

## DEPARTMENT OF MICROBIOLOGY, BMCRI

### General Information about the department

Specialty of Microbiology came into existence as an independent department at BMCRI in 1968 and was headed by Dr. T. Prabhu (postgraduate from AIIMS, Delhi) after separation from Pathology department. Dr. Chandramukhi, Dr. Meera D. Meundi and Dr. Shashikala Tallur were the first batch of MD students in 1972. Dr. T. Prabhu and Dr. Meera D. Meundi went on to become Principals of BMCRI later. HIV section was started in the year 1986, by Dr. D. Venkatesha and at present it has grown to become NABL accredited State Reference Lab with CD4 testing lab, apart from HIV viral load testing facility. The laboratory was housed in the current Pathology block until 2008 when Infosys laboratory came into existence. Under the able leadership of various heads/ professors of departments ( Dr. Sarsawati Bhargava, Dr. V. Rajgopal, Dr. Munasira Sultana, Dr. E.R. Nagaraj, Dr. Bharati, Dr. T. Nagarathnamma, to name a few ) department has come a long way and has grown to be NABL accredited lab (first full-fledged department under Directorate of Medical Education, Govt of Karnataka to achieve the feat ) and includes IDSP Reference Lab, State Level VRDL, National VPD lab, State STI/RTI lab, state NVHCP lab, HIV viral load testing lab. Apart from providing diagnostic services & involvement teaching and research activities, faculty from the department play pivotal role in hospital infection control related activities for NABH, KAYAKALPA & NQAS. The department has conducted State, Regional & National Level Workshops, Conferences & CME. The faculty & students (PG/UG) have brought laurels to the institution by winning medals in various State & National Level Conferences. PG students of the department have consistently topped RGUHS MD examinations & have been awarded Gold Medals by the University. Faculty have been invited as resource persons at State, National & International Conferences, Workshops & CMEs. The department has been actively pursuing advanced research projects with funding by various national & state agencies. The faculty & students have contributed immensely to the scientific literature by publishing in peer-reviewed indexed journals. The contributions of various sections of the department are widely recognized by concerned health authorities. The icing on the cake being ICTC at Victoria Hospital, looked after by the department awarded as the **Best Performing ICTC in the State** on World AIDS Day (1<sup>st</sup> December 2020).

## **FACULTY LIST**

<b>Sl. No.</b>	<b>Name</b>	<b>Qualification</b>	<b>Designation</b>
1.	Dr. Ambica R.	MBBS, MD	Professor & Head
2.	Dr. Asima Banu	MBBS, MD	Professor
3.	Dr. Jyoti S. Kabbin	MBBS, MD	Professor
4.	Dr. Shantala G.B.	MBBS, MD	Professor
5.	Dr. Sneha K. Chunchanur	MBBS, MD	Assistant Professor
6.	Dr. Sathyanarayan M.S.	MBBS, MD	Assistant Professor
7.	Dr. Shwetha J.V.	MBBS, MD	Assistant Professor
8.	Dr. Harsha T.R.	MBBS, MD	Assistant Professor
9.	Mrs. Kusuma G.R.	MSC	Lecturer
10.	Mr. Rudrappa P.T.	MSC	Lecturer
11.	Dr. Deepa Sinha	MBBS, MD	Senior Resident
12.	Dr. Ashish Anshuman	MBBS, MD	Senior Resident
13.	Dr. Harshitha	MBBS, MD	Senior Resident

### **Non teaching faculty**

<b>Sl. No</b>	<b>Name</b>	<b>Qualification</b>	<b>Designation</b>
1.	M.N Nandeesh	DMLT	Lab Technician
2.	Chandrappa.T	DMLT	Lab Technician
3.	Puttaswamy	DMLT	Lab Technician
4.	Shivanna B.V	DMLT	Lab Technician
5.	H.P Sulochana	DMLT	Lab Technician
6.	Ramaiah	DMLT	Lab Technician
7.	H.S.Savthri	DMLT	Lab Technician
8.	Priyadarshini	DMLT	Lab Technician
9.	Rajendra Prasad	DMLT	Lab Technician
10.	Yathiraju TR	DMLT	Lab Technician

