Biochemistry Department, KMC, Manipal

1. **Why to choose MD Biochemistry at KMC Manipal?**

   The department of Biochemistry is actively involved in teaching, providing clinical diagnostic services and in carrying out research activities in the field of biochemistry. The past and current research interests have bridged to a certain extent the existing lacunae in diseases related to; Diabetes, Coronary artery diseases, Hepatobiliary diseases, renal diseases, Nutrition, Inborn errors of Metabolism, Toxicology etc. State-of-the-art facilities and a vibrant learning atmosphere ensure trainees to gain expertise in the field of Clinical Biochemistry, Inborn errors of Metabolism, Toxicology, molecular biology and Laboratory Medicine. The diagnostic laboratory is equipped with automated testing systems like Roche COBAS 6000/COBAS 8000 for analysis of chemistry and immunological test parameters, COBAS P512 sample sorting system, Bio-Rad D10, HPLC for quantification for amino acids and other analytes, Helena gel electrophoresis system for serum protein electrophoresis and immune-fixation for light chains, Radiometer and Roche instruments for Blood gas analysis, ELISA, LIS and many manual tests for the management of patients. The department runs a 24x7 Clinical Biochemistry laboratory and STAT laboratory which caters to all patients visiting/admitted in the hospital out patients and admitted cases. The laboratory which processes about 8,000 tests per day is accredited by NABL. All the post graduates get hands on training in all the above areas in addition to regular academic activities and hospital postings.

2. Core competencies pursued during postgraduate training at Manipal

- Apply biochemical principles to explain the disease conditions and mechanism of action used in the diagnosis and treatment of diseases
- Explain importance of biomolecules in sustaining the life process
- Describe and apply the concept of nutrition in health and disease
- Apply and integrate knowledge of molecular and metabolic conditions in normal and disease states for clinical problem solving and research
- Acquire knowledge on application of various aspects of genetic engineering in medicine and perform
- Acquire knowledge and apply the principle of statistics, basics of research methodology to the evaluation and interpretation of molecular and metabolic disease states
- Evaluate, analyze and monitor disease states by applying relevant biochemical investigations and interpreting the clinical and laboratory data
- Apply the principles of teaching - learning technology
- Demonstrate knowledge about recent advances and trends in research in the field of clinical biochemistry
- Communicate biochemical reasoning effectively with peers, staff and faculty, and other members of the health care team.
- Demonstrate ethical behavior and integrity in one's work.
- Be aware of the cost of diagnostic tests and economic status of patients.
- Demonstrate standard operating procedures of various methods

and techniques used in clinical biochemistry.

- Demonstrate presentation skills at academic meetings and publications.

3. **Career opportunities after Post graduation**
    - Faculty in academic institutes having MD in Biochemistry
    - Authorized signatory for NABL accredited laboratories.
    - Medical Advisor for diagnostic/manufacturing/pharmacological companies
    - Proceed to get DM in Endocrinology.
    - Work in the field of research and obtain a PhD
    - Set up/manage a diagnostic laboratory.

Also Visit:

https://manipal.edu/kmc-manipal/department-faculty/department-list/biochemistry.html