



DEPARTMENT OF MICROBIOLOGY
GOVT. MEDICAL COLLEGE & HOSPITAL, KATHUA

Email: -microgmck@gmail.com

“When observation is concern, chances favors only prepared mind” *-Louis Pasteur*

1. General Introduction

The department of Microbiology at Government Medical College, Kathua is a perfect blend of *Academic, Diagnostic and Research* activities. The department was established in 2018 under the able guidance of Dr. Shashi Sudhan Sharma and currently headed by *Dr. Natasha Sawhney* who is working as Incharge head of the department. In the *academic* curriculum, the department offers courses to MBBS, BSc. Paramedical and B.Sc. Nursing students and provide ample scope to them by case- based learning along with applied topics by horizontal integration by interacting with the clinical staff as well. The *diagnostic* Microbiology Laboratory has carved a name for itself as a centre of excellence for diagnostic Microbiology. The thrust areas of the department include Bacteriology, Mycobacteriology, Parasitology, Immunology & Serology, Mycology and Virology, that offers diagnostic services to the public. Also, the HIV Laboratory in the department as (ICTC) Integrated Counselling and Testing Centre provide services for HIV to direct walk-in and referred patients. A reliable Virology Laboratory is being established for a strong public health response to emerging viral diseases well equipped with the molecular testing facilities. The department also focuses to provide quality teaching *research* opportunities to the students, faculty as well as interdepartmental activities aiding various departments to complete their research. The branch is still expanding in terms of newer diagnostic facilities for the patient care.

2. Mission of the Department

- a.** The foremost mission of the department of Microbiology is to educate and train **students** in the discipline of Microbiology and to expand their body of knowledge in the same filed.
- b.** To enhance opportunities for research and scholarship for faculty members as well as students.
- c.** To serve the patients with best diagnostic care.
- d.** To contribute to the Hospital with infection control and Antibiotic stewardship programs.

3. Vision of the Department

The microbiology department seeks to achieve distinguished level of quality education and training to our students, bringing out the very best in them through the stimulus of academic progression and aspire to provide an exemplary patient care diagnostic facility with active role in surveillance and infection control.

4. Core values of the Department

The three core values of the department of Microbiology are Dedication, Determination and Diligence.

5. Information about staff

Name	Designation	Email	Phone Number
Dr. NATASHA SAWHNEY	Associate Professor and I/c HOD	dr.natashakapahi@gmail.com	9419127777
Dr. AMRISH KOHLI	Assistant Professor	amrishkohli.ganu@gmail.com	9419016637
Mr. BILAL AHMAD MALIK	Demonstrator	bilal.micro17@gmail.com	9797909089
Mr. ZAHID HAMID KHANDAY	Demonstrator	khanxahid03@gmail.com	7006248226
Mr. OWIAS YOUSF LONE	Demonstrator	owaislone1993@gmail.com	9541199351

All the sections of the Department are well equipped with following Machinery and Equipments:-

A Bacteriology Lab:

Equipment Name:

- Laboratory Refrigerator
- Incubator
- BOD Incubator
- Hot Air Oven
- -80C refrigerator
- -20C DeepFreezer
- Biosafety Cabinet Class-II
- Water Bath
- Binocular Microscope

B Media Room:

- Auto Clave
- Hot Air Oven
- Laboratory Refrigerator
- Weighing scale
- Hot plate

C Mycology and Parasitology:

- BioSafety cabinet Class-II
- Incubator
- Binocular Microscope

D Research lab:

- Mili Q Water Purifier System
- Hot Air Oven
- GENE Sequencing 5th Gen.

E Virology Lab:

- Biosafety cabinet
- PCR work Station
- ThermoCycler
- -80c refrigerator
- -20c deepFreezer
- RefrigeratedCentrifuge
- WaterBath
- DryBath
- HotPlateStirrer
- AutomatedRNAExtractor
- ELISAwasher
- ELISAreader
-

F Central Laboratory Associated Hospital:

- BinocularMicroscope
- NeedleDestroyer

G Tuberculosis Lab

- TrueNatMachine
- BinocularMicroscope

H Museum:

- Well equipped with Models and Charts

I Students Lab:

- Well equipped with each Microscope per student and all the teaching aids.

