



DEPARTMENT OF BIOCHEMISTRY



OBJECTIVES

- The Department of Biochemistry aims to provide an overall, clear understanding of the molecular basis of life
- To explain the major metabolic pathways
- To apply biochemical knowledge to clinical diagnosis

PROGRESS

- BIOCHEMISTRY DEPARTMENT – ESTABLISHED – **2010**
- FIRST UG BATCH – 2010 – **150** students
- Increased to 250 MBBS STUDENTS IN 2025
- 2 PG residents per year from 2023-24 academic year

NUMBER OF FACULTIES AND JRS IN THE DEPARTMENT

PROFESSORS	2
ASSOCIATE PROFESSORS	NIL
ASSISTANT PROFESSORS	5
TUTORS	3
JUNIOR RESIDENTS	5

Doctors



Dr. Shivaraj Gowda

Professor

[Detailed Profile](#) ▼



Dr. Sneha Henry

Professor

[Detailed Profile](#) ▼



Dr. Jaala C

Assistant Professor

[Detailed Profile](#) ▼



Dr. Shyamkriehnan R

Assistant Professor

[Detailed Profile](#) ▼



Dr. Divya P

Assistant Professor

[Detailed Profile](#) ▼



Mrs. Neethu Augustin

Assistant Professor

[Detailed Profile](#) ▼



Dr. Haenamol P T

Assistant Professor

[Detailed Profile](#) ▼



COURSES

PG COURSES

- MD BIOCHEMISTRY (2)
- MDS (15)

BSc COURSES

- BSc MEDICAL BIOCHEMISTRY (7)
- BSc NURSING (100)
- BSc OPTOMETRY (30)
- BPT (50)
- BSc DIALYSIS TECHNOLOGY (10)
- BSc RESPIRATORY TECHNOLOGY (4)
- BSc ANAESTHESIA & OT TECHNOLOGY (3)

UG COURSES

- MBBS (250)
- BDS (100)
- BDS Add batch

DIPLOMA COURSES

- DET (6)

INFRASTRUCTURE



DEMO ROOM WITH SMART BOARD



UG LABORATORY



RESEARCH LABORATORY



DEPARTMENT LIBRARY



DEPARTMENTAL ACTIVITIES

- BIOCHEMISTRY BONANZA 2024
- BIORIDDLE QUIZ 2025
- BIOCON 2025
- BIONUTRICON PRECONFERENCE WORKSHOP 2026

BIOCHEMISTRY BONANZA 2024



BIOCHEMISTRY BONANZA 2024



BIOCHEMISTRY BONANZA 2024



BIOCHEMISTRY BONANZA 2024

Healthy Recipe
**FIRELESS COOKING
COMPETITION**



TEAM BIOCHEMISTRY PRESENTS
"THE HEALTHY BOWL"



COME JOIN US ON
Tuesday, 18th March, 2025,
Time: 12:00pm - 1:30pm
Venue: Pharmacology Laboratory,
6th Floor, Academic Block

Register your team on or before 17th March 2025

For registration please contact:
Dr. Hasna : 90 4845 0827
Dr. Revathy : 88 4876 1509

Flavour Up ... Fuel Up ... Healthier You

 **MALABAR MEDICAL COLLEGE
HOSPITAL & RESEARCH CENTRE**
Discover a new life



BIOCON 2025



DEPARTMENT OF
BIOCHEMISTRY

BIO CON

Unraveling Obesity:
Metabolism to
Management

Organised by Department of Biochemistry

Saturday, 22nd March, 2025
Venue: Sapphire Hall, Academic Block, 5th Floor,
Malabar Medical College, Ulliyeri, Kozhikode

 **MALABAR MEDICAL COLLEGE
HOSPITAL & RESEARCH CENTRE**
Discover a new life

www.mmchospital.in



BIOCON 2025



BIOCON 2025 – BIORIDDLE QUIZ COMPETITION

NAVIGATE THE METABOLIC MAZE
BIORIDDLE

Malabar Medical College
Hospital & Research Centre
Discover to Heal Life

"INTER COLLEGIATE QUIZ
COMPETITION FOR PHASE 1 - MBBS"

Register
**NOW & WIN
PRIZES**

Book your participation now!
Last date to register : 17/03/2025

PRELIMINARY
• 21/03/2025 (11 AM)

