



**ICGCW 2025**

**7th INDIAN CANCER GENETICS CONFERENCE & WORKSHOP  
Tata Memorial Hospital & ACTREC, Mumbai, India**



**ICGC2025 CONFERENCE TMH, PAREL: 22-23 Feb '25 (Saturday & Sunday)**

**THREE PRECONFERENCE  
HANDS ON WORKSHOPS  
20-21st Feb 2025**

- Genetic Counselling of Common Hereditary Cancers: TMH, Mumbai
- NGS Wetlab, DryLab & Reporting: ACTREC, Navi Mumbai
- Functional Genomics & Tissue Culture, ACTREC, Navi Mumbai

# Deep Dive To know More about Less Known Genes

# Navigating The Rising Tide of VUS

My  
Rare Gene Diary



- Should Germline or Somatic report include these genes / variants ??
- How should they be described ?
- How to act (or not) on these ?

**Registration Link**  
for a Deep Dive to learn  
together & reach consensus

## ALL ABOUT LESS KNOWN or MODERATE RISK GENES, HYPOMORPHIC ALLELES & VUS

TMC Cancer Genetics Unit has CURATED germline genotype & phenotype data of 10,000+ cases - not only well characterised genes like BRCA1/2, MLH1, MSH2, TP53, PALB2) but also Less known genes (CHEK2, BRIP1, RAD51, CDH1, MSH6, PMS2, SDH, & many more We have reclassified hundreds of ClinVar VUS as Likely Benign & a few as Likely Pathogenic

<b>Registration fee (with 18% GST)</b> *Will be Half for Trainees & GCs & *Double for Industry delegates	<b>Early Bird</b> 31-12.2024	<b>Regular</b> 31-1-2025	<b>SPOT REG</b> Feb 2025
<b>Conference Only</b>	<b>6000</b>	<b>7500</b>	<b>9000</b>
<b>Conference + GC Workshop</b>	<b>8000</b>	<b>9500</b>	<b>12000</b>
<b>Conference + 1 Lab Workshop NGS or Functional Genomics</b>	<b>10000</b>	<b>12000</b>	<b>If available</b>

### DATES TO REMEMBER

- **EARLY BIRD:**  
31/12/2024
- **ABSTRACT: 05/02/2025**  
Mail 1 page PDF abstract to [icgcw.tmc@gmail.com](mailto:icgcw.tmc@gmail.com)  
**Best Paper Award for One abstract each in**
  - Clinical Genetics
  - Genetic Counselling
  - Molecular Genetics
- \*\*Abstracts eligible for fee waiver

\*\*May Request Reg Fee Refund for abstract with Genotype-Phenotype description of >10 cases of less known genes or VUS

**<< [CLICK TO REGISTER](#) >>**

Email [icgcw.tmc@gmail.com](mailto:icgcw.tmc@gmail.com)

Phone +91-22-27405000 ext. 5318

Mobile: +91-8433733212

Registration Link: <https://forms.ale/5H6csUwmQ1NwkYUx5>

<b>PATRON</b> Prof. Sudeep Gupta	<b>CHAIRPERSON</b> Prof. Rajiv Sarin	<b>ORGANIZING SECRETARY</b> Dr Poonam Gera	<b>TREASURER</b> Dr Somya Srivastava
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## *Less Known or Moderate Risk Genes, Hypomorphic Alleles & VUS*

- *Why are they tested in the first place?*
- *Should they be in the report & how should they be described?*
- *Genotype-Phenotype uncertainty of these genes or variants*
- *Family & functional studies to characterise these variants*
- *Pitfalls in ignoring or acting upon these genes / variants*
- ***My RARE GENE DIARY** of Low to Moderate Cancer Risk Genes*

### Three Pre Conference Workshops

#### **1) CANCER GENETIC COUNSELLING**

- *Genetic counselling overview*
- *Drawing informative complex pedigrees*
- *Psychosocial issues in genetic counselling*
- *Counselling for VUS & Moderate penetrance genes*
- *Counselling for HBOC, Lynch, Li-Fraumeni, NF, FAP, MEN2, Cowden, RB1, Dicer, WT1 & other syndromes*
- *Prenatal & Pre-Implantation genetic testing*
- *Case based discussions & role plays*