LISTON ITEMS IN RTPCRL LABORATORY

RNA EXTRACTION ROOM

1. Biosafety cabinet class II - 1 no.
2. Dry heat bath - 1 no.
3. Magnetic stirrer - 1 no.
4. Refrigerated centrifuge - 2 no.
5. Vortex machine - 2 no.
6. Water bath - 1 no.
7. Automated RNA extractor (genetix) with UPS and batteries - 1 no.

MASTERMIXROOM

1. -80*crefrigerator-2 no.
2. -20*crefrigerator-3no.
3. PCRworkstation-1no.
4. Microcentrifuge-1no.
5. ILRrefrigerator-1no.

REPORTINGROOM

1. Thermocycler-2no.(bioradandappliedbiosystem)withotheraccessories.
2. Refrigeratorcumdeepfreezer-1no.
3. Pippetteswithstand(1000ul,200ul,100ul,20ul,10ul)
4. PCRplate vortex

CONSUMABLES

1. Surgicalgloves
2. Surgicalmasks
3. PPEkits
4. Handwashingsoaps
5. Sanitizers
6. Cottonrolls
7. Autoclavablebags
8. Dustbinbags
9. Dustbins
10. Microtips(1000ul,200ul,100ul,20ul,10ul)
11. Beakers
12. Pcrplates
13. Microsealadhesivefilms
14. Vtm racks
15. Mctracks
16. Ethanol
17. Wipes
18. Microcentifugetubes(2ml,1.5ml)
19. Surgicalgowns
20. GenetixRna/Dnapurificationkits.

BOOKS IN DEPARTMENTAL LIBRARY:-

- Microbiology(Prescott,HarleyandKlein's)
- FoundationinMicrobiology(KathleenTalara,ArthurTeelarao)IIndEdition
- PracticalMedicalMicrobiology(MuckieandMaccortney)14thEdition
- M.D(Microbiology)2017AThesis(Dr.ShivamMalhotra)
- ColorAtlasandTextbookofDiagnosticMicrobiology(Koneman's)7thedition
- Ananthanaryanandpaniker'sTextbookofMicrobiology10thedition
- Prakash'sMicrobiolodyincludingParasitologyandEutomology3rdedition
- C.PBaveja,V.BavejaMicrobilogyforMBBSParaitologyincludedRevised competency based NMC (MCI) Curriculum
- EssentialsofMedicalParasitology(Apurbaandsastry,sandhyaBhat)2ndedition
- AIDSintheModernWorld(I.EdwardAlcamo)
- WorkbookforPracticalMicrobiology(UpasanaBhumbla)2ndedition
- MedicalMicrobiologyandparasitology(BSNagoba)
- TextbookofPracticalMicrobiology2ndEd(SCPararijla)
- EssentialMalariaology4thEd(DavidA.Warrell)
- MedicalMicrobiology(kayser)
- PracticalandappliedMicrobiology5thEd(Anuradha De)
- EssentialsofMicrobiology(SRajan)
- InfectionPreventionandControl(PELLiott)
- CellularandMolecularImmunology1stSAE(AKAbbad)
- TheShortTextbookofMedicalMicrobiology11thEd(SatishGupte)
- Ananthanarayan&Paniker'sTextbookofMicrobiology10thEd(RKanungo)
- EssentialsofHospitalInfectioncontrol(ApurbaSSastry)
- Ananthanarayan&Paniker'sTextbookofMicrobiology11thEd(RKanungo)
- TextbookofMedicalMycology4thEdition(JagdishChander)
- ManualofInfectionPreventionandControl4thEd(NizamDamani)
- MedicalParasitology5thEd(DrArora)
- MedicalMycology2ndEd(DrArora)
- Parasitology(ProtozoologyandHelminthology)13thEd(KDChatterjee)
- PracticalMicrobiologyforMBBS4thEd(CPBaveja)
- MackieandMaCartneyPracticalMedicalMicrobiology14thEd(J.G.Collee)
- TextbookofMicrobiology6thEd(DRArora)
- Bailey7Scott'sDiagosticMicrobiology,14/Ed(Tille)
- Koneman'sColorAtlas&TextbookofDiagnosticMicrobiology,7 Ed

RESEARCH PUBLICATIONS OF THE STAFF MEMBERS/PAPER PRESENTATION
/BOOK CHAPTERS

Dr.NatashaSawhney

Designation: - Associate Professor and Incharge Head of Department Microbiology, GMC Kathua.

