

DEPARTMENT OF PATHOLOGY

ANNUAL REPORT FOR THE YEAR 2009-10

The department of Pathology is one of the biggest departments in Kidwai with a total staff strength of 67. It forms the backbone on which cancer therapy is based.

The department offers mainly diagnosis of cancer, with a limited infrastructure for cancer research. The department is also recognized for DNB in Pathology and three candidates have completed the DNB course in Pathology. The department is recognized by the WHO for training pathologists for a period of 6 and 12 months every year. Started fellowship programme in Pathology with an intake of 2 fellows for a period of 1 year.

The various sections under Pathology department are

1. Histopathology
2. Cytopathology
3. Cytogenetics
4. Haematology

The details of each section is enclosed

HISTOPATHOLOGY UNIT

I. INTRODUCTION

In the histopathology section, the sample load is around 10,000 to 12,000 annually inclusive of referred slides from other hospitals for opinion. Frozen section is being done as a routine. This facilitates an accurate diagnosis in cases where there is a diagnostic problem and in greyzone areas.

ACHIEVEMENTS: Staff of surgical pathology are well trained in Oncopathology. In addition, most of them have specialized training in molecular techniques both in India and abroad.

II. CONFERENCES/SEMINAR/WORKSHOPS CONDUCTED BY THE DEPARTMENT.

Nil

III. DETAILS OF MAJOR EQUIPMENTS

Nil

IV. STAFF POSITION (A TO GROUP C)

Dr. Geetashree Mukherjee
Prof.& Head.

Professors
Dr. Clementina Rama Rao
Dr. Rekha V Kumar

Associate Professors.
Dr. Usha Amirtham
Dr. Premalata C.S

Asst. Professor
Dr. Champaka G
Dr. N.R. Namrata

Asst. Research Scientist
Mr. Prashanth Kumar
Dr. Shanmugham

Cytotechnician
Mr. Lokesh Babu

Sr. Lab Technician
Smt. Jagadevi

Jr. Lab technicians
Sri. Veerappa N Belur
Sri. Srinivasa
Smt. Shobha
Smt. Shilpa
Smt. Syeda Zartaz Hashmi

Pharmacist
Sri. Satish Babu

Typist
Smt. P. Savithramma

Data Operators
Smt.Rekha Vani S
Smt Indira S

Plant Operator
Sri. Ravi K.V.

V. Research Activities, Department of Pathology.

ONGOING PROJECTS

1. Evaluation of molecular pathology of breast cancers by gene expression profiling in Breast cancer stem cells, ductal carcinomas in situ and invasive breast cancers. Team leader Prof. P. Kondaiah, Department of MRDG, IISc, Bangalore- Funded by DBT, Rs. 34,00,000/- to Kidwai (5 years, 2009-2011)
2. “Validation of molecular markers that predict breast cancer development in women with ductal hyperplasias”. This is in collaboration with Howard University, USA. (2 years 2009-2011)
3. “Studying the requirements for long term in-vitro Propagation of human mammary stem cells” in collaboration with Dr. Annapoorni Rangarajan, Department of MRDG, IISc, Bangalore funded by DBT, with a grant of Rs.2,00,000 to Kidwai (3 years 2009-2012)
4. “Efficacy of MCM antibody staining in early diagnosis of cervical and oral cancers”, in collaboration with MRC Cancer Research Centre, Cambridge, U,K(5 years 2006- 2011).
5. “Vibrational spectroscopic studies an cancer” in collaboration with Prof.S. Umopathy, Professor of Inorganic and Physical Chemistry, IISc, Bangalore, will commence shortly (2 years)
6. Ph-d guide for 2 students with topics
 - a) Role of Bmi1 molecule in breast cancer.
 - b) Prognostic factors in breast cancer.

B. Dr. Rekha V Kumar

1. Principal Investigator of a research project entitled”Association of Human Papillomavirus with Retinoblastoma in a South Indian population” and PhD guide-3 year project funded by the ICMR,New Delhi, India.
2. “Gene expression profiling of esophageal squamous cell carcinoma”, in collaboration with the Institute of Bioinformatics, Bangalore-Ongoing.
3. “Identification and validation of novel biomarkers for gastric adenocarcinoma using whole genome array and antibodies”, in collaboration with the Institute of Bioinformatics, Bangalore-Ongoing.

