

## DEPARTMENT DETAILS- BIOCHEMISTRY

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### **Introduction /Overview**

The Biochemistry Department at GMC Jalgaon is dedicated to excellence in **medical education, clinical diagnostics, and biomedical research**. With a strong commitment to academic innovation, ethical practices, and research-driven learning, the department plays a crucial role in training future healthcare professionals and supporting evidence-based diagnostics.

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### **Vision/Objectives**

#### **Vision**

To excel in biochemistry education, clinical diagnostics, and research by fostering innovation, ethics, and academic excellence.

#### **Objectives**

- Strengthen teaching with qualified faculty and modern methods.
- Promote student research through ICMR-STS and MUHS Avishkar.
- Introduce advanced tests using Chemiluminescence Immunoassay.
- Upgrade the lab to a state-of-the-art diagnostic facility.
- Encourage impactful, well-funded research addressing health needs.

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### **Mission/Goal**

#### **Mission**

To deliver high-quality education in biochemistry, promote clinical excellence through advanced diagnostic services, and encourage impactful research that addresses local and global health challenges. The department strives to nurture competent, ethical, and research-oriented professionals dedicated to improving healthcare outcomes.





#### **Goals**

- 1. Academic Development**
  - Strengthen undergraduate teaching by increasing qualified faculty and integrating modern teaching methodologies.
  - Introduce early clinical exposure to bridge theoretical knowledge with real-world application.
- 2. Student Engagement**
  - Motivate students to participate in research activities such as **ICMR-STS** and **MUHS Avishkar**.
- 3. Clinical Laboratory Advancement**

- Expand diagnostic capabilities by introducing advanced biochemical tests using **Chemiluminescence Immunoassay**.
  - Upgrade the existing lab to a **state-of-the-art facility** aligned with national standards.
- 4. Research Excellence**
- Promote high-quality, socially relevant research by ensuring access to modern instrumentation and funding.
  - Address regional health issues through biochemical approaches and strategic problem-solving.

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### List of Teaching Faculties

Sr. No.	Name of Faculty	Designation	Qualification	Total Teaching experience	Photo
1	<b>Dr Rajesh Jambhulkar</b> MMC- 2008/02/0318	Associate Professor and Head	MBBS, MD, DNB - Biochemistry	13 Years	
2	<b>Dr. Sachin Lokhanda</b> MMC- 2024/08/6853	Junior Resident/ Tutor	MBBS	5 Months	
3	<b>Dr. Sanjay Meena</b> MMC- 2024/09/8645	Junior Resident/ tutor	MBBS	1 Year 3 Months	
4	<b>Dr Amrat Rana</b> MMC- 2025/05/03968	Junior Resident/ tutor	MBBS	2 Months	

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### List of Non-Teaching Staff

Sr. No.	Name	Post
1	Mr. R D Mahajan	Technician (MBBS UG LAB+Thyroid lab + Tumor marker)
2	Mr. Nilkanth Mahale	Technician (CCL)
3	Mr. Pravin More	Technician (MBBS UG Lab)
4	Mr Dilip Pawar	Technician (Thyroid Lab+ Dept Lab )
5	Mrs Megha Sonwane	Technician (CCL)
6	Mr Prem Totre	Assistant Technician (CCL)
7	Mr Tushar Nagre	Assistant Technician (CCL)

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### Activities by Department

1. Innovative, student-focused teaching with early clinical exposure.
2. Support for UG research (ICMR-STs, MUHS Avishkar).
3. Advanced lab tests including hormonal assays via CLIA.
4. Regular quality control for accurate lab reporting.
5. Faculty development through research and training programs.

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### Best Practices/ facilities/Services offered by Department (If any)

#### 24 x7 Clinical Biochemistry laboratory

#### Routine clinical tests

#### Routine Biochemistry Tests

- Blood Glucose (Fasting, Postprandial, Random)
- Urea, Creatinine
- Uric Acid
- Total Protein, Albumin, Globulin
- Bilirubin (Total, Direct, Indirect)
- SGOT (AST), SGPT (ALT), ALP
- Lipid Profile (Cholesterol, Triglycerides, HDL, LDL, VLDL)
- Electrolytes (Sodium, Potassium, Chloride)
- Calcium, Phosphorus
- CRP (C-Reactive Protein)

#### Special Investigations (Advanced)

- Thyroid Profile (**Free T3, Free T4, TSH**)
- HbA1c
- Serum Amylase, Lipase
- Cholinesterase
- Tumor markers- **CEA, AFP, PSA, CA-125, CA19-9**

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### List of Publications and Research (Faculty wise)

Sr. No.	Publication in Vancouver Style	Indexing System
1	Jambhulkar R. <i>Serum Prolactin: A clue to breast malignancy</i> . Med Lab J. 2022;16(1):13–19	DOAJ
2	Jambhulkar RK, Mahajan BH. Effect of meditation on lipid profile of post-menopausal women. <i>Int J Recent Trends Sci Technol</i> . 2014;9(3):438–41	Index Copernicus
3	Fupare S, Jambhulkar RK, Tale A. Correlation of thyroid hormones with infertility in reproductive age group women. <i>Indian J Basic Appl Med Res</i> . 2015;4(4):488–95	Index Copernicus
4	Jambhulkar R. <i>The study of Paraoxonase 2, lipid profile and TOS in ischemic stroke</i> . J Med Sci Health. 2020;6(2):8–13.	DOAJ
5	Puppalwar PV, Jambhulkar RK. Jigsaw technique – A novel method of teaching biochemistry to medical undergraduates. <i>Int J Med Sci Public Health</i> . 2019;8(12).	Index Copernicus

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### Achievements/ Awards

1. Book- Jambhulkar RK. *Case Oriented Approach in Biochemistry*. 2nd ed. New Delhi: IP Innovative Publication Pvt. Ltd.; 2023. 148 p. ISBN: 978-8196276225.
2. Book- Jambhulkar RK. *Golden Notes: Biochemistry Rapid Revision Handwritten Notes*. 3rd ed. New Delhi: Jaypee Brothers Medical Publishers Pvt. Ltd; 2024. 441 p. ISBN: 978-9356965782.
3. Best Book Author- for “Case Oriented Approach in Biochemistry” by 5<sup>th</sup> National editor summit 2023 & 2024 – Innovative education and scientific Research foundation

## Photo Gallery

CLIA IMMUNOASSAY ANALYZER



MBBS -UG Laboratory



AUTOMATED CHEMISTRY ANALYZER