PhoneNumber:- 9419127777

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AWARDS:

1. Certificate of Academic Excellence by Gian Chand Jain Memorial Foundation for obtaining 2nd position in MD Microbiology
2. Certificate of Paper presentation” Theme solution of Controversies “Title- How prone are you to hepatitis B and hepatitis C? At 38th annual conference NZOACON2019 organised at Department of Orthopaedics GMC Jammu.
3. Certificate of Appreciation in MICRON2018 at Dayanand Medical College and Hospital, Ludhiana (Punjab) on 13th October,2018.
4. Certificate of paper presentation “Title- Neonatal sepsis –changing patterns in bacteriological profile” in Pathcon 2017(IAPM) organised by PG Department of Pathology, GMC Jammu and secured 2nd prize.
5. Certificate of Appreciation by 1st J&K Medical Science Congress at AcharyaShriChander College of Medical sciences and Hospital, Sidhra, Jammu on 20th -21st May,2016.

ORGANIZER OF CONFERENCES:

1. International CME Cum Conference on “Hospital acquired superbugs: return to preantibiotic era?” February 4-5, 2012, at M.M.I.M.S.R, Mullana.

RESOURCE PERSON:

Teaching/Trainings:

1. Teaching of undergraduate students – Theory and Practical teaching of MBBS students, BSC MLT & Nursing.
2. Training on Infection Control Practices in Hospitals to doctors and Paramedical staff in compliance with DHS Jammu on 8th June, 2021
3. Awareness Programme for MBBS students on World TB day on 24 March 2021
4. Extracurricular Activities of the department viz. special programmes/activities for undergraduate students like Poster/Painting competition and felicitation ceremonies for the covid warriors by the department in the year 2021.
5. A training programme on Infection Control Practices Corona Virus (COVID-19) conducted by the department on 11-03-2020
6. A training programme /workshop on Infection Control Practices Corona Virus (COVID-19) conducted by the department on 12-03-2020

7. Hands on training on sample collection and infection control on Infection Control Practices Corona Virus (COVID-19) conducted by the department on 13-03-2020.
8. A training session of Paramedical staff on Infection Control Practices Corona Virus(COVID-19) conducted by the department on 14-03-2020
9. Induction training of staff nurses on Infection Control Practices conducted by the department on 04-04-2020.
10. Orientation training regarding COVID-19 conducted by the department on 07-04-2020.
11. A training programme on Biomedical waste Management and Handling Rules conducted by the department on 02-11-2019.

RESEARCH:

Courses/Trainings/Conferences/Workshop/CME:National:

- 1 Certificate of Participation as Faculty in CRAB-E-CON PUNJ, under the Aegis of Association of Radiation Oncologists of India –North Zone in Collaboration with GMC Kathua at Jammu.
- 2 Certificate of Participation as DELEGATE in the NZOACON2019 held at Department of Orthopedics GMC, Jammu from 8th -10th Feb, 2019.
- 3 Certificate of Participation as delegate, paper presentation Oral in MICROCON 2018, NW conference of IAMM held at Dayanand Medical College and Hospital, Ludhiana (Punjab) on 13th October, 2018.
- 4 Certificate of Participation in BIOCON-2016 International Conference “Emerging Trends in Biomedical Research in the New Millennium” organized by Department of Biochemistry GMC and Hospital Jammu on November 29th -30th, 2016.
- 5 Certificate of Participation in MICROCON 2016 held at PGIMER, Chandigarh on 25th-27th November, 2016.
- 6 Certificate of Participation in North –west Chapter IAMM” Revisiting infections Prevalent in North-West Region” at GMC Hospital, Sector 32, Chandigarh on September 3, 2016.
- 7 Certificate of Participation in International CME Cum MICROCON NW- 2016” Hospital infection Control and Antibiotic Stewardship, Putting Knowledge into Action” held at Department of Microbiology ,SGRDIMSAR, Vallah, Amritsar on 2nd April 2016.
- 8 Certificate of Participation in SIHAM 2016 organized by Department of Microbiology ,Indira Gandhi Medical College, Shimla, HP from March 18th -20th, 2016.
- 9 Certificate of Participation in GISICON 2015 organized by Department of Microbiology and Medicine, GMC Jammu from 6-7 November, 2015.
- 10 Certificate of Participation in the workshop on “Interactive Teaching” conducted by MEU, M.M Institute of Medical Sciences and Research Mullana-Ambala on 17-10-2014.
- 11 Certificate of Participation in UP MICROCON 2014 at Department of Microbiology School of Medical Sciences & Research and Sharda Hospital, Sharda University Greater Noida (U.P) on 1st Feb, 2014.
- 12 Certificate of Participation in CME “INFECTIOUS DISEASE UPDATE 2013 jointly organized by Department of Medicine & Department of Microbiology at Christian Medical College and Hospital, Ludhiana.