4. PhD guide on the topic of “Notch signaling in breast cancer”- in collaboration with the Indian Institute of Science- ongoing.
5. Co-PI of DBT funded project & PhD guide on the topic “Proteomics of esophageal cancer”- in collaboration with the Institute of Bioinformatics, Bangalore-Ongoing.
6. PhD co-guide on “Proteomics of gastric cancer”, in collaboration with the Institute of Bioinformatics, Bangalore-Ongoing.
7. PhD guide on the topic of “Expression of EGFR as a marker in assessing the pathological changes in unerupted / impacted tooth follicle-an immunohistochemical analysis” Ongoing

VI. Participation at Conference/Seminar/Workshops during the 2009-10

Dr. Geetashree Mukherjee, Prof. & Head.

1. Guest lecture on “Pathology of Mediastinal Tumors” as part of a CME on Pulmonary Pathology” conducted by Command Hospital, Air Force, Bangalore on December 2009.
2. Indo-US CME in Surgical Pathology conducted by the North American Association of Pathologists, held at Indore, Feb 5-7, 2010.

Dr. Clementina Rama Rao, Professor

1. Lecture on Non Hodgkin Lymphoma-on overview- IInd CME in Pathology, MVH Medical College and Research Hospital, Bangalore.

Dr. Rekha V. Kumar, Professor

1. Slide seminar on “Musculoskeletal tumours” at XXXVI KCIAPM Annual Conference Pre-conference workshop, JSS Medical College, Mysore 2009.
2. Guest lecture on “Handling bone specimens” and “Slide seminar on bone lesions” at the Bangalore Orthopedic Oncology Conference, MSRMCH, Bangalore 2009.
3. Guest lecture on “Pathology of malignant lung tumours” at the CME on pulmonary pathology at the Command Hospital Air Force, Bangalore 2009.
4. Keynote address on “Sarcomas of the craniofacial region” at the X National postgraduate convention of the Indian Association of Oral and Maxillofacial Pathologists, Coorg-2010 June.

Dr. Usha Amirtham, Associate Professor

1. Participated in KCIAM as faculty slide seminar at KMIO, Bangalore Bangalore 2009.
2. CME on plasma cell dyscrasia, KMIO, Bangalore November 2009
3. Update on Neuro endocrine tumours, March 2010 participated as a faculty (Recent advances in Pathology and Molecular biology) KMIO.
4. Cancer Cervix update on Colposcopy and HPV vaccine at KMIO, 10.07.2010.
5. Update on non small cell lung cancer 16.07.10 at KMIO.

Dr. Premalata C.S. Associate Professor

1. Participated as faculty in the Video based conference in Gynaecology (VCGO) held at NIMHANS convention centre, organized by KMIO, Department of Gynaec Oncology, Bangalore 11-12 April 2009.
2. Participated as faculty in the slide seminar organized by Karnataka chapter of KCIAPM at KMIO, Bangalore on 25th April 2009.
3. Attended international CME on Surgical Pathology, Cytology and hematooncology, held at Indore 5-7th February 2010.
4. Attended CME on Neuroendocrine tumours held at KMIO, Bangalore 27th March 2010.

Dr. Champaka, Asst. Professor

1. Attended the 'CME'- plasma cell dyscrasia conducted by the Department of Medical Oncology, KMIO on 21st November 2009.
2. Attended the 'CME-Neuroendocrine Tumors' conducted by department of Medical Oncology, KMIO on 27th March 2010.
3. Participated as faculty in the slide seminar organized by Karnataka Chapter of KCIAPM at KMIO, Bangalore on 25th April 2009.

Dr.N.R. Namrata, Asst. Professor

1. Attended CME on plasma cell dyscrasias at KMIO, November 2009.

2. CME and slide seminars conducted by KCIAPM on 25.04.09

VII. Paper Published in National and International Journals along with of the paper, authors name, name of journal

1. Vaidyanathan K, Kumar P, Reddy CO, Deshmane V, Somasundaram K, Mukherjee G, Erb B-2 expression and its association with other biological parameters of breast cancer among Indian Women, Indian Journal of Cancer, 2010, 47, Jan-March/Issue 1, 8-15.
2. Srivastava, B Ramdass, S Nagarajan, M. Rehman, G. Mukherjee, S. Krishna, Notch 1 regulates the functional contribution of RhoC to cervical carcinoma progression. British Journal of Cancer 2010, 102, 196-205.
3. K. Vaidyanathan, S. Lakhotia, HM Ravishankar, U. Tabassum, G. Mukherjee, K. Somasundaram. BRCA 1 & BRCA 2 germ line mutation analysis among Indian women from South India: identification of four novel mutations and high frequency occurrence of 185 del AG mutation. J. Bioscience, 2009, 34(3), 415-422.
4. Bindhu J, Imtiaz Qa, Kumar RV, Thejaswini MDRT, A rare presentation of metastatic favourable histologic cystic Wilms tumour. J postgrad Med 2010;56:28-30.
5. Kashyap MK, Marimuthu A, Peri S, Kumar GSS, Jacob HKC, Prasad TSK, Mamood R Kumar KVV, Kumar MV, Meltzer SJ, Montgomery EA, Kumar RV, Pandey A. Overexpression of periostin and lumican in esophageal squamous cell carcinoma, Cancers 2010 2 (open access).
6. Mittal S, Subramanyam D, Dey D, Kumar RV, Rangarajan A. Co-operation of Notch and Ras/MAPK signaling pathways in human breast carcinogenesis. Molecular Cancer 2009;8:128.
7. Premalata CS, Kumar RV, Salim KM, Lata J Fatima Das K, Fetal Rhabdomyoma of the lower extremity. Paediatric Blood and Cancer 2009;52(7) 881-883.
8. Kashyap MK, Marimuthu A, Kishore LJH, Peri S, Keerthikumar S, Prasad TSK, Mahmood R, Rao S, Ranganathan P, Vijayakumar M, Kumar KVV, Montgomery EA, Kumar RV, Pandey A. Genomewide mRNA profile of esophageal squamous cell carcinoma for identification of cancer biomarkers. Cancer Biology and Therapy 2009; 8:1-11.
9. Primary B cell non Hodgkin lymphoma of tongue 84-85 Indian Journal of Cancer//January- March 2010, Vol 471/issue 1 (letters to the Editor) Singh T,

Amirtham U, Sathesh CT, Sajeevan KV, Jain A, Lakshmaiah KC, Babu KG, Lokanatha D.

10. Panja S, Champaka G, Shenoy AM, "Infantile Myo fibroma of the pharynx presenting with severe upper airway obstruction in a child Indian Journal of Cancer, Vol-47, Jan-March 2010, page 78,79.

CYTOPATHOLOGY UNIT
(2009-10)

I. INTRODUCTION

The cytology unit was started in the year 1974. It offers cytodiagnostic services to all patients of Kidwai Memorial Institute of Oncology, and also to those referred from other hospitals and institutions. It also caters to cancer detection camps conducted by Community Oncology department of KMIO in various parts of Karnataka and neighbouring states.

The cytology unit handles an average of 12,000 specimens per year, half of which are Fine needle aspiration cytology specimens comprising of routine FNA, ultrasound and CT guided FNA. The other half includes Gynaec Cytology and nongynaec cytology consisting of fluid cytology, brushings and washings from various sites (statistics enclosed)

The department also offers short term technical training to Cytotechnicians, Cytotechnologists, Pathologists and post graduate students in the department of Pathology and Gynaecology and students on Fellowship in Onco Pathology. The unit has external quality control participation with the Indian Academy of cytologists.

II. Conference/Seminar/workshops conducted by the department.-NIL

III. Major equipment added during the year 2008-09.

NIL

IV. Staff position (Group A-C)

Professors

Dr. Gayathri devi M

Dr. Siddhartha Biswas

Associate Professor

Dr. S. Baalu

Dr. M. Malathi from April 2010

Asst Professor

Dr. Akkamahadevi Patil

Cytotechnologists

Sri. B.M. Gangahanumaiah

Sri. Suresh D. Satpute

Smt. Kalavathi

Cytotechnicians
Sri. Syed I Ahmed
Smt. Omana P.N
Smt. Mahalakshmi N

Junior Lab Technician
Miss. Uma Maheshwari

V. Research Activities/Projects

Nil

VI. Participation at conference/Seminars/Workshops

(a) Dr. Gayathri Devi M, Professor & Unit Head.

(a) CME in Cytology conducted by M.S. Ramaiah Medical College Bangalore on 5th January 2010.

(b) CME on Neuroendocrine tumours conducted at KMIO, Bangalore On 29th March 2010.

(c) CME on Plasma cell dyscrasias conducted by KMIO, Bangalore 21st November 2009.

(b) Dr. Siddhartha Biswas, Professor

1. CME on Plasma cell dyscrasias conducted by KMIO, Bangalore 21st November 2009.

2. CME on Cytology in MSRMCH on 5th January 2010.

3. CME on Neuroendocrine tumour on 29th March 2010 at KMIO.

(c) Dr. Baalu S, Associated Professor

1. September 2009 - CME on Plasma cell dyscrasias "Conducted at KMIO, Bangalore.

2. March 2010: CME in Neuroendocrine Tumours conducted at KMIO.

Dr. Malathi M, Associate Professor

1. Attended CME/Workshop on "Flow Cytometry" Held at M.S Ramaiah Medical College M.S.R.M.C, Bangalore on 18th July 2010.

d) Dr. Akkamahadevi Patil, Asst. Professor

1. September 2009 – CME on Plasma cell dyscrasias conducted at KMIO, Bangalore.
2. January 5th 2010- Cytology CME conducted at MS Ramaiah Hospital, Bangalore.
3. March 2010- CME in Neuroendocrine tumour conducted at KMIO.

Haematology Unit
(2009-10)

I) Introduction about the department including activities

The Haematology unit performs haemograms for all cancer patients and those attending Cancer Detection Clinic. These include 50- 80 pediatric, and 150- 200 adult haemograms per day, The division takes part in the external quality assurance program conducted by AIIMS, New Delhi. 10-15 bone marrow aspirates and biopsy are processed and reported. These include new cases and follow up of haematological malignancies. Detailed characterization of leukemias with the full range of cytochemistry is being done. Acute leukemia panel is available for immunophenotyping by flow cytometry. In addition, clinical pathology tests are performed. Teaching of DNB (Path), BSc (MLT) and MD (Path) students is undertaken

II Conferences/ seminars /workshops conducted by the department: Nil

III. Major equipment added during the year 2009-2010

16 Tube Remi Centrifuge.

IV. Staff position

Group A

Dr. V Lakshmi devi	MBBS MD (Path) Professor
Dr. D. S Madhumathi	MBBS MD (Path) Senior specialist
Dr. H.V. Raghavendra	MBBS MD (Path) Associate Professor
Dr Shankarananda S Bharathnur	MBBS MD (Path) Assistant Professor

Group B

Ms Vishalakshi Tiwari	Assistant Research Scientist
Mr Jayadev Naik	Assistant Research Scientist

Group C;

Mr Dakshinamurthy	Chief Laboratory Technician
Mr Mohan kumar	Cyto Technician
Ms Sarojamma	Junior Laboratory Technician
Mr Prabhakar	Junior Laboratory Technician
Mr. Mahesh	Junior Laboratory Technician
Mrs. Madhushree	Junior Laboratory Technician

Group D

Mr Krishna T	Laboratory Attender
Smt Lakshamma	Attender

V. Research activities / Projects – completed projects , ongoing and new projects under taken during this period : Nil

VI. Participation at conference /Seminars/Work shops during the year 2009 -2010

Dr Lakshmi devi, Professor

1. Training in flow cytometry in leukemia and lymphoma immunophenotyping from BD Bio Sciences at Gurgaon in October 2009.
2. Gave a lecture on plasma cell biology and pathology of Plasma cell dyscrasias on 21.11.2009 at CME on plasma cell dyscrasias at KMIO, Bangalore.
3. Attended CME on Neuroendocrine tumours in KMIO on 27.03.10.