FINALS
• 21/03/2025
• 2pm to 4pm
• Sapphire Hall
Academic Block

For Queries contact :
Dr Shyamkrishnan.R
9495594377
Dr Jaisa.C
9746667624
BIOCHEMISTRY DEPT

www.mmchospital.in
0496-270 1800, 0496-3501800
Ulliyeri,Kozhikode

RS.200
Per team for
Registration

2 team
Per college

2 students
Per team

REGISTER HERE

CME BIOCON
SCAN & PAY

PAY HERE



BIONUTRICON PRECONFERENCE WORKSHOP 2026

AMBI KERALA CHAPTER
IN COLLABORATION WITH
**GMC KOZHIKODE, KMCT MEDICAL COLLEGE
& MMC KOZHIKODE**

**THIRD STATE CONFERENCE OF
AMBI KERALA CHAPTER**

(UNDER THE AEGIS OF THE ASSOCIATION OF MEDICAL BIOCHEMISTS OF INDIA)



PRE CONFERENCE WORKSHOPS
27th MARCH 2026

Topic	Venue
01 Hands on training NGS and TMS	Multidisciplinary Research Unit, GMC Kozhikode
02 Bioinformatic Tools	NIT Calicut
03 Laboratory Statistics	Malabar Medical College, Kozhikode

BASICS OF DECODING LAB DATA	
Organised by MMC Kozhikode	
Date	: 27.03.2026
Venue	: Malabar Medical College, kozhikode
Coordinator	: Dr Sneha Henry, Dr Shyam, Krishnan R
Program schedule	
8:15am-9:00am	: Registration
9:15am-10:45am	: IQC, EQAS, Lot Verification Dr Rajesh K M, Professor (CAP), GMC Ernakulam
10:45am-11:00am	: TEA BREAK
11:00am-12:00pm	: Precision, Accuracy, Total allowable error, Carryover studies Dr Jyothsna S, Assistant professor, GMC Trivandrum
12:00pm-1:00pm	: Linearity and Instrument comparison Dr Roopa Kulkarni, Consultant Biochemist, Renai Medcity Hospital, kochi
1:00pm-2:00pm	: LUNCH BREAK
2:00pm-3:15pm	: Calculations in day to day lab reporting, Disclaimers Dr Ashish K Joy, Asst Professor, GMC Kollam
3:15pm-3:30pm	: Post test and feedback
3:30pm-4:00pm	: Valedictory function Certificate distribution

BIONUTRICON PRECONFERENCE WORKSHOP 2026



OTHER ACTIVITIES

- ADD-ON COURSE – QUALITY CONTROL IN LABORATORY FOR PHASE 1 MBBS STUDENTS
- ELECTIVES FOR PHASE 3 PART 1 MBBS STUDENTS
- FOUNDATION COURSE -2026-27 BATCH
- KUHS APPRECIATION RESEARCH AWARDS
- ICMR STS PROJECTS

BIOCHEMISTRY CLINICAL LABORATORY



Daily around ***3500 tests*** are carried out in the laboratory

CLINICAL LABORATORY TESTS

FASTING BLOOD SUGAR (FBS)	CALCIUM	SERUM OSMOLALITY	24 HOUR ALBUMIN CREATININE RATIO
POST PRANDIAL BLOOD SUGAR (PPBS)	PHOSPHOROUS	BUN	24 HOUR PROTEIN CREATININE RATIO
RANDOM BLOOD SUGAR (RBS)	CK-MB	AMMONIA	24 HOUR MICROPROTEIN
GCT	CREATININE PHOSPHO-KINASE	HBA1C	240HOUR CREATININE CLEARANCE TEST
GTT	MAGNESIUM	ABG WITH LACTATE	COVID 19 ANTIBODY TEST
UREA	IRON	CSF FLUID ADA	LIPID PROFILE
CREATININE	TIBC	CSF FLUID PROTEIN	RENAL FUNCTION TEST
URIC ACID	AMYLASE	CSF FLUID GLUCOSE	LIVER FUNCTION TEST
CHOLESTEROL	LIPASE	CSF FLUID LDH	SERUM ELECTROLYTES
TRIGLYCERIDES	SODIUM	URINE CREATININE	24 HR URINE CALCIUM
HDL CHOLESTEROL	POTASSIUM	URINE PORPHOBILINOGEN	24 HR URINE CREATININE
LDL CHOLESTEROL	CHLORIDE	URINE TOXICOLOGY	24 HR URINE UREA
TOTAL BILIRUBIN	C3	URINE SODIUM	24 HR URINE URIC ACID
DIRECT BILIRUBIN	C4	URINE POTASSIUM	A/G RATIO PACKAGE
SGOT	LDH	URINE CHLORIDE	BODY FLUID CALCIUM
SGPT	ADA	URINE MICROALBUMIN	BODY FLUID POTASSIUM
ALKALINE PHOSPHATASE	IONIZED CALCIUM	URINE MICROPROTEIN	BODY FLUID PROTEIN
TOTAL PROTEIN	BICARBONATE	URINE OSMOLALITY	BODY FLUID SODIUM
ALBUMIN	LACTATE	ALBUMIN CREATININE RATIO (SPOT)	BODY FLUID UREA
GGT	TRANSFERRIN SATURATION	PROTEIN CREATININE RATIO (SPOT)	BODY FLUID URIC ACID