11.	Harish Doddamani	DMLT	Lab Technician
12.	Chowramma		Group D
13.	Nagarathna		Group D
14.	Prabhu deva.C		DEO

**Services given by the department**

<b>Sl. No.</b>	<b>Programmes/Services</b>	<b>Concerned staff</b>	<b>Time/Period</b>
<b>1.</b>	<b>Diagnostic services in Clinical Microbiology – Bacteriology, Immunology &amp; Serology, Parasitology, Mycology, Virology</b>	<b>All Staff</b>	<b>Since inception</b>
<b>2.</b>	<b>State Reference Lab under IDSP</b>	Dr. Ambica R. Mrs. Kusuma G.R.	
<b>3.</b>	<b>Integrated Counseling &amp; Testing Center</b>	Dr. Ambica R.	
<b>4.</b>	<b>State Level Virus Research &amp; Diagnostic Laboratory</b>	Dr. Ambica R. Dr. Shantala G.B. Dr. Sathyanarayan M.S Dr. Shwetha J.V.	<b>Since 2016</b>
<b>5.</b>	<b>National Viral Hepatitis Control Program State Lab</b>	Dr. Ambica R Dr. Sathyanarayan M.S. Dr. Sneha K.Chunchanur	<b>Since 2018</b>
<b>6.</b>	<b>National Lab for Vaccine Preventable Diseases</b>	Dr. Ambica R Dr. Sneha K.Chunchanur Dr. Shwetha J.V.	<b>Since 2018</b>
<b>7.</b>	<b>HIV Viral Load Testing Laboratory</b>	Dr. Ambica R Dr. Sathyanarayan M.S.	<b>Since 2019</b>

<b>8.</b>	<b>CD4 Laboratory</b>	Dr. Ambica R Dr Jyoti Kabbin	
<b>9.</b>	<b>STI/RTI State Reference Centre</b>	Dr. Ambica R Dr. Sneha K.Chunchanur	
<b>10.</b>	<b>Hospital Infection Control</b>	Dr. Ambica R. – Chairperson/ Member Secretary, HICC of BMCRI attached hospitals Dr. Asima Banu – Trauma & Emergency Care Center Dr. Jyoti S. Kabbin – PMSSY SSH Dr. Shantala G.B. – Minto Hospital Dr. Sneha K.C. & Dr. Shwetha J.V. – Victoria Hospital Dr. Sathyanarayan M.S. – Vani Vilas Hospital	<b>Since 2015</b>

### Academic Activities

#### Teaching programmes

1. MBBS
2. MD(Microbiology)
3. Allied Health Sciences (BSc MLT, RCT, OT etc)
4. BDS/MDS

For the month of		
<b>Sl. No</b>	<b>UG (numbers/-- month)</b>	<b>PG (numbers/--month)</b>
Theory classes	08	-
Practical classes	08	-
Seminars		08

Journal club		04
Guest lectures		-
Case presentations/ Culture seminars		04
Any others(Specify) SDL	04	-

### Research Activities

#### **Research Projects—2019, 2020**

<b>Sl. No</b>	<b>Title of the project</b>	<b>Name &amp; Designation of the Principal investigator</b>
1.	Establishment of a network of Laboratories for managing epidemics and Natural Calamities Funded by DHR-ICMR (2014-15)	Dr. Ambica R. (State Nodal Officer) Dr. Shantala G.B. (PI) Dr. Sathyanarayan M.S. (Co-PI) Dr. Shwetha J.V. (Co-PI)
2.	Development Of Sars-Cov2 ELISA For Sero Surviellance A Cost Effective Approach For Sero Surveillance And Profiling Sera For Sars-Cov2 Antibodies. In collaboration with Dr Gurudatta Baraka, CHG, Bengaluru. (PI) Funded by DBT (2020)	Dr Ambica R Prof and Head, Microbiology Dr Shantala GB Professor, Microbiology Dr Sneha K Chunchanur Asst Professor, Microbiology Dr Sathyanarayan M S Asst Professor, Microbiology  (All Coinvestigators)
3.	Whole- genome sequencing of SARS-CoV-2 from clinical specimens for the identification of strain-specific genetic signatures and its involvement in pathogenesis	Dr Ambica R Prof and Head, Microbiology Dr Shantala GB Professor, Microbiology Dr Sathyanarayan M S Asst Professor, Microbiology Dr Shashiraja Padukone Research Scientist II, VRDL