Dr D S Madhumathi, Senior Specialist

1. 1, Delivered a guest lecture on Haemopoiesis in Health and Disease – at National Centre for biological sciences (NCBS) February 2009.
2. Training on flow cytometer in leukaemias and lymphoma immunophenotyping from BD Biosciences at Gurgaou in October 2009.
3. Attended CME on plasma cell dyscrasias at KMIO, November 2009.
4. Participated in 16th National CME in Haematology and Haematooncology at Mumbai January 2010.

Dr M Malathi Associate Professor

1. Attended CME on “Plasma cell dyscrasias “November 2009 at KMIO, Bangalore.
2. Attended” International CME on Surgical Pathology, Cytology and Haematooncology” Held at Indore on February 2010.
3. Attended CME on “Neuroendocrine tumours” Held at KMIO, Bangalore on 27th March 2010.

Dr. Raghavendra H.V, Associate Professor

1. Attended the “CME-Plasma Cell Dyscrasias” conducted by Department of Medical Oncology, KMIO, Bangalore 21st November 2009.
2. Attended the “CME-Neuro-endocrine Tumors” conducted by KMIO on 27th March 2010.

3. Attended the CME on “Rational usage and Recent Trends in Blood Component Therapy in Modern Medicine, BGS Global Hospital, Bangalore on 6th June 2009.

Dr. Shankaranand S Bharathnur, Associate Professor

1. CME and slide seminars conducted by KCIAPM on 25.04.09
2. CME on “Flow cytometry” conducted by KCIAPM in MS Ramaiah Medical College on 18th July 2009
3. CME on “Plasma Cell dyscrasia” conducted by Department of Medical Oncology at KMIO on 21st November 2009.
4. CME on “Musculoskeletal lesions” conducted by Bangalore Orthopedic Society at MS Ramaiah Medical College in December 2009.
5. Workshop- “Advanced TCS Flow Cytometry workshop on hematological malignancies at Gurgaon Hariyana from 28th March to April 2010.
6. Workshop- Science Administration and Research Management for scientists at ASCI, Hyderabad from April 19-30 2010.
7. CME- on Neuroendocrine Tumours conducted by Department of Medical Oncology KMIO on 27th March 2010.

VII. Papers Published in National and International journals

1. Turbid serum in a patient of acute lymphoblastic leukemia on treatment What to Look for? Journal of Cancer Research Therapy July-September 2009-5,3,219-220
2. Fine Needle Aspiration Cytology of Benign fibrous Histiocytoma of Bone-A Case report (Acta cytological 2010;54;89-91)
3. Accelerated phase of chediak –H Syndrome mimicking lymphoma: A case report, Journal of Paediatric Haematology/Oncology In Press.

CELL BIOLOGY UNIT
DEPT OF PATHOLOGY-2009-10

I. Introduction:

The Cytogenetics facility at Kidwai Memorial Institute was established in 1989 as a subsection of the Pathology department. Major contributions were made to the establishment of chromosome changes in-patients with various forms of hematological and solid tumors. The facility offers cytogenetic analysis of hematological malignancies and solid tumors to the department of Medical, Pediatrics and surgical oncology departments in the form of routine diagnosis for the patients on therapy to see the cytogenetic response. Also, we receive samples of clinical cases from other referral Hospitals. GTG/banding is used routinely, but Q-, C-, R-banding and NOR- staining are also available. Special studies offered include sister chromatid exchange (SCE) and fragile site analysis. The unit is involved in substantial research activities and publications in national and international journals. In addition tanning is offered periodically on the above subject by qualified and experienced resource persons.

Achievements:

Chromosome analysis has been performed and diagnosis of the disease is made on over 11798 bone marrow, blood and tumor samples (fine needle aspirate/solid tissues). In addition, the Unit has academic achievements in the form of nearly 20 outstanding publications of the work in reputed international journals, to name a few, Cancer Genetics and Cytogenetics, Anticancer research, Annals de Genetics and The cancer journal, etc. Ten members have successfully obtained their Ph.D degree in various cancer research projects such as Cytogenetics of Acute Leukemia's, Uterine cervix, Breast tumors Genetic predisposition's in Retinoblastoma, Wilm's tumor and Bronchogenic carcinoma.