CLINICAL LABORATORY TESTS

BODY FLUID CHLORIDE

ASCITIC FLUID PROTEIN

ASCITIC FLUID SUGAR

ASCITIC FLUID LDH

ASCITIC FLUID ADA

ASCITIC FLUID ALBUMIN

SYNOVIAL FLUID PROTEIN

SYNOVIAL FLUID SUGAR

SYNOVIAL FLUID LDH

SYNOVIAL FLUID ADA

SYNOVIAL FLUID ALBUMIN

PERITONIAL FLUID PROTEIN

PERITONIAL FLUID SUGAR

PERITONIAL FLUID LDH

PERITONIAL FLUID ADA

PERITONIAL FLUID ALBUMIN

PERICARDIAL FLUID PROTEIN

PERICARDIAL FLUID SUGAR

PERICARDIAL FLUID LDH

PERICARDIA LFLUID ADA

PERICARDIAL FLUID ALBUMIN

URINE CHLORIDE

VBG

T3

T4

TSH

FREE T3

FREE T4

ANTI TPO

ALPHA FETOPROTEIN (AFP)

PROSTATE SPECIFIC ANTIGEN (PSA)

CA125

CARCINO EMBRYONIC ANTIGEN (CEA)

BETA HCG

FERRITIN

LH

FSH

PROLACTIN

CORTISOL

TESTOSTERONE

VITAMIN D

PARATHYROID HORMONE

FOLATE

VITAMIN B12

ANA ELISA

SERUM PROTEIN ELECTROPHORESIS

TROPONIN I QUANTITATIVE

THYROID FUNCTION TEST

ANA PROFILE

NT PRO BNP

BENCE JONES PROTEIN

BILE PIGMENT

BILE SALT

ACHIEVEMENTS

- DR. SHYAMKRISHNAN R – BEST TEACHER AWARD -2026
- DR. ASWATHI MOHAN & REVATHY BR – THIRD PRIZE IN AMBICON STATE CONFERENCE PG QUIZ COMPETITION 2026



UG ACHIEVEMENTS

- 14 DISTINCTION HOLDERS IN BIOCHEMISTRY IN 2024-25 ACADEMIC YEAR

RESEARCH AND PUBLICATIONS

- Artificial Intelligence–Assisted Quasi-Simulation for Teaching Attitude, Ethics, and Communication Principles among Undergraduate Medical Students in India: A Quasi-Experimental Study. Athulya Anil, Aswathi Mohan K, **Shivaraj Gowda** Chinese journal of Laboratory Medicine 2026; 8(1):
- Analysis of Critical Biochemistry Values in Medical College Hospital. Leela P, **Shivaraj Gowda**, Shreedhar AM Panacea Journal of Medical Sciences 2026;16(1):
- Thyroid dysfunction and serum creatinine variations: A tertiary care study from northern Kerala. Revathy BR, **Shivaraj Gowda**, Sneha H Acta Biochimica Indonesiana 9(1):229, 1-10. 2026
- Upgrading endocrine test requisition forms to improve diagnostic accuracy and reduce pre-analytical errors: a review Acta Medica International 13(1), 197-201. 2026 Aswathi Mohan K, Nourjihane RS, **Shivaraj Gowda**
- Evaluation of integrated-shared teaching with in-class activity for basic science medical students. Journal of College of Medical Sciences-Nepal, 21(3), 270–276. 2025. **Gowda, Shivaraj.**, Das, S., Mohan, A. K., Bhoge, A., & Curran, V.
- 6Therapeutic Hypothermia for Hypoxic Ischemic Encephalopathy in neonates above 36 weeks and neurodevelopmental outcomes – A single centre experience. Ro J Pediatr. 2024;74(1) Prashanth. SV, Vikram SK, Dhananjaya SR, Sajna MK, **Shivaraj Gowda**
- Neonate of Jehovah witness parents. Sri Lanka Journal of Child Health, 2023; 52(4): 481-483 Anil K, Vikram SK, Dhananjaya SR, **Shivaraj Gowda**
- Cuties, Creams and Cushing. Belgian journal of Pediatrics 2023; 25 (2):109-111 Vikram SK, Dhananjaya SR, Thejaswini R, Girish S, **Shivaraj Gowda**
- Pyruvate Dehydrogenase E3 Deficiency -Dihydrolipoamide dehydrogenase (DLD) - Is this heterozygous mutation significant in this infant with symptomatic hypoglycemia? New Emirates Medical Journal 2023: 4(2) Prashanth S V, Vikram SK, Dhananjaya SR, **Shivaraj Gowda**

