



**DEPARTMENT OF MICROBIOLOGY**  
**GOVT. MEDICAL COLLEGE & HOSPITAL, KATHUA**

Email: - [microgmck@gmail.com](mailto: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 MLT and 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, Tuberculosis, Parasitology, Serology, Mycology and Virology. Also, the HIV Laboratory in the department as 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**

<b>Name</b>	<b>Designation</b>	<b>Email</b>	<b>Phone Number</b>
<b>Dr. Natasha sawhney</b>	<b>Assistant Professor and I/c HOD</b>	<b>dr.natashakapahi@gmail.com</b>	<b>9419127777</b>
<b>Dr. AmrishKohli</b>	<b>Assistant Professor</b>	<b>amrishkohli.ganu@gmail.com</b>	<b>9419016637</b>
<b>Dr. Sadika Sharma</b>	<b>Demonstrator</b>	<b>Sadika9622@gmail.com</b>	<b>9622042225</b>

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
- -80 C refrigerator
- -20 C Deep Freezer
- Bio safety 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:**

- Bio Safety cabinet Class II
- Incubator
- Binocular Microscope

##### **D Research lab:**

- Mili Q Water Purifier System
- Hot Air Oven

#### **E Virology Lab:**

- Bio safety cabinet
- PCR work Station
- Thermo Cyclor
- -80 c refrigerator
- -20 c deep Freezer
- Refrigerated Centrifuge
- Water Bath
- Dry Bath
- Hot Plate Strirrer
- Automated RNA Extractor
- ELISA washer
- ELISA reader
- VDRL Shaker

#### **F Hospital Lab:**

- Binocular Microscope
- Needle Destroyer

#### **G Tuberculosis Lab**

- TrueNat Machine
- Binocular Microscope

#### **H Museum:**

- Well equipped with Models and Charts

#### **I Students Lab:**

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

### **LIST ON ITEMS IN RTPCR LABORATORY**

#### **RNA EXTRACTION ROOM**

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

## **MASTERMIX ROOM**

1. -80\*c refrigerator - 2 no.
2. -20\*c refrigerator - 3no.
3. PCR workstation - 1no.
4. Microcentrifuge - 1no.
5. ILR refrigerator - 1no.

## **REPORTING ROOM**

1. Thermocycler - 2no. (biorad and applied biosystem) with other accessories.
2. Refrigerator cum deep freezer - 1no.
3. Pippettes with stand (1000ul, 200ul, 100ul, 20ul, 10ul)
4. PCR plate vortex

## **CONSUMABLES**

1. Surgical gloves
2. Surgical masks
3. PPE kits
4. Hand washing soaps
5. Sanitizers
6. Cotton rolls
7. Autoclavable bags
8. Dustbin bags
9. Dustbins
10. Microtips (1000ul,200ul, 100ul, 20ul, 10ul)
11. Beakers
12. Pcr plates
13. Microseal adhesive films
14. Vtm racks
15. Mct racks
16. Ethanol
17. Wipes
18. Microcentifuge tubes (2ml, 1.5ml)
19. Surgical gowns
20. Genetix Rna/Dna purification kits.

### BOOKS IN DEPARTMENTAL LIBRARY:-

- Microbiology(Prescott, Harley and Klein's)
- Foundation in Microbiology ( Kathleen Talara , Arthur Teelarao) IInd Edition
- Practical Medical Microbiology (Muckie and Maccortney) 14<sup>th</sup> Edition
- M.D (Microbiology)2017 A Thesis (Dr. ShivamMalhotra)
- Color Atlas and Textbook of Diagnostic Microbiology(Koneman's) 7<sup>th</sup> edition
- Ananthanaryan and paniker's Text book of Microbiolgy 10<sup>th</sup> edition
- Prakash'sMicrobiolody including Parasitology and Eutomology 3<sup>rd</sup> edition
- C.P Baveja ,V.BavejaMicrobiolgy for MBBS Paraitology included Revised competency based NMC (MCI) Curriculum
- Essentials of Medical Parasitology (Apurba and sastry, sandhyaBhat)2<sup>nd</sup> edition
- AIDS in the Modern World(I.Edward Alcamo)
- Workbook for Practical Microbiology (UpasanaBhumbla ) 2<sup>nd</sup> edition
- Medical Microbiology and parasitology(BS Nagoba)
- Textbook of Practical Microbiology 2<sup>nd</sup> Ed (SC Pararijla)
- Essential Malariology 4<sup>th</sup> Ed (David A.Warrell)
- Medical Microbiology (kayser)
- Practical and applied Microbiology 5<sup>th</sup> Ed (Anuradha De)
- Essentials of Microbiology (S Rajan)
- Infection Prevention and Control (P Elliott)
- Cellular and Molecular Immunology 1<sup>st</sup> SAE (AK Abbad)
- The Short Text book of Medical Microbiology 11<sup>th</sup> Ed (Satish Gupte)
- Ananthanarayan &Paniker's Textbook of Microbiology 10<sup>th</sup> Ed (R Kanungo)
- Essentials of Hospital Infection control (Apurba S Sastry)
- Ananthanarayan & Paniker's Textbook of Microbiology 11<sup>th</sup> Ed (R Kanungo)
- Textbook of Medical Mycology 4<sup>th</sup> Edition ( Jagdish Chander)
- Manual of Infection Preventionand Control 4<sup>th</sup> Ed (Nizam Damani)
- Medical Parasitology 5<sup>th</sup> Ed ( Dr Arora )
- Medical Mycology 2<sup>nd</sup> Ed ( Dr Arora)
- Parasitology (Protozoology and Helminthology ) 13<sup>th</sup> Ed (KD Chatterjee)
- Practical Microbiology for MBBS 4<sup>th</sup> Ed (CP Baveja)
- Mackie and MaCartney Practical Medical Microbiology 14<sup>th</sup> Ed ( J.G. Collee)
- Textbook of Microbiology 6<sup>th</sup> Ed (DR Arora)
- Bailey 7 Scott's Diagostic Microbiology,14/Ed ( Tille)
- Koneman's Color Atlas & Textbook of Diagnostic Microbiology ,7 Ed

