

Methods in Cancer Biomarker Research

PhD course CC BIO905, September 27th-29th 2022

Centre for Cancer Biomarkers CC BIO
Norwegian Centre of Excellence – University of Bergen (Norway)

The course will run as a digital event in Zoom. Access codes will be available to registered participants in due time.

Day 1: Tuesday, September 27th, 2022

Session 1: Chair: Ingeborg Winge

09:00-09:30 Introduction to cancer biomarker research (Lars A. Akslen)

09:30-10:15 Basic techniques – Nucleotides (Elisabet Ognedal)

10:15-11:00 Basic techniques – Proteins (Manuel Carrasco)

11:00-11:15 **BREAK**

Session 2: Chair: Vandana Ardawatia

11:15-12:00 Epigenetics and miRNA (Erling Høivik)

12:00-12:15 **For ECTS participants only:** Information about assignments (Agnete Engelsen)

12:15-13:00 **LUNCH**

For ECTS participants only: Working lunch with initiation of group assignment

13:00-13:45 Immunohistochemistry (Ingeborg Winge)

13:45-14:00 **BREAK**

Session 3: Chair: Ingeborg Winge

14:00-14:30 Proximity Ligation Assay (PLA) Gro Røssland)

14:30-15:15 Artificial Intelligence (Marit Valla)

For ECTS participants only: group assignment continued as agreed in the individual groups

Available online in mittUiB for self-study:

Lecture on *In situ* hybridization/RNAScope (by Agnete Engelsen)

Day 2: Wednesday, September 28th, 2022

Session 4: Chair: Ingeborg Winge

09:00-09:45 Tissue microdissection and proteomics (Kenneth Finne)

09:45-10:15 Flow cytometry and Mass cytometry (Jørn Skavland)

10:15-10:30 **BREAK**

Session 5: Chair: Vandana Ardawatia

10:30-11:15 Liquid biopsy (Oddmund Nordgård)

11:15-11:45 Next Generation Sequencing (Olav Vintermyr)

11:45-12:30 **LUNCH/ For ECTS participants only:** we suggest working lunch

Session 6: Chair: Ingeborg Winge

12:30-13:15 **For ECTS participants only:** Time allocated to group assignment

13:15-14:00 Mass Cytometry Imaging I (Vladan Milosevic)

14:00-14:15 **BREAK**

Session 7: Chair: Vandana Ardawatia

14:15-14:45 Mass Cytometry Imaging II (Ingeborg Winge & Kenneth Finne)

14:45-15:30 Mass Cytometry Imaging III (Dimitrios Kleftogiannis)

15:30-16:00 Spatial omics analysis (Carina Strell)

Available online in mittUiB for self-study:

Lecture on 'Strategies for analysis of biomarker data' (by Elisabeth Wik).

Day 3: Thursday, September 29th, 2022

Session 8: Chair: Vandana Ardawatia

09:00-09:30 Animal and cell models (Carina Strell)

09:30-10:15 Tissue organoids (Heidrun Vethe)

10:15-10:30 **BREAK**

Session 9: Chair: Vandana Ardawatia

10:30-11:15 Nanostring analysis (Karen Toska)

11:15-12:00 Biobanking (Ann Cathrine Krogsveen)

12:00-12.30 **LUNCH**

12.30- 13.15 **KEYNOTE Lecture: Professor Klaus Pantel. Topic: 'The promise of ctDNA and CTCs in the evaluation of cancer treatment efficacy' **NB! Zoom-webinar link****

13.15-13.30 Questions/ Break

Session 10: Chair: Ingeborg Winge

13.30- 14.15 Clinical applications of Cancer Biomarkers (Oddbjørn Straume)

14.15-14-30 **BREAK**

14.30-16.00 **Group assignments: presentations and discussion** with peers and an expert panel (Liv Cecilie Vestrheim Thomsen, Harsh Dongre, Cornelia Schuster)

This course is open to PhD candidates affiliated with the Centre for Cancer Biomarkers CCBio, UiB other PhD candidates, and students at the Medical Student Research Program **(5 ECTS credit course)**.

Academic responsibility:

Lars A. Akslen and Agnete Engelsen (CCBio)

Contact:

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