- 13 Certificate of Participation as delegate in National CME on MDR/XDR Tuberculosis held at Department of Respiratory Medicine , MMIMSR,MMU, Mullana on 13 august 2013.
- 14 Certificate of Participation as DELEGATE in International CME Cum Conference at Department of Microbiology Maharishi Markandeshwar Institute of Medical Sciences & Research , Mullana-133207 on Feb 4- 5, 2012.
- 15 Certificate of Participation in NAMS-ICMR-IGMC-2011, National Conference on Tuberculosis –A Global Challenge held on 11th and 12th June at Shimla (H.P).
- 16 Certificate of Participation in NNF post Graduate Quiz in Neonatology, 2009 at SMGS Hospital, Jammu on 01-09-2009.
- 17 Certificate of Participation in Scientific program on “Pharmacovigilance” conducted by Knowledge Academy.

Publications: (Dr. Natasha Sawhney)

- Book published entitled TUBERCULIN Skin Test: New INSIGHT (2017) UNDER Lambert Publication (UK) Author: Dr. Natasha Sawhney.
- Natasha Sawhney, Sandeep Dogra, Bella Mahajan.” Neonatal intensive Care Unit in a tertiary Care Hospital in North India”. Volume 6, Issue 2, Feb 2018.
- Natasha Sawhney , Sandeep Dogra , Bella Mahajan Bacteriological Profile and AntibioGram of CSF Culture Isolates from a Neonatal Intensive Care Unit in a Tertiary Care Hospital in North India. Volume 6, 5 Feb 2018.
- Natasha Sawhney, Rahul Prabhas, Varsha A Singh.” Bacteriological profile of Urinary tract Infections in Pregnant women- Future Challenges”. Volume 23, Issue 1, 2017
- Natasha Sawhney, Rahul Prabhas, Varsha A Singh.” Post Operative wound infections: pattern of bacterial pathogens and their antibiotic sensitivity in a tertiary care hospital of north India. Volume 22, Issue 2, 2017
- Natasha Sawhney, Sandeep Dogra, Bella Mahajan “ Epidemiological Study of Parasitic Infestations in Paediatric Population Attending A Tertiary Care Hospital , Northern India”. Volume 05, Issue 06, June 2017
- Sonia Mehta, Kuldeep Singh, Natasha Sawhney, Varsha A Singh, Subhash Goyal. “Time Related Changes in Pathogenic bacterial patterns in burn wound infections and their Sensitivity traits”. Bangladesh Journal of Medical Sciences. 2017; 16(2) March, 2017
- Natasha Sawhney, Pottathil Shinu and Varsha A. Singh, “Bacteriological Profile and Antibiotic Susceptibility Pattern of Neonatal Septicaemia in a Tertiary Care Hospital”, January 2015
- Sawhney N, Mehta S, Shinu P, Singh VA. Prevalence of latent tuberculosis infection among hospital workers in a tertiary care referral centre. International journal of advances in health sciences. 2015; 2(5):589-595, 10 March 2015.
- Natasha Sawhney, Sonia Mehta, Varsha A Singh, Pottathil Shinu, “Application of Tuberculin Skin Test in Diagnosis of Latent Tuberculosis; A two year Experience in a Tertiary Care Hospital”, ISSN No-2230-7885, Volume 4 Issue 10, 2015.
- Natasha Sawhney, Pottathil Shinu, Bhawna Sharma, Varsha A Singh, Tanya Sharma, “Trimethoprim–Sulfamethoxazole and Ciprofloxacin Resistance Among Klebsiella Species Isolated from Community-Acquired Urinary Tract Infection”, Volume 05, 16 September, 2015.