3.	Adaptability of saliva as a sample for diagnosis of COVID 19: Safe, Simple, Cost effective and promising option for future application Funded by RGUHS (2020)	1.Dr Sneha K Chunchanur (PI) Asst Professor, Microbiology 2.Dr Ambica R (Coinvestigator) Prof and Head, Microbiology 3.Dr Harsha T R (Coinvestigator) Asst Professor, Microbiology
4.	A host-response based measure to track disease recovery and identify asymptomatic cases in COVID-19 patients Collaboration with Dr Nagasumachandra, IISc, Bengaluru (PI) (2020)	1. Dr Sneha K Chunchanur (Coinvestigator) Asst Professor, Microbiology 2.Dr Ambica R (Coinvestigator) Prof and Head, Microbiology 3. Dr Sathyanarayan M.S. (Coinvestigator) Asst Professor, Microbiology 4. Dr Harsha T R (Coinvestigator) Asst Professor, Microbiology 5. Mrs Kusuma G.R. (Coinvestigator) Lecturer, Microbiology
5.	Development of novel assay for rapid detection of cholera toxin using DNA aptamers.  Technically approved by DHR(2020)	1.Dr Sneha K Chunchanur (PI) Asst Professor, Microbiology 2. Dr Shwetha J V (Co PI) Asst Professor, Microbiology 3. Dr Ambica R (Coinvestigator) Prof and Head, Microbiology 4. Mrs Kusuma G B (Coinvestigator) Lecturer, Microbiology
6.	Emerging drug resistance in community acquired urinary tract infection and molecular insights into dynamics of resistance traits in Indian isolates- A multi-centric cross-sectional study Funded by ICMR (2019)	1.Dr Shwetha J V (Co PI) Asst Professor, Microbiology 2. Dr Sneha K C (Coinvestigator) Asst Professor, Microbiology 3. Dr Ambica R (Coinvestigator) Prof and Head, Microbiology

**Publications of the faculty and students 2019, 2020**

Sl.No	Publication in Vancouver style	National/ International
1.	Phylogenetic diversity of <i>Orientia tsutsugamushi</i> isolates in patients with scrub typhus in Bengaluru, India. Sneha K Chunchanur, Shwetha J Venugopal, R Ambica, B Dakshayani. Indian Journal of Medical Microbiology.2019; 37 (3): 438-441.	International
2	Basawarajappa SG, Rangappa KG, Rangaiah A, Chaudhry R, Shankar SM. Detection of <i>Mycoplasma pneumoniae</i> in Children with Respiratory Tract Infections by ELISA and PCR. <i>Saudi J Pathol Microbiol</i> , Oct., 2019; 4(10): 761-766.	International
3.	JV Shwetha, Sneha K Chunchanur, R Ambica. Clinical and Sero-immunological Profile of Scrub Typhus in Bengaluru, Southern India. <i>JCDR</i> . 2020; 14(9):32-36.doi: 10.7860/jcdr/2020/45157.14043	International
4.	Sondakar A, Chunchanur S K, Rangaiah A , Shankar S M , Molecular characterization of metallo-beta-lactamase producers among carbapenem resistant <i>Pseudomonas aeruginosa</i> isolated from cases of hospital acquired infections in a tertiary care hospital, Bengaluru. <i>Indian J Microbiol Res</i> . 2020; 7(2):212-217.	National
5.	Sneha K Chunchanur, Shwetha JV, Ambica R, Leelavathy B, Revathi N. Gonorrhoea in Men having sex with men (MSM): A study from tertiary care centre, Bangalore, India. <i>BMC Infectious Diseases</i> 2020, 20 (Suppl 1): 324: 43.ISSNID. <a href="https://doi.org/10.1186/s12879-020-05038-y">https://doi.org/10.1186/s12879-020-05038-y</a> . (abstract)	International

6.	Shankar SM, Rangappa KG, Rangaiah A, Basawarajappa SG. Small colony variants of <i>Staphylococcus aureus</i> : Missed entities? <i>Int J Cur Res Rev</i> Aug 2020;12(15): 55-60.	International
7.	Kumar K, Prakash AA, Gangasagara SB, Rathod SB, Ravi K, Rangaiah A, Shankar SM, Basawarajappa SG <i>et al.</i> Presence of viral RNA of SARS-CoV-2 in conjunctival swab specimens of COVID-19 patients. <i>Indian J Ophthalmol</i> 2020;68:1015-7.	National
8.	Basawarajappa SG, Rangaiah A, Padukone S, Yadav PD, Gupta N, Shankar SM. Performance evaluation of Truenat™ Beta CoV and Truenat™ SARS-CoV-2 point of care assays for COVID-19. <i>Ind J Med Res.</i> 2020 .	National
9.	Gupta N, Potdar V, Praharaj I, Giri S, Sapkal G, Yadav P, <i>et al.</i> Laboratory preparedness for SARS-CoV-2 testing in India: Harnessing a network of virus research & diagnostic laboratories. <i>Indian J Med Res</i> 2020; 151: 216-25.	National

