

Metoder i vaskulær biologi

Dette kursus afholdes af Århus Universitet i samarbejde med forskerskolen Danish Cardiovascular Research Academy.

Formål og indhold: Kurset tager sigte på give de ph.d.-studerende indsigt i de metoder og teknikker, der anvendes i undersøgelser af den vaskulære function hos dyr og i et vist omfang mennesker. Kurset vil fokusere på teknikker, der undersøger de cellulære aspekter af disse spørgsmål. I kurset vil også de praktiske aspekter af teknikkerne blive belyst og der vil være demonstrationer. Praktiske øvelser med de forskellige teknikker vil kunne arrangeres for den enkelte student, men vil foregå efter kurset.

Målgruppe: Ph.d.-studerende med interesser i vaskulær fysiologi/biofysik/farmakologi/biokemi og de metoder, som anvendes til at studere disse problemstillinger. Det forventes at de studerende vil blive bedt om at forberede en mindre introduktion til et emne, som vil blive behandlet ved kurset.

Form: Forelæsninger, journal clubs, demonstrationer

Kursusledelse: Professor Christian Aalkjær, Fysiologisk Institut, Aarhus Universitet

Undervisere: Undervisere fra udlandet (Anders Arner and Börje Haraldsson, Sverige; Jaqui Ohanian and Tony Heagerty, UK; Paul Vanhoutte, Frankrig; Steffen Bolz, Tyskland) vil undervise sammen med lærere fra Aarhus, København og Odense.

Tid: Mandag den 8. september til fredag den 12. september 2003 (5 dage)

Sted: Victor Albeck Bygningen, Aarhus Universitet

Kursusafgift: 6.500 kr.

Kursussekretær: Christian Aalkjær, Fysiologisk Institut, Aarhus Universitet, Universitetsparken 160, 8000 Århus C. Tