



Title: Cancer Research – from basic science to bedside

This PhD course is offered by the Doctoral School of Clinical Science and Biomedicine, Aalborg University, in the spring 2018.

Criteria for participation: Enrolled in a PhD programme at a Danish University

Evaluation: In order to pass the course, participants are expected to attend all lectures as well as to present their own projects and actively take part in scientific discussion. In addition, it is expected that all PhD students have read the scientific papers that will be circulated 4 weeks before the course.

Language: English

ECTS: Estimated 3.0

Head of Course: Ass. professor Tarec Christoffer El-Galaly (tceg@rn.dk) Aalborg University Hospital and the Clinical Cancer Research Center, Aalborg University Hospital

Course coordinator: Postdoc Julie Støve Bødker

Number of Participants: 20

Dates and Times: 23-25 May 2018

Place: Forskningshus, Sdr. Skovvej 15, 9000 Aalborg

Deadline for application: 9 May 2018

Application form: Online at Aalborg University's Doctoral School, in the course calendar

Confrontation hours (contact hours): 20 hours

Preparation, expected to be 100% of the confrontation hours: 10 hours

Participant activity: 6 hours

Further Information: Secretary Assistant Anne Lindblom Hansen (e-mail: a.lindblom@rn.dk), phone +45 97663864

Description of the course:

This PhD course is aimed at PhD students working within the field of translational cancer research and clinical cancer research. The course will cover several topics related to translational cancer research, including basic science methodologies, statistics and bioinformatics and clinical research. The basic science lectures will cover topics like tumour heterogeneity, liquid biopsies and model systems as well as the currently used methods to elucidate these topics. The bioinformatic lectures will focus on development of work-flows for personalized medicine, challenges in database structures, cancer commons, and interpretation of sequencing data. The clinical research will discuss contemporary cancer treatments and current needs, research based on clinical data, drug development and ethics in personalized medicine.



Final Programme

Wednesday 23 May 2018
Programme, day 1

| Time | Lecture | Organizer / Teacher |
|--------------------|--|---|
| 9:30 | Welcome and coffee | Tarec El-Galaly |
| 10:00-10:30 | Tumour heterogeneity | Karen Dybkær |
| 10:30-11:00 | Techniques to detect rare events and follow clonal evolution (Sequencing) | Julie Støve Bødker/ Mads Sønderkær |
| 11:00-12:00 | Colloquium on tumor heterogeneity Reading and discussion of predefined questions on key paper | Toward understanding and exploiting tumor heterogeneity. Alizadeh et al. PMID: 26248267 |
| 12:00-13:00 | Lunch | |
| 13:00-13:45 | Liquid Biopsies | Claus Lindberg Andersen, Professor, Colorectal Cancer Research Group MOMA, Aarhus University Hospital |
| 13:45-14:45 | Colloquium on liquid biopsies Reading and discussion of predefined questions on key paper | Clinical Implications of Monitoring Circulating Tumor DNA in Patients with Colorectal Cancer. Schøler et al. PMID: 28600478 |
| 14:45-15:15 | Coffee break | |
| 15:15-16:00 | Model systems and functional analysis | Bo Porse, Professor, Finsen Laboratory / Rigshospitalet, University of Copenhagen |
| 16:00-17:00 | Colloquium on functional analysis Reading and discussion of predefined questions on key paper | EZH2 is a potential therapeutic target for H3K27M-mutant pediatric gliomas. Mohammad et al. PMID: 28263309 |



Thursday 24 May 2018
Programme, day 2

| Time | Lecture | Organizer / Teacher |
|--------------------|---|---|
| 8:00-8:30 | Most important thing I learned yesterday – feedback from each course participant | Rasmus Froberg Brøndum |
| 8:30-9:30 | Bioinformatics workflow for DNA - and RNA-sequencing I | Mads Sønderkær/ Rasmus Froberg Brøndum |
| 9:30-9:45 | Coffee break | |
| 9:45-10:45 | Bioinformatics workflow for DNA - and RNA-sequencing II | Mads Sønderkær/ Rasmus Froberg Brøndum |
| 10:45-11:45 | Excercise: Intepretation of a VCF file by QCI | Mads Sønderkær/ Rasmus Froberg Brøndum |
| 11:45-12:30 | Lunch | |
| 12:30-13:15 | Finding and Targeting the Genomic Alterations which Drive Cancer Invasion | Richard Simon, the National Cancer Institute, USA, former Chief of the Computational and Systems Biology Branch |
| 13:15-14:00 | Basket Clinical Trials in Oncology | Richard Simon, the National Cancer Institute, USA |
| 14:00-14:30 | Coffee break | |
| 14:30-15:15 | Biomarker Driven Clinical Trial Designs in Oncology | Richard Simon, the National Cancer Institute, USA |
| 15:15 – 17:15 | Presentation of own PhD projects | Julie Støve Bødker |



Friday 25 May 2018
Programme, day 3:

| Time | Lecture | Organizer / Teacher |
|--------------------|---|---|
| 8:00-8:20 | Most important thing I learned yesterday – feedback from each course participant | Tarec El-Galaly |
| 8:20-8:30 | Presentation of today's program | Tarec El-Galaly |
| 8:30-9:30 | Toxicity reporting in haematological Malignancies in the real world setting | Tarec El-Galaly Senior Consultant, Department of Haematology |
| 9:30-10:15 | Patient reported outcome research in clinical cancer research | Mia Sommer PhD student, Department of Haematology |
| 10:15-10:45 | Coffee break | |
| 10:45-11:30 | Preclinical and clinical drug development in the pharmaceutical industry | Philipp Astrup Pharmacist, MSD |
| 11:30-12:15 | Drug approvals – The Danish Medicine Agency | Doris Hovgaard Senior Consultant, Lægemiddelstyrelsen |
| 12:15-13:00 | Lunch | |
| 13:00-13:45 | Copenhagen Phase 1 Unit | Martin Hutchings, Senior Consultant, Department of Hematology, Rigshospitalet |
| 13:45-14:30 | Immunotherapy | Marco Donia, Center for Cancer Immune Therapy (CCIT), Herlev Hospital |
| 14:30-15:00 | Coffee break | |
| 15:00-16:00 | Course evaluation and goodbye | |