

**1. Title of the Course: Cancer Biology: Tools and Technology in Genomics, Diagnostics & Therapeutics**

- 2. Course Mentors:**
1. Dr. Palki Sahib Kaur Head of Department, Biotechnology, CCT [cct.hod@cgc.edu.in](mailto:cct.hod@cgc.edu.in), Contact No. 8968813333
  2. Dr. Sonica Sondhj Associate Professor, Biotechnology, CCT, [sonica.3316@cgc.edu.in](mailto:sonica.3316@cgc.edu.in) Contact No. 8295259397
  3. Dr. Preeti Devi, Associate Professor, Biotechnology, CCT, [preetidevi.4406@cgc.edu.in](mailto:preetidevi.4406@cgc.edu.in) Contact No. 8699360535.
  4. Dr. Narotam Sharma, Scientist and Head, DNA Labs A Centre for Applied Sciences, Dehradun, UK [sharmanarotam5@gmail.com](mailto:sharmanarotam5@gmail.com) Contact No. 9557650069

**3. Target Group:** Graduation, Post- Graduation, Ph.D research Scholar and faculty members

**4. Fee Structure:** 2000 /-per participant

**5. Duration of the course:** 10/07 /2023 - 14/07/2022

**6. Days and time of the course** (Monday to Friday 9.30 to 4.30pm)

**7. Eligibility of the Course:** Open for CGC Landran and Non CGC Landran Students, researchers and faculties.

**8. Objectives:** After completion of the course, the participants will be able to

1. Discuss the Ethics, Norms, Biosafety in infectious Virology & Biotechnology Laboratories
2. Interpret the programming of variants of PCR and amplification technologies in End Point PCR and Real Time PCR.
3. Analyse various Serological analysis, tumour markers CEA, CA125 and CA19 -9 characterizations and its importance .
4. Analyse End point amplifications technologies and its applications in HPV DNA HIGH RISK Causing cervical cancer, its detection.
5. Hands-on-training sessions on nucleic acid isolation from Clinical Samples (Saliva, Blood, biopsies etc) by Silica Column Method/ Magnetic Bead methods.

**9. Scope:** Understanding the development of new and more sophisticated approaches in diagnostic testing and the growth in targeted cancer therapies will transform the landscape of cancer diagnosis and care. This training course will address various aspects of cancer biology and will help to enhance the understanding about Tumor markers CEA, CA125 and CA19, recent developments in various Genomics tools like NABL .

**10. Uniqueness:** The course will impart hands on training on nucleic acid isolation, histological tissue preparations in solid Tumors and identification and characterizations of Tumor markers CEA, CA125 and CA19 . The training will be given by the experts in DNA labs, Dehradun, UK.

**11. Learning Outcomes of the Course:** After completing this course students will be able to know the

- Basic ethics, Norms, Biosafety guidelines in infectious Virology & Biotechnology labs .
- Interpret the programming of variants of PCR and amplification technologies .
- Identification and characterizations of tumor markers CEA, CA125 and CA19 .
- Demonstration of NABL Genomics tools and its Importance in Biotechnology and Cancer Biology .

## 12. Week/Day wise Plan of the Course:

| Module -1   | Module - 2   | Module - 3  | Module - 4   | Module - 5   |
|---|--|---|--|--|
| (Practical demonstrations on Pre-PCR/Master Mix Preparation for genes ) | (Serological analysis, Tumour markers CEA, CA125 and CA19-9 characterizations) | (Histological and Tissue preparations in Solid Tumors ) | (Determinations of Circulating tumour cells and WBCs in various carcinomas ) | (Real Time Polymerase chain reaction, End Point Amplifications ) |

Registration Link: <https://forms.gle/nxeuo1PDHwKqGGgV7>

**MODE OF PAYMENT:** CASH

TO BE DEPOSITED TO

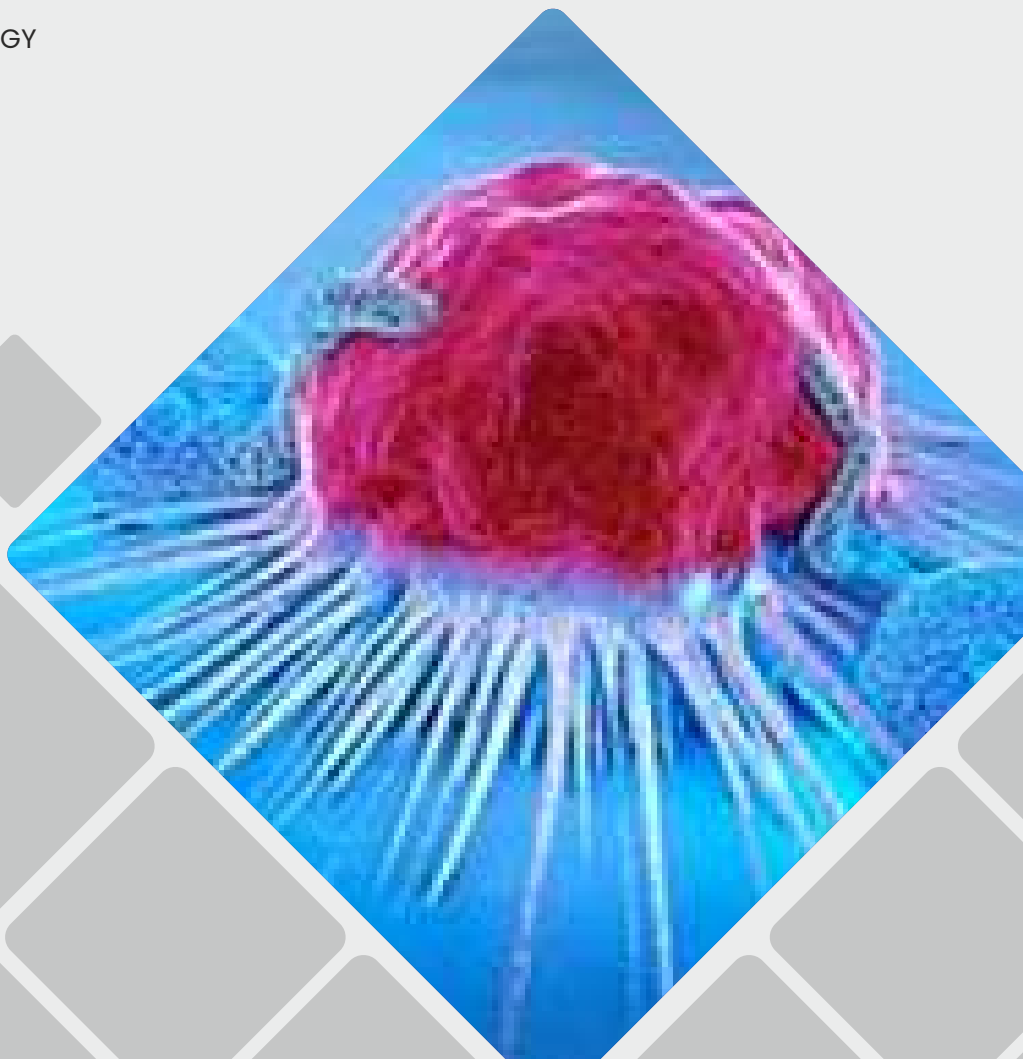
**DR. SONICA SONDHI**

COORDINATOR

DEPARTMENT OF BIOTECHNOLOGY

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