# CYTOGENETICS LABORATORY

**CIBR: Center for Innovative Biomedical Resources** 

## CORE INSTRUMENTATION

### **Automatic Interphase and Metaphase Finder**

Metasystems Metafer Slide Scanner and Ikaros/Isis Analysis Software are powerful tools.



• Automatic export of high resolution images for analysis

### Major equipment available:

- Metasystems Metafer Slide Scanner and Ikaros/ Isis Analysis Software
- Nikon TMS microscope w/Fluorescence
- Olympus AX-70 microscope
- Olympus BHSM microscope
- Olympus BX-41 microscope
- Olympus BX-41 w/Fluorescence
- Zeiss Axiophot microscope
- Zeiss Axioskop microscope

### MISSION

Our laboratory offers cytogenetic and molecular genomic diagnosis for both constitutional and acquired chromosome abnormalities. We focus on the detection and characterization of subtle chromosome abnormalities in hematological malignancies/ stem cells, as well as roles of telomere biology in cancer and human aging.

### **CORE SERVICES**

The Cytogenetics Laboratory is a CLIA-certified and CAP accredited facility that offers comprehensive cytogenetic diagnosis for both constitutional and acquired chromosome abnormalities. It provides conventional karyotype analysis and fluorescence in situ hybridization (FISH) studies for the detection and characterization of chromosome abnormalities in clinical specimens and in established cell lines. The **Cytogenetics Laboratory includes** an American Board of Medical Genetics-certified clinical cytogeneticist/clinical molecular geneticist, highly knowledgeable laboratory supervisors, and wellexperienced staff.

### SERVICES OFFERED

- Chromosome Studies on multiple sample types including peripheral blood, bone marrow, fibroblasts and solid tissues (Karyotype).
- FISH testing
- Microarray analyses (Data analyses)



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### **Chromosome Studies (Karyotype)**



### **FISH Testing**

- Whole chromosome painting
- Centromere probes
- Subtelomere probes
- Microdeletion probes
- Cancer probes
- Other locus-specific probes

### **Cytogenomic Microarray Analyses**



Cytogenomic microarray analyses of a solid tumor revealed duplications (in blue lines), deletions (in red line) and CN-LOH regions (yellow in cytobands)

### CONTACT



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