### Conference presentations of 2019, 2020

Sl. No	Title of the presentation	Name & Designation of the Presenter	Details of the conference
1.	Quality Indicators for Infection prevention and control in a large government tertiary care hospital.	Dr Sneha K Chunchanur Asst Professor, Microbiology	IAMM MICRO-KAR 19 State conference, 8 <sup>th</sup> -9 <sup>th</sup> February 2019.
2	Molecular and Serology detection of coinfection of Dengue and Chikungunya from a tertiary care centre	Dr. Shwetha J.V.	IAMM MICRO-KAR 19 State conference, 8 <sup>th</sup> -9 <sup>th</sup> February 2019.
3.	Confronting antimicrobial resistance during COVID times!	Dr Sneha K Chunchanur	AIIMS-ASM 2020



	Experience from a tertiary care covid hospital.	Asst Professor, Microbiology	Antibiotic resistance: Renewed Fight 7 <sup>th</sup> -8 <sup>th</sup> October 2020
4.	Antimicrobial susceptibility of N.gonorrhoeae isolates from MSM: First report from Indis	Dr. Shwetha J.V.	AIIMS-ASM 2020 Antibiotic resistance: Renewed Fight 7 <sup>th</sup> -8 <sup>th</sup> October 2020

**CME / Workshops conducted by the department in 2019, 2020**

Sl.no	Title	Date	Level (regional/national/international)	Credit points
1.	VRDL workshop on Basics of Clinically Important Viral Infections and Diagnostics	11 <sup>th</sup> -13 <sup>th</sup> March 2019	National	--
2.	NVHCP workshop on Laboratory diagnosis of Viral Hepatitis	23 <sup>rd</sup> -27 <sup>th</sup> September 2019	State	--

**Conferences conducted by the department in 2019, 2020**

Sl.no	Title	Date	Level (regional/national/international)	Credit points

## Notice board

### (Awards, achievements of students and faculty, new services)

1. Department of Microbiology is the first full fledged department under Directorate of Medical Education, GOK, to be accredited as per ISO 15189:2012 by National Accreditation Board for Laboratories (NABL) .
2. State Level Virus Research & Diagnostic Laboratory (VRDL) established in collaboration with DHR-ICMR, first in the country to be accredited by NABL among VRDLs, first in the country (after NIV, Pune) to initiate COVID-19 testing on 1<sup>st</sup> February 2020 and has tested over 1.7 lakh samples till date and involved in mentoring other institutes and kit validation for COVID 19 testing.
3. **Dr. Ashwini Sondakar** secured 1<sup>st</sup> Rank in MD (Microbiology) exams of RGUHS, Karnataka held in April 2019 and was awarded Gold Medal in *Annual Convocation of RGUHS held in 2020*
4. **Dr. Sathyanarayan M.S.** was invited to deliver a lecture on ‘Diagnosis of COVID-19: Laboratory perspectives’ during *International Conference on Corona (COVID-19/ SARS-CoV-2) viral genomics, 7<sup>th</sup> June 2020*
5. **Dr Sneha K Chunchanur** gave a talk on Microbiological investigations in COVID 19 patients at National Conference for allied health Sciences (NATCON) organized by RGUHS ON 21<sup>st</sup> November 2020.
6. **Dr Shwetha J.V.** won gold medal for Best Poster presentation at *Indian Association of Medical Microbiologist–Karnataka Chapter State Conference, Dharwad-2019*
7. **Dr Sneha K Chunchanur** won gold medal for Best Oral Paper at *Indian Association of Medical Microbiologist–Karnataka Chapter State Conference, Dharwad-2019*
8. **Dr. Sathyanarayan M.S.** delivered a guest lecture on ‘Surveillance: Cornerstone of Infection Prevention & Control’ during *Stale Level CME on Exploring the challenges and Innovations in prevention of hospital acquired infections, 27<sup>th</sup> August 2019, AIMS, Bellore*
9. **Mr. Pritik Shah**, 2<sup>nd</sup> MBBS student won 2<sup>nd</sup> prize in COVID Innovation Challenge at the RGUHS HACKATHON prize, 2019 under guidance of Microbiology Faculty.
10. Best oral presentation award at e-MICRO-KAR to Dr Shruthi N, Post Graduate, for topic "Saliva as a non-invasive sample for diagnosis of COVID-

19: a cross-sectional study" under project funded to PI Dr Sneha K Chunchanur by RGUHS.