LUND UNIVERSITY
Faculty of Medicine

Research Programmes Board, FUN

Mouse Models and Imaging Modalities in Cancer Research, MED008F

Musmodeller och avbildningstekniker i cancerforskning

1.5 credits   Third cycle

General information

The course is part of the range of courses offered by a graduate school specialising in cancer – Cancer Research South (CARES). Space permitting, the course is also open to other doctoral students, postdoc researchers and other staff. The course is primarily intended for research students at Lund University and Gothenburg University who wish to deepen their knowledge of mouse models and imaging modalities in cancer research.

Language of instruction
English

Objective

The aim of the course is to provide in-depth knowledge of how to produce and use mouse models within cancer research, and to equip participants with tools to take well-founded decisions on suitable mouse models in their own research situation. It also provides an overview of current methods within various imaging modalities and their applications to animal models.

Learning outcomes

On completion of the course, participants shall be able to

- Compare different categories of mouse models within cancer and analyse the advantages and disadvantages of the models within each category
- Reflect on state-of-the-art techniques in producing and using new mouse models of cancer
- Compare different types of imaging modalities (in vivo/in vitro)
- Transfer knowledge of mouse models of cancer to their own research
- Independently search for more information on mouse models within cancer

Course content

The course includes an introduction to various mouse models within cancer research and their applications. Practical components involving the use of mouse models are also included. Great emphasis is placed on the participants being able, after the course, to choose the mouse model system that best suits a particular research hypothesis.

Course design

The course consists of course components with independent and group work. Teaching consists of a mixture of various forms of tuition such as lectures, a seminar and individual practical exercises. A continuous group work will be applied to achieve the course learning outcomes in which each participant's individual choice of model system will be discussed with all participants.

Assessment

In addition to completing the practical components, active attendance to all the teaching sessions of the course is required. The participants are assessed in connection with the final presentation of their choice of mouse model and imaging modalities for their own research based on the group work in which they will also critically review the models and techniques of the other participants.

Grades

The grades awarded are Pass or Fail.

Admission requirements

To be admitted to the course, the student must be admitted to research studies at the Faculty of Medicine or equivalent. Places are primarily assigned to doctoral students in CARES.

Required reading

Relevant literature identified by each group.