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

### **Dr. Natasha Sawhney**

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

**Phone Number:** - 9419127777

**E-Mail:-** [dr.natashakapahi@gmail.com](mailto:dr.natashakapahi@gmail.com)

### **AWARDS:**

1. Certificate of Academic Excellence by Gian Chand Jain Memorial Foundation for obtaining 2<sup>nd</sup> 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 38<sup>th</sup> 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 13<sup>th</sup> 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 2<sup>nd</sup> prize.
5. Certificate of Appreciation by 1<sup>st</sup> J&K Medical Science Congress at AcharyaShriChander College of Medical sciences and Hospital, Sidhra, Jammu on 20<sup>th</sup> -21<sup>st</sup> May,2016.

### **ORGANIZER OF CONFERENCES:**

1. International CME Cum Conference on “Hospital acquired superbugs: return to pre antibiotic 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 8<sup>th</sup> 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 8<sup>th</sup> -10<sup>th</sup> 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 13<sup>th</sup> 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 29<sup>th</sup> -30<sup>th</sup>, 2016.
- 5 Certificate of Participation in MICROCON 2016 held at PGIMER, Chandigarh on 25<sup>th</sup>-27<sup>th</sup> 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 2<sup>nd</sup> April 2016.
- 8 Certificate of Participation in SIHAM 2016 organized by Department of Microbiology ,Indira Gandhi Medical College, Shimla, HP from March 18<sup>th</sup> -20<sup>th</sup> ,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 1<sup>st</sup> 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 11<sup>th</sup> and 12<sup>th</sup> 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:

- Book published entitled TUBERCULIN Skin Test: New INSIGHT (2017) UNDER Lambert Publication(UK) Author: Dr. Natasha Sawhney.
- Natasha Sawhney, SandeepDogra, Bella Mahajan.” Neonatal intensive Care Unit in a tertiary Care Hospital in North India”.Volume 6, Issue 2, Feb 2018.
- Natasha Sawhney , SandeepDogra , Bella MahajanBacteriological Profile and Antibigram of CSF Culture Isolates from a Neonatal Intensive Care Unit in a Tertiary Care Hospital in North India. Volume 6, 5 Feb2018.
- 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, SubhashGoyal. “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, PottathilShinu 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. Prevalance 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, PottathilShinu, “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, Pottathilshinu, Bhawna Sharma,Varsha A Singh, Tanya Sharma,”Trimethoprim–Sulfamethoxazole and Ciprofloxacin Resistance Among Klebsiellae Species Isolated from Community-Acquired Urinary Tract Infection”,Volume 05, 16 september,2015.



- P Shinu ,Singh V, N Sawhney,S Mehta . “Arcanobacteriumhaemolyticum associated
- Urinary tract infection”. Clinical communiqués and medical education (accepted), ISSN2320-9208, January- June 2014, Vol. 2I Issue 1.
- S Mehta , NatsahaSawhney , VA singh ,R Bungar,TGarg, P Shinu Nosocomial Wound Infection amongst post operative Patients and their Antibigrams at Tertiary Care Hospital in India, Volume 15 Issue 2, 2014
- ShaluMengi, PrakritiVohra, 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, 3<sup>rd</sup> 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