Only 40  
participants

#### **2) NGS WET LAB, DRY LAB & REPORTING**

- *Library prep - Targeted Panel & Exome*
- *Setting up NGS run on MiSeq & NextSeq*
- *Bioinformatics - fastq to vcf, genomic databases*
- *Variant annotation, clinical report drafting on ACMG guidelines. Case based discussions on imp. aspects*
- *Sanger sequencing, Long Range PCR & Digital MLPA*

Only 24  
participants

#### **3) FUNCTIONAL GENOMICS & TISSUE CULTURE**

- *Functional Genomics Overview*
- *Mammalian Cell Culture Techniques*
- *Gene Editing Technologies - CRISPR/Cas9*
- *Functional Assays in Tissue Culture*
- *DNA Damage Repair and Genomic Integrity*
- *Apoptosis and Cell Survival Assays*

Only 14  
participants

# Pre Conference Workshop 1

## Cancer Genetic Counselling in Practice

(TMH)

**Thursday & Friday: 20th & 21st February, 2025**  
**Venue: Choksi Auditorium, Tata Memorial Hospital, Parel, Mumbai**

**Who should attend:** Genetic Counsellors, Oncologists, Gynecologists, Preventive Medicine

**Faculty:** Rajiv Sarin, Somya Srivastava, Neena Bhatnagar, Deepali Kapoor, Aparna Dhar, Deepanjana Dutta, Yoon Sook Yee

**Instructors:** TMC Clinical Genetic & Counselling Team

**Format:** Faculty Talks, Case Based Interactive Discussions & Role Plays

### Day 1 (10 am - 6:00 pm)

1. **Overview of Cancer Epidemiology, risk factors & Cancer Genetics:** Risk factors for cancers, Global burden of Cancer & Hereditary Cancers
2. **Cancer Genetic Counselling in Indian Practice Setting & Barriers**
3. **Taking Personal & Family history, Phenotyping, Syndromic Diagnosis & drawing complex pedigrees**
4. **Navigating Medical Records of relevance and Verbal Autopsy techniques for cancer**
5. **Knudson's model for suspecting inherited predisposition to cancer:** Concept and case scenarios
6. **Choosing the right test and panel- Germline, Somatic or Both and their Sequence**
7. **Do's & Don'ts in Pretest and Post Test counselling:** Theoretical framework and real life scenarios
8. **Minimizing Pre-analytical errors, Consents & disclaimers:** Systematic approach to spot the red flags.
9. **Navigating through Genomic Databases to improve reporting and improve public health**
10. **Interpreting Genetic Test Reports**
11. **Dealing with VUS in the Clinic**

### Day 2 (9 am - 5:30 pm)

1. **HBOC syndrome, BRCA1/2 & other HRR Genes**
2. **Lynch Syndrome, MMR Genes**
3. **Li-Fraumeni Syndrome, TP53**
4. **MEN1, MEN2 & PPGL syndromes**
5. **NF1 & NF2 Syndrome**
6. **Cowden & Peutz Jegher Syndrome**
7. **DICER, WAGR and other syndromes, genes**
8. **Screening / Preventive Surgery for Ovary & Endometrial Cancer Risk**
9. **Screening / Preventive Surgery for Breast Cancer Risk**
10. **Chemoprevention, Endoscopic management & Surgical Prevention of colorectal cancer risk**
11. **Reporting & counseling for moderate penetrance genes**
12. **Ethical Legal and Psychosocial Issues in Genetic Counselling**
13. **Feedback, Post Workshop Evaluation & Group Photo**

# Pre Conference Workshop 2

## NGS & Digital MLPA - Wet Lab, Dry Lab & Reporting

### (ACTREC)

**Thursday & Friday: 20th & 21st February, 2025**  
**Venue: Genomics Lab, CRI, ACTREC, Kharghar, Navi Mumbai**

**Who should attend:** Genome analysts, Molecular Biologists, Molecular Pathologists, Clinicians, Genetic Counsellors, PhD students