Presently a research fellow is working on Pediatric Acute leukemia Cytogenetics and Fluorescence in Situ Hybridization (FISH).

II. Conferences/Seminars/Workshops conducted by the department:

NIL

III. Major equipment added:

Nil

IV. Staff position (Group A - C):

Dr. Prasannakumari, Ph.D
Associate Professor
I/C Head Cytogenetics Unit

Mrs. M.Mangala gowri, M.Sc., M.Phil
Asst. Professor

Dr. L. Kavitha, M.D
Asst. Professor

Mr. Obul Reddy, M.Sc. M.Phil
Asst. Professor

Dr. Ranjana Babu, Ph.D
Asst. Research Scientist

Dr. Kousar Jahan, Ph.D
Asst. Research Scientist

Mr. Mahadev Prasad, M.Sc., PMDS
Asst. Research Scientist

Mr. Thibbaiah
Jr. Lab Technician

V. Research activities/Projects:

The research student Mr. Sayed Hasham Mazloumi registered for the Ph.D under the guidance of Dr. Prasannakumari on research project entitled "Contribution to the refinement of genetic classification and prognosis of childhood Acute leukemia", to the Rajeev Gandhi University of Health Sciences, Bangalore. A part of the PhD work is completed and three research progress reports (six months once) were submitted to RGUHS Bangalore.

VI. Participation at Conferences/Seminars/Workshops:

Dr. Prasannakumari, Associate Professor

1. "XVIth National CME in Haematology" held at Bombay Hospital, Mumbai, from 14th to 16th January 2010.
2. Participation and poster presentation in "International symposium on role of Genomics in clinical practice & 35th Annual conference of the Indian Society of Human Genetics" held at Sanjay Gandhi Postgraduate of Medical Sciences, Lucknow from 6th to 8th March 2010.
3. "Recent trends in Brain Tumour treatment and Research" held at NIMHANS, Bangalore, on 15th June, 2010.

Mrs. Mangalagowri, Asst. Professor

1. Participation and poster presentation in “International symposium on role of Genomics in clinical practice & 35th Annual conference of the Indian Society of Human Genetics” held at Sanjay Gandhi Postgraduate of Medical Sciences, Lucknow from 6th to 8th March 2010.

Dr. Kavitha B.L, Asst. Professor

1. CME in Cytology held at M.S. Ramaiah Medical College, Bangalore On 5th January 2010.
2. Recent trends in Brain Tumour treatment and Research held at NIMHANS, Bangalore on 15th June 2010.

Dr. C. Obula Reddy Asst. Professor

1. Recent trends in Brain Tumour treatment and Research” held at NIMHANS Bangalore 15th June 2010.

All staff of Cytogenetics Unit were participated in CME Plasma cell dycrasias held at Kidwai Memorial Institute of Oncology, Bangalore on 21.November 2009.

VII.Papers published in national and international journals.

Following research papers are presented (Poster) in International Symposium on role of Genomics in clinical practice & 35th Annual conference of the I S H G” held at S G P Medical Sciences, Lucknow from 6th to 8th March 2010.

1. “A rare case of translocation (12:22) (p13;q12) in Ewings sarcoma” Mangalagowri, S.K Kousar Jahan, KavithaAkkamahadevi, Appaji, Prasannakumari.
2. “Acute Promyelocytic Leukemia with Unusual Karyotype” Mangalagowri, S.K. Kousar Jahan, Kavitha Madhumathi, Appaji, Prasannakumari.
3. “Cytogenetics in childhood acute leukemia” Seyed Hashem Mir Mzloumi, Appaji, Madhumathi, Prasannakumari.

The Following Papers are communicated for publication

1. "A rare case of translocation (12;22) (p13;q12) in Ewings Sarcoma"
Mangalagowri, S.K. Kousar Jahan, Kavitha, Akkamahadevi, Appaji,
Prasannakumari
2. "Acute Promyelocytic Leukemia with Unusual Karyotype"
Mangalagowri, S.K. Kousar Jahan, Kavitha, Madhumathi, Appaji, Prasannakumari.