

## **Title course: “Personalized Medicine in Cancer Research – The Scientific Methodology, Technologies, Infrastructure, Clinical Validation Trials and Implementation”**

This PhD course is offered by the Doctoral School of Clinical Science and Biomedicine, Aalborg University, autumn 2015.

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

**Evaluation:** To pass the course, it is expected that the participants will attend all lectures and present and discuss 1) a priori given highly selected article on the course topic or 2) the status of her/his PhD project including hypothesis, aims, findings and conclusions.

**Contents:** Lectures, workshops, journal clubs and student presentations.

**Language:** English

**ECTS:** Estimated 3.0

**Head of Course:** Professor Hans E Johnsen ([haej@rn.dk](mailto:haej@rn.dk)) Aalborg University Hospital, and The Clinical Cancer Research Center, Aalborg University Hospital (CCRC-Aalborg UH)

**Course coordinators:** Post doc Julie Støve Bødker, PhD student Anders Bilgrau, PhD student Sara Marques.

**Number of Participants:** 15

**Dates and Times:** 10-12 November 2015

**Place:** Klitgården Refugium, Damstedvej 39, DK-9990 Skagen, tel. +4596 79 19 99, e-mail: [info@klitgaarden.dk](mailto:info@klitgaarden.dk)

**Deadline for application:** 15 September 2015

**Application form:** To be filled out 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:** 20 hours

**Participant activity, expected to be 50% of the confrontation hours:** 10 hours

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

Description of the course:

This PhD course will focus on the classic research strategies to obtain diagnostic as well as therapeutic improvements as the background for a paradigm shift from "one fits all" to individualized strategies in clinical practice.

The complex cancer biology model for oncogenesis will be presented documenting the importance of the translational approach for the future - requiring new multidisciplinary engagements. Based on highly selected lectures and papers, we will discuss novel, cutting edge technologies (Multiparametric Flow Cytometry and Cell Sorting, Microarray Technologies, Gene Sequencing, Biobanking), Cancer models (Cancer Cell Lines and Mice Models) and the future design of trials (treatment, diagnostics) and endpoints while adhering to scientific rigor when interpreting results and decisions.

The course will include lectures, workshops and journal clubs. The outcome for participants will be insight into new technologies and approaches allowing the future researchers to participate in the translation of scientific discoveries into cost-effective and meaningful clinical improvements in patient care.

Literature hands out:

1. "The Unwritten Rules of PhD Research" Marian Petre & Gordon Rugg Open University Press, 2010, paperback, ISBN 0 335 237029

## Preliminary programme

**Tuesday 10 November 2015**

**1<sup>st</sup> day Course:**

<b>Time</b>	<b>Lecture</b>	<b>Organizer/Teacher</b>
<b>12-13.30</b>	<b>Arrival and lunch (12.30-13.30)</b>	
13.30-13.45	Welcome and course introduction	Lecturer Julie S. Bødker, cand scient PhD
13.45-14.15	"The Value of Personalized Medicine in Health Care"	Lecturer Hans Erik Johnsen, Professor
14.15-14.45	"Personalised medicine in oncology – need, goals and frame"	Lecturer Ursula Falkmer, Professor
14.45-15.15	"Personalized medicine in imaging"	Lecturer Lars Jelstrup Petersen, Professor
<b>15.15-16.30</b>	<b>Break and short walk</b>	
16.30-17.00	"Personalized medicine in Oncosurgery"	Lecturer Ole Thorlacius-Ussing, Professor
17.00-17.30	"Personalized medicine and Drug design"	Lecturer Sakari Kauppinen Professor
17.30-18.00	"Personalized medicine in radiation therapy"	Lecturer Jesper Carl, Associate Professor
<b>18.30-19.30</b>	<b>Dinner</b>	
19.30-20.30	Student 1 + 2 + 3 + 4 + 5 project presentation (10 min each)	
20.30-	Final planning in journal clubs and get together students and lecturers	

**Wednesday 11 November 2015****2<sup>nd</sup> day Course:**

<b>Time</b>	<b>Lecture</b>	<b>Organizer/Teacher</b>
8.30-9.30	Breakfast	
09.30-11.30	“Multiparametric flow cytometry and cell sorting”. Journal club I / workshop I	Lecturer Alexander Schmitz, cand scient PhD
<b>11.30-11.45</b>	<b>Break</b>	
11.45-12.30	Student 6 + 7 + 8 + 9 project presentation (10 min each)	
<b>12.30-13.30</b>	<b>Lunch</b>	
13.30-15.30	“Microarray Technologies” Journal club II / workshop II	Lecturer Julie Støve Bødker, cand scient PhD
<b>15.30-16.45</b>	<b>Break, walk and talk - Skagen</b>	
16.45-17.30	“Bioinformatics: Sequencing”	Lecturer Andreas Petri, cand scient PhD
17.30-18.30	Student 10 + 11 + 12 + 13 + 14 + 15 project presentation (10 min each)	
<b>18.30-19.30</b>	<b>Dinner</b>	

**Thursday 12 November 2015**  
**3<sup>rd</sup> day Course:**

<b>Time</b>	<b>Lecture</b>	<b>Organizer/Teacher</b>
<b>8.30-9.30</b>	<b>Breakfast</b>	
09.30-11.30	“MicroRNA in Cancer” Journal club III / workshop III	Lecturer Karen Dybkær, Professor
<b>11.30-11.45</b>	<b>Break</b>	
11.45-12.30	“Statistical issues in translational cancer research” (Part 1) Journal club IV / workshop IV	Lecturer Martin Bøgsted, Professor
<b>12.30-13.15</b>	<b>Lunch</b>	
13.15-14.45	“Statistical issues in translational cancer research” (Part 2) Journal club IV / workshop IV	Lecturer Martin Bøgsted, Professor
14.45-15.15	Coffee, summary and course evaluation	
<b>15.15</b>	<b>End of course</b>	