**Faculty:** Rajiv Sarin, Poonam Gera, Somya Srivastava, Nikhil Gadewal

**Instructors:** TMC Genomics Lab & Reporting Team

**Format:** Faculty Talks, NGS Wet Lab, Sanger / MLPA Overview & Brief Demonstration, Interrogating Database & Drafting Reports, Case Based Interactive Discussions & Troubleshooting [BRING YOUR LAPTOPS, IF POSSIBLE]

#### Day 1 (10 am - 6:30 pm)

1. **Overview** of somatic & Germline testing & common hereditary cancer syndrome
2. **DNA extraction on Semi-Automated platforms & QC**
3. **NGS Hands-on workshop (in 2 batches)**
4. **Primer Designing & Troubleshooting for PCR**
5. **MLPA (including Digital MLPA):** Principles, steps & report analysis
6. **Sanger Sequencing:** Principle, steps, run set up demo and report analysis
7. **Bioinformatic pipelines**
8. **Population & disease database & resources used for variant classification**

#### Day 2 (9 am - 5:30 pm)

1. **Sequencing Outputs, QA & QC**
2. **ACMG Classification:** Applying various criteria for variant classification & reporting
3. **Variant interpretation & Reporting with Sophia DDM (Demo including CNV analysis)**
4. **NGS Run Set up, Sequencing Methods & Illumina platforms**
5. **Interesting & informative cases:** Variant Analysis, Interpretation, Clinical correlation
6. **Report Analysis in clinics:** Tips & tricks on fingertips
7. **Feedback, Post Workshop Evaluation & Group Photo**



# Pre Conference Workshop 3

## Functional Genomics, Tissue Culture & CRISPR (ACTREC)

**Thursday & Friday: 20th & 21st February, 2025**  
**Venue: Sarin Lab & Hasan Lab, CRI, ACTREC, Kharghar, Navi Mumbai**

**Who should attend:** Molecular Biologists, PhD students and Post Docs & Scientists

**Faculty:** Rajiv Sarin, Syed Hasan, Ashwin Kotnis, Poonam Gera, Jasoda Chaudhari

**Instructors:** Amartya Chakraborty, Om Yadav & Neha Gupta & Anup Jha

**Format:** Faculty Talks, Wet Lab techniques and Demonstration,

### Day 1 (9:30 am - 6:00 pm)

#### 1. Introduction to Functional Genomics: (Talk - Dr Ashwin Kotnis)

Overview of functional genomics, its role in understanding gene function, and how cell culture models like LCLs contribute to this research.

#### 2. Mammalian Cell Culture Techniques:

Key techniques in culturing and maintaining mammalian cells (including LCLs, PBMCs)

#### 3. Functional Assays in Mammalian Cell Culture:

##### a. Cell Proliferation Assay:

Measuring cell growth and division in response to gene modifications.

##### b. Cell Migration Assay:

Investigating how gene modifications impact cellular motility.

#### 4. DNA Damage Repair and Genomic Integrity:

Molecular techniques for studying DNA damage response in cell culture models.

### Day 2 (9:30 am - 6:00 pm)

#### 1. CRISPR in Gene Editing: An Introduction to Its Applications: (Talk - Dr Syed Hasan)

In-depth discussion on CRISPR/Cas9 applications in LCLs & other tissue culture systems for functional genomics. Exploring genetic modifications, gene knockouts, and gene overexpression techniques to study gene function

#### 2. Gene Editing Technologies - CRISPR/Cas9:

- |  |  |
|--|--|
| a. Designing the Guide RNA (sgRNA)     | b. Vector digestion and gel extraction |
| c. Annealing of sgRNA Oligonucleotides | d. Ligation                            |
| e. Plasmid Isolation                   | f. Cell Transfection                   |
| g. Targeted DNA Cleavage               | h. Validation of edits.                |

#### 3. Apoptosis Assay and Cell Survival:

Measuring apoptosis in response to genetic modifications using functional assays

#### 4. Troubleshooting and Discussion.

#### 5. Feedback, Post Workshop Evaluation & Group Photo

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*Topics to be covered in Main Conference (full programme will be shared soon)*

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