



WORKSHOP-2

Centre for Human Genetics

KAPCON - Preconference Workshop

"Cancer Cytogenetics and FISH"

10th July 2025

About the workshop

Chromosomal abnormalities are genetic aberrations involving a change in chromosome number or structure. Cancer cytogenetics helps in identifying chromosomal abnormalities that are specific to certain cancer type or stage, assisting in cancer diagnosis, classification, and prognosis. The techniques employed in studying patient samples include conventional or classical chromosome studies such as routine karyotyping as well as high end molecular cytogenetic techniques like FISH, SKY, M-FISH and mBand FISH. Analysis of the test results is done using karyotyping and FISH workstation consisting of an appropriate microscope to capture the images and software like MetaSystems/Applied Spectral Imaging that helps in analyzing, interpreting and reporting cases.

This workshop aims at sharing knowledge and practical experience in techniques employed in cytogenetic analysis of cancer patients.

VENUE: CGH, BANGALORE

TARGET NUMBER:30

FACULTY

1. Prof. Jayarama S. Kadandale, David A. Hungerford Chair, CHG
2. Ms. Pooja Kulshtreshtha, [M.Sc.](#), Technical Officer, CHG
3. Ms. Soumya Thomas E, M.Sc., Teaching Instructor, CHG
4. Ms. Harikrupa Devi, AG, M.Sc., Teaching Instructor, CHG
5. Mr. Krishnamoorthy, B.Tech., Project Associate, CHG
6. Ms. Priyanka M.Sc., Project Associate, CHG



Programme Schedule

Time	Contents
10.00 am – 10.05 am	Welcome note
10.05 am – 10.10 am	Presentation of the program
10.10 am – 10.30 am	Lecture 1: “Cancer Cytogenetics and FISH”
10.30 am – 10.45 am	Lecture 2: “Culture and harvest of samples”
10.45 am – 11.00 am	Lecture 3: “G banding, chromosome landmarks and ISCN”
11.00 am – 11.15 am	Coffee break
11.15 am – 1.00 pm	Lab Session 1: TC Lab Requirements Culture setup Maintenance of culture, subculture and cryopreservation Harvesting of cultures for cytogenetic testing Slide preparation G-Banding demonstration Analysis using karyotyping workstation
1.00 pm – 2.00 pm	Lunch
2.00 pm – 2.30 pm	Lecture 4: “Molecular Cytogenetics – FISH and mFISH”
2.30 pm – 3.30 pm	Lab Session 2: Direct processing of samples Pretreatment of tissue sections on slides. FISH hybridization
3.30 pm – 3.45 pm	Coffee break
3.45 pm – 5.00 pm	Lab Session 3: Post hybridization washing Analysis using FISH workstation Abnormal FISH cases
5.00 pm – 5.15 pm	Reporting