Department of Biochemistry

1. **Department Name:** **Biochemistry**

2. **About the Department**:

The department of Biochemistry is a comprehensive department involved in patient care, teaching and research. A wide spectrum of clinical chemistry investigations including tumor markers are being routinely carried out in the department for the out-patients and in-patients of our hospital and also patients referred from other centers. The laboratory is well equipped with Auto analyzer for routine work and has a regular quality control programme to ensure the accuracy of laboratory results reported.

Our laboratory does more than 4,00,000 tests annually. Turnaround time for all the investigations is 5 hours. Housekeeping and waste management is done as per the institute waste management policy.

Academic Activities:

The department is actively engaged in several teaching programs with qualified teaching faculty and supporting staff. The 3 years B.Sc. medical laboratory technology course is being conducted under the Rajiv Gandhi medical university. Undergraduate and postgraduate medical students and students enrolled in the superspeciality oncology courses of the medical university and from neighboring institutes are regularly posted to the department for training.

In addition, the department extends facilities and guidance to postgraduate medical and dental students for their dissertation work. A number of undergraduate and post graduate non medical students from Bangalore University and other outside universities are regularly posted to the department for summer training program.

Research Activities:

Our laboratory is recognized by the Bhabha Atomic Research centre for carrying out in vitro radioisotope work. The department is recognized by the Rajiv Gandhi

medical University, Karnataka State, to carry out research work for doctoral program. Our faculty members are recognized guides and have students registered for Ph.D. in Medical Biochemistry. Currently five candidates are working for their Ph.D. degree in department of Biochemistry under medical faculty.

3. Facilities available in the Department:

Routine Investigation: Routine blood test for biochemical parameters like, Blood sugar, RFT, LFT, LDH, Calcium, Uric acid, Cholesterol & Electrolytes like Sodium and Potassium

Special Investigation: Thyroid Function Test- T3,T4 & TSH, Thyroglobulin, Anti TG, Anti TPO

Tumor Markers : CEA, PSA, AFP, CA 125, BHCG, CA 19.9

Details of available equipments in the department:

Cobas C311 Autoanalyser
Cobas e411 Immuno Analyzer
Semi Autoanalyser Modulab – 5010
Ion Selective Electrolyte Analyzer
PCR conventional gradient (Thermal Cycler)
PCR Real Time
Gel documentation system
Electrophoresis unit
Spectrophotometer
Elisa Reader
Centrifuges
Microcentrifuge
Drybath with cooling and mixing
Waterbath
Incubator
UV Transilluminator
Microwave oven
Vertex mixer
Ice maker
Freezers −20ºC, −80º C

4. Information to patients:

OPD timings: 9 am to 4 pm on all working days
9 am to 1 pm on all Government holidays

5. Department Faculty|Doctors, Designation:

1. Dr. G. Ramesh
   Prof. & HOD

2. Dr. K.Thriveni
   Assoc. Prof.

1. Academic – Doctors|Residents|Registrars|Students

a) PhD students list with Admission Date

Ms Rani James -- 01-07-2008
Mr Yashwanth -- 01-01-2009
Mr. Rahul Bhagat --- 01-01-2010
Miss.Shilpa V -- 01-01-2010
Miss. Bhaskari J -- 01-01-2012

b) UG List – BSc|Dip|Technology Course etc.

I, II & III Year BSc MLT Students – 19 students

2. Department staff list, Designation:

Group 'A'
Dr G Ramesh
Prof. & Head

Dr.K.Thriveni
Assc.Prof.

Group 'B' (Asst.Research Scientist)

Smt.D.Renuka Devi
Mr.S.P. Vajra Kumar

Smt.N.C.Vijayalakshmi
Chief.Med.Lab Technologist

Group 'C' (Sr.Med.Lab Technologist)
Smt.Liza Prakash
Mr.Syed Abdul Jameel

Mr.D.Narasimulu
Mr. B.Shivaswamy

Jr.Med.Lab.Technologists
Mr.K.B.Lingaraju
Smt.G.S.Shivarathnamma
Smt.S.K.Kavitha

Smt.H.R.Nagamani
Clerk-Cum-Typist

3. Medical Education – Teaching and Learning(Lecture, Seminar, Symposium, CME, Conference etc) MCI|RGUHS criteria
   - Conduct classes for UG students as per the university guidelines.
   - Conduct journal club, seminars and scientific discussions for Ph.D students.

4. **Medical Research:**

a) Ongoing Research activity

- Promoter methylation of DNA repair genes in ovarian carcinoma – correlation with disease characterstics and prognosis- (ICMR) Funded
- The relationship of VEGF polymorphisms with plasma VEGF levels and tumor VEGF expression in epithelial ovarian cancer & their prognostic importance --- (ICMR) Funded
- Methylation patterns of gene promoters associated with human ovarian carcinoma (DBT)
- A study of expression of Cytokines in breast cancer patients funded by Department of Science & Technology (DST)

b) Publications(Year wise 2008,2009,2010,2012, 2013)

i. National

1. Sadananda Adiga, Sunil Chandy, Girija Ramaswamy, L Appaji and Lakshmi Krishnamoorthy "Homocysteine, Vitamin B_{12} and folate status in pediatric acute lymphoblastic leukemia." Ind J Paediatrics,75 (2), 25-28, 2008

2. Sunil Chandy, Sadananda Adiga, Girija Ramaswamy, C. Ramachandra, and Lakshmi Krishnamoorthy. "Effect of Vitamin B_{12} and folate on Homocysteine levels in Colorectal Cancer. Ind J Clin Biochem, 23 (3), 258-261, 2008

3. Sadananda Adiga, Sunil Chandy, Girija Ramaswamy, Appaji L, Aruna Kumari B S and Lakshmi Krishnamoorthy. "Association between plasma Homocysteine and riboflavin status in acute lymphoblastic leukaemia in children". Ind J Clin Biochem, 24 (3), 257-261, 2009.

4. Sadananda Adiga, Sunil Chandy, Ramachandra N, Appaji L, Aruna Kumari B S, Girija Ramaswamy, Savithri H S and Lakshmi Krishnamoorthy. "Methylenetetrahydrofolate

reductase gene polymorphism and risk of acute lymphoblastic leukaemia in children". Ind J Cancer, 47 (1), 40-45, Jan-March 2010.

5. Sunil Chandy, Sadananda Adiga M N, Ramachandra N, Krishnamoorthy S, Girija Ramaswamy, Savithri H S and Lakshmi Krishnamoorthy. "Association of Methylenetetrahydrofolate reductase gene polymorphism and colorectal cancer in India". Ind J Med Res, 131(5), 659-662, May 2010.

6. Rani James, Thriveni K, Lakshmi Krishnamoorthy, Vijaylakshmi Deshmane, Bapsy P P, Girija Ramaswamy. "Clinical outcome of adjuvant endocrine treatment according to Her-2/neu status in breast cancer". Ind J Med Res, Jan 2011, 133, 70-75 Pp.

7. Rani James, G. Ramesh, Lakshmi Krishnamoorthy, Rahul Bhagat, Shilpa Chadaga, Vijayalaxmi Deshmane, Girija Ramaswamy. "Prevalence of +405G>C,−1154G>A Vascular Endothelial Growth Factor Polymorphism in Breast Cancer". Ind J of Clin Biochem. DOI 10.1007/s12291-013-0307-2, 2013.

8. Thriveni K, Vijayalaxmi Deshmane, Lakshmi Krishnamoorthy, Girija Ramaswamy. "Diagnostic significance of CA 15.3 with combination of HER-2|neu values at 85th percentiles in breast cancer". Ind.J.Clin.Biochem 28: 136-140, 2013

ii. International

1. Sunil Chandy, Sadananda Adiga M N, Ramesh G, Girija Ramaswamy, Vijayakumar M, Savithri H S and Lakshmi Krishnamoorthy. "Methylenetetrahydrofolate reductase 677 C→T and 1298 A→C gene polymorphisms and its relation to levels of homocysteine, folate, Vitamin B12 and Vitamin B2 in colorectal cancer". Austral-Asian J of Cancer, 9(2), 91-100, April 2010.
2. Rani James, G. Ramesh, Lakshmi Krishnamoorthy, Triveni K, Vijaylaxmi Deshmane, P P Bapsy, Girija Ramaswamy. "Plasma VEGF as a marker of therapy in breast cancer patients". Austral Asian J of Cancer 2011; 10(3); 189-95.
3. Rahul Bhagat, Shilpa Chadaga, C.S. Premlatha, G.Ramesh, C. Ramesh, V.R. Pallavi, Lakshmi Krishnamoorthy. "Aberrant promoter methylation of RASSF1A and APC genes in epithelial ovarian carcinoma development". Cell Oncol (2012) 35: 473-479.
4. Rahul Bhagat, C. S. Premalata, V. Shilpa, V. R. Pallavi, G. Ramesh, C. R. Vijay & Lakshmi Krishnamoorthy "Altered expression of β-cadherin, E-cadherin, and E-cadherin promoter methylation in epithelial ovarian carcinoma". Tumor Biol. DOI 10.1007/s13277-013-0797-9, 2013.