Title course: "Translational Cancer Research – The Scientific Methodology, Technologies, Infrastructure and Clinical Validation Trials and Implementation"

This PhD course is offered by the Doctoral School of Clinical Science and Biomedicine, Aalborg University, autumn 2013.

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) 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: 17

Dates and Times: 12-14 November 2013

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

Deadline for application: 8 October 2013

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), phone +45 99326873

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

Final programme

Tuesday 12 November 2013
1st day Course:

15.00 -16.15 **Arrival, Coffee and Welcome**

16.15-16.30 Course introduction
Hans E Johnsen, Professor

16.30-17.15 Lecture on "Personalised medicine – need, goals and frame"
Lecturer Ursula Falkmer, Professor

17.15-18.00 Lecture on "Mesoteliom – a translational approach"
Lecturer Oluf D. Roe, Professor

18.30-19.30 Dinner

19.30- Final planning in journal clubs and get together

Wednesday 13 November 2013
2nd day Course:

08.30-09.30 Breakfast

09.30-11.00 Lecture on "Multiparametric flow cytometry and cell sorting".
Lecturer Alexander Schmitz, cand scient PhD
Journal club I / workshop I

11.00-11.15 Break

11.15-12.15 Student 1 + 2 + 3 + 4 + 5 project presentation (10 min each)

12.30-13.30 Lunch

13.30-14.00 Student 6 + 7 + 8 project presentation (10 min each)

14.00-15.30 Lecture on "Microarray Technologies"
Lecturer Julie Støve Bødker, cand scient PhD
Journal club II / workshop II

15.30-16.45 Break + walk and talk

16.45-17.15 Lecture on "Bioinformatics: Gene Sequencing"
Lecturer: Andreas Petri, cand scient PhD

17.15-18.15 Student 9 + 10 + 11 + 12 + 13 project presentation (10 min each)

18.30-19.30 Dinner

19.30-21.30 Evening programme: Skagen Museum Round Tour

Thursday 14 November 2013
3rd day Course:

08.30-09.30 Breakfast

09.30-11.00 Lecture on "MicroRNA in Cancer"
Lecturer Karen Dybkær, Professor
Journal club III / workshop III

11.00-11.30 Break

11.30-12.15 Student 14 + 15 + 16 + 17 project presentation (10 min each)

12.30-14.15 Lunch and walk

14.15-16.15 Lecture on "Statistical issues in translational cancer research"
Lecturer Martin Bøgsted, Professor
Journal club IV / workshop IV

16.15-16.45 Break

16.45-17.30 Lecture on "Novel drug design and trials"
Lecturer: Sakari Kauppinen, Professor

17.30-18.00 Summary and course evaluation

18.30-19.30 End of course + Dinner