RESEARCH AND PUBLICATIONS

- Tuberculosis treatment spills the beans on Wilson's disease and More Medical Journal Armed Forces India 2023; 79(1): S276-S279. Vikram SK, Dhananjaya SR, **Shivaraj Gowda**
- Preanaesthetic Check-up Parameters and Postoperative Recovery Score: A Cross-sectional Study J Clin of Diagn Res. 2025; 19(5):BC05-BC09. <https://www.doi.org/10.7860/JCDR/2025/76754/20984>
- E M V, R Sripradha RS, Prejisha B PB, Henry S. Biomarkers For Predicting Preeclampsia : An Updated Review. J Neonatal Surg [Internet]. 2025 Apr. 21 [cited 2026 Aug. 5];14(16S):156-63.
- Thyroid dysfunction and serum creatinine variations: A tertiary care study from northern Kerala Revathy B.R*, Shivaraj Gowda, Sneha Henry
- Revathy B.R, Gowda, S., & Henry, S. (2026). Thyroid dysfunction and serum creatinine variations: A tertiary care study from northern Kerala. *Acta Biochimica Indonesiana*, 9(1), 229. <https://doi.org/10.32889/actabioina.229>
- Binub K, Harsha PV, Salim RS, et al. An Observational Study on the Utility of Lab Parameters in Evaluating the Severity of Patients in South India with Covid-19. *J Pharm Bioallied Sci*. 2023;15(Suppl 1):S414-S418. doi:10.4103/jpbs.jpbs_549_22
- Harsha P, Henry S, Dabas P, Binub K. Mortality, morbidity and its associations in the second peak of second wave of covid-19: A tertiary care hospital study from Kerala, a southern state in India. *International Journal of Life Sciences Biotechnology and Pharma Research (IJLBPR)*. 2024
- Dabas P, Harsha P.V., Sneha Henry, Kannian Binub Factors influencing the hospital length of stay in Covid-19 patients in Calicut, Kerala-Across-sectional study [Vol. 12 No. 1 \(2023\): Global Journal of Medicine & Public Health](#)

RESEARCH AND PUBLICATIONS

- Dabas P, Harsha PV, Henry, S; Binub K. Relationship between COVID-19 Vaccination Status and Comorbidities of COVID-19 Patients Admitted at a Tertiary Medical College in Calicut District, Kerala. Dentistry and Medical Research. 2024.
- Sneha Henry, Bharti Uppal, M Joseph John. Study of LDH isoenzyme patterns in different Hematological malignancies. MedPulse International Journal of Biochemistry. December 2020; 16(3): 42-47.
<https://www.medpulse.in/Biochemistry>
- Sneha Henry, Bewin Oral J, Goldy S J. Electrophoretic pattern of LDH isoenzymes in different hematological malignancies at a cancer unit. MedPulse International Journal of Biochemistry. December 2020; 16(3): 23-28.
<https://www.medpulse.in/Biochemistry>
- Harisankar S Varier , Shyamkrishnan R , Muhammad Roshan M , Jasla C. et al , A Cross- sectional Study on the Association of Serum Uric Acid to High-density Lipoprotein Ratio and Monocyte to HDL Ratio with Glycemic Control in Subjects with Type 2 Diabetes Mellitus, Indian Journal of Medical Biochemistry, Volume 30 Issue 1
- Hasnamol Pila THoTTaTHil1, Sindu Padinjareveedu CHandran2, joSe jaCoB3 Reference Interval, Biological Variations and Distribution of Creatinine Level in Fasting, Urine: A Cross-sectional Study
- Evaluation of hepcidin and its relation ship with iron in non- alcoholic fatty liver disease (in biomedicine as short communication . 2022)

THANK YOU