- PShinu, Singh V, NSawhney, S Mehta. "Arcanobacterium haemolyticum associated Urinary tract infection". Clinical Communiqués and Medical Education (accepted), ISSN 2320-9208, January- June 2014, Vol. 21 Issue 1.
- S Mehta, Natsaha Sawhney, VA Singh, R Bunge, TGarg, P Shinu Nosocomial Wound Infection amongst post operative Patients and their Antibiograms at Tertiary Care Hospital in India, Volume 15 Issue 2, 2014
- Shalu Mengi, Prakriti Vohra, Natasha Sawhney, Varsha A Singh. "Biofilms: A diagnostic challenge in Persistent infection" International Journal of Research in Medical and Health Sciences, issue No. 2307-2383, July 2013, Vol. 2, No. 3

Presentations:

Oral:

- 1 Oral presentation on "Bacteriological profile of Urinary tract infection in pregnant women" in ISRPTCON 2011 Jammu, 3rd National Conference and CME Cum workshop held at GMC Jammu
- 2 Oral Paper presentation on topic "A study of Bacterial Pathogens in Neonatal Septicemic patient"...No Child Should Die Before Seeing Life! At International CME Cum conference Department of Microbiology MM Institutes of Medical Sciences & Research, Mullana - 133207
- 3 Oral paper presentation entitled ESBL producing Gram Negative Bacteria –A cause of concern in NICU at BIOCON 2016 International Conference organized by Department of Biochemistry, GMCH Jammu.

Poster:

- 1 Poster presentation entitled Prevalence of Tuberculin positivity in different categories of persons by using 5 and 10 TU of PPD at National CME Cum MICROCON NW 2012 organized by Department of Microbiology, GMC, Amritsar.

On Going/In Process Research and Publication:

1. Diagnostic yield of Ziehl-Neelsen staining technique and CBNAAT in diagnosis of Pulmonary Tuberculosis: A comparative study in tertiary care facility.
2. Dengue transmission during COVID pandemic –The enigma of slumping cases.
3. Dengue infection-Prevalence and seasonal variation among patients attending a tertiary care hospital at lower Himalayan region, India.
4. Book publishing on Microbial home of Biofilms

Dr. Amrish Kohli : Assistant Professor, Department of Microbiology, GMC Kathua

Email: amrishkohli.ganu@gmail.com

Phone no. 9419016637

Publications:

- Rapid drug susceptibility testing of Mycobacterium tuberculosis clinical isolates to first-line antitubercular drugs by nitrate reductase assay: A comparison with proportion method. International Journal of Mycobacteriology: IJM 5(2016) 469-474
- A comparative study of post injection bacterial isolates in deltoid and gluteal abscesses in a tertiary care hospital in Kashmir. IJMR No. 4494 (21-05-2019)
- Prevalence and antibiotic sensitivity pattern of organisms isolated from post injection intramuscular abscesses in a tertiary care hospital, Kashmir. JMRR-9771-2019. Vol 5, No. 2 July-Dec 2019.
- Bacteriological profile and antibiotic sensitivity pattern of uropathogens from a tertiary care hospital in Kashmir.
- Microbiological profile and epidemiology of Gram positive cocci in blood stream infections in a tertiary care hospital, Kashmir.
- Aerobic Bacteriological Profile and Antibiogram of Surgical Site Infections in a tertiary care hospital in Kashmir.
- Evaluating the pattern of blood stream infections among paediatric and adult patients and role of drug resistant *Acinetobacter* species in a tertiary care hospital, Kashmir.
- Prevalence and Antibiotic Susceptibility Pattern of *Pseudomonas aeruginosa* Isolates from Respiratory samples, Pus samples and Body Fluids in a Tertiary Care Hospital, Kashmir.
- A comparative study of antibiotic profile of community acquired and hospital acquired *Staphylococcus aureus* in a tertiary care hospital, Kashmir.
- Prevalence of Carbapenemase Producing Genes among Carbapenem Resistant Enterobacteriaceae Isolated from Blood in a Tertiary Care Hospital, Kashmir.
- Mediating role of Covid 19 burn out in the relationship between coronavirus stress and wellbeing of healthcare professionals. Sambhasan, Volume-4 Issue-1.
- Analysis of surface contamination of severe acute respiratory syndrome coronavirus 2 in a health-care setting in the context of the coronavirus disease-2019 pandemic. *Kohli, et al.: Analysis of SARS-COV-2 virus contamination in a health-care settings*