of BSMMU and BCPS and guided students to finish their thesis. From my lab; various paper on antimicrobial resistance were published.

I have presented posters in various international seminars on antimicrobial resistance (AMR).

I have been granted fund from Drexel university college of Medicine Philadelphia, USA to establish Infection control and prevention control in Bangladesh.

I have granted fund from US-CDC. American Society for Microbiology.

Closely work with Govt of Bangladesh with IEDCR

Executive editor, Journal of Medical Science and research

Review the publication on AMR from Bangladesh journal of Medical Microbiology

Chief coordinator Infection control and prevention of Internatiol Red Crescent during covid time

Selected Publications:

1. **Murshed M**, Kamar S. Organisms in operative site in an urban hospital of Dhaka city: An urgent need to develop an infection control program in Bangladesh. ***BJMM*** 2013;7(1):20-24
2. **Murshed M**, Rahman MM, Malek MA: Presence of *E. coli* as a hospital acquired infection in a private hospital of Bangladesh. ***IJMR*** .2013;5: 1-8
3. **Murshed M**, Shahnaz S, Alam SMK, Rahman MM, Malek MA: Isolation of post operative hospital acquired infections in a private hospital of Bangladesh and determination of clonal relationship of *E. coli* by Pulsed fieled gel electrophoresis. ***BJMM*** 2012; 6(2): 07-10
4. **Murshed M**, Kamar S, Malek MA, Haque MM, Akhter N: A comparative study of surgical site wound infection in DMCH and HFRCMCH and detection of MRSA. ***OMTAJ*** 2011; 10(1): 36-41
5. **Murshed M,** Kamar S, Malek MA, hasan R: Antibiotics susceptibility and plasmid profile analysis of *E. coli* isolated from patient surrounding environment of operative and post operative room in an urban hospital of Dhaka city. ***OMTAJ*** 2011; 10(2): 116-121
6. **Murshed M,** Shahnaz S, Malek MA :Detection of resistance gene marker *intl1* and antimicrobial resistance pattern of *E. coli* isolated from surgical site wound infection in HFRCMC. ***BJMM*** 2010; 4(2): 19-23
7. Kamar S, Hasan R,**Murshed M**: Rotavirus vaccination. ***OMTAJ***. 2012;11(1):65-69
8. Kamar S, Chowdhury OA,**Murshed M**, Hasan R .Optimum time for measles vaccination. ***OMTAJ*** 2010; 9(1): 20-24
9. Kamar S, Chowdhury OA,**Murshed M**, Hasan R. Transplacental transfer of measles antibody. ***JMJ*** 2010;7(2):47-50
10. Kamar S, Chowdhury OA,**Murshed M**, Hasan R .Effect of gestational age and nutrition on transplacental transfer of meseales antibody. ***Medicine today*** 2010; 22(1):1-5
11. Kamar S, Chowdhury OA,**Murshed M,** Hasan R. Polio vaccine- a review. ***OMTAJ*** 2009; 8(2): 116-120
12. Kamar S, Chowdhury OA,**Murshed M**, Hasan R. Dengue fever and its laboratory diagnosis. ***OMTAJ*** 2008; 7(2): 44-49
13. Jilani MSA, **Murshed M,** Sultana L, Hasan Z. Common clinically important aerobic bacteria and their drug resistance pattern at different zones of Dhaka city and its vicinity. ***BMCJ*** 2008;13(2):66-71
14. Farooque AHMO, **Murshed M,** Akther S, Saima K. Study of breast lump by FNAC and its histological correlation. ***BPMPJ*** 2008. 14(1): 29-35
15. Jilani MSA, **Murshed M**, Chowdhury MM, Hasan Z. Preparation of SOP for microbiology: a short guideline.***BJMM*** 2007;1(1): 25-32.
16. Jilani MSA, **Murshed M,** Chowdhury MM, Hasan Z. nosocomial infection and its prevention. ***BJP*** 2007;22(01): 30-34
17. Farooque AHMO, **Murshed M**.Gall bladder diseases: A study of 191 cases in HFRCMCF. ***BPMPJ*** 2006. 12(1): 30-33
18. **Murshed M**, Rahman ZU, Kabir MH, Khan MSH .Vaccination and its impact in rural community of Bangladesh. ***JMJ*** 2005. 1(2). 24-27
19. Shahnaz S, **Murshed M,** Rahman T. Urinary pathogens and its culture sensitivity patterns in HFRCMCH. ***BPMPJ*** 2005. 11(1): 19-22
20. **Murshed M,** Shahnaz S, Hossain A, Roy CK. Urinary tract infections: practical approaches to urine microscopy, culture and antimicrobial sensitivity test. ***JMJ*** 2004.1(2): 67-71
21. Shahnaz S, **Murshed M,** Jilani MSA, Hassan M. Experience with blood culture in an urban hospital in Dhaka city. ***OMTAJ*** 2004; 3(2):7-11
22. **Murshed M**, Jackson SK. Bacterial lipopolysaccharide and its role in inflammation and immunological modification. ***OMTAJ*** 2003; 2(2):38-43
23. Begum T, ***Murshed M***, Akter T, Duza SS,Shahnaz S .Pseudomonas isolates of holy family red crecent medical college HOSPITAL: changing patterns over 12 years:***JMSR***;2014:23(01):9-13
24. ***Murshed M***. Social intelligence of bacteria:***BJMM*** 2014;8(2):01-02

25. Akter T, ***Murshed M***, Begum T, Nahar K, Duza SS, Shahnaz S .Antimicrobial resistance pattern of bacterial isolates from intensive care unit of a tertiary care hospital in Bangladesh:***BJMM***;2014:8(2):7-11

26. Ferdous J, Begum T, Akter T, ***Murshed M***, Jahan N, Shahnaz S.Study of extra intestinal *E.coli* and their resistance pattern in a tertiary care hospital in Bangladesh:***BJMM***;2017:11(01):10-13

27. Begum T, ***Murshed M***, Akter T, Duza SS, Shahnaz S .Pseudomonas isolates of holy family red crecent medical college HOSPITAL: changing patterns over 12 years:***JMSR***;2014:23(01):9-13

28. Kamar S,***Murshed M***, Hasan R; Tuberculin test- areview article: ***JMJ***:2011:8(2):76-81

29. Shahnaz S,***Murshed M***. Bacterial collective behaviour:role of mitochondria:***BJMM***;2015:9(2):24-27

30. ***Murshed M***. Importance of standard molecular and clinical microbiology laboratory: Bangladesh perspective. ***BJMM***:2023:17(2):48-49

31. Ferdous J, ***Murshed M***, Jahan N, Shahnaz S, Duza SS, Siddique PR. Isolation of Acinetobacter species and their antimicrobial resistance pattern in a tertiary care hospital in Dhaka Bangladesh:***BJMM***;2016:10(1):18-21

32. Begum T,Ferdous J,Ullah MB, ***Murshed M***, Shahnaz S .:***JMSR***;2014:23(01):9-13 Bacteriological profile of tracheal aspirate and their antimicrobial resistance pattern in a tertiary care hospital in Dhaka city ***JMSR***;2022:33(02):1-10

33. Perveen RA, Nasir M,Ferdous J, ***Murshed M***, Nazneen R, Rahman MA. Comprehensive overview of 473 cases of covid-19:Outcome experiences of a dedicated hospital in Dhaka, Bangladesh GJMR-F 2021:21(4)39-45

34. Nasir M,Parveen RA, ***Murshed M***, Nazneen Talha KA.Survival and biomarkers of covid 19 patients treated with remdesivir and favipiravir in icu during the peak of pandemic:a single center study in Bangladesh:***JPPRI***;2020:32(45):14-22

35. Perveen RA, Nasir M,Ferdous J, ***Murshed M***, Nazneen R, Ahmed SN: Remdesivir and favipiravir hepatorenal profile in covid 19 patients:a cross sectional observation in Bangladesh. ***IJMSCI***:8(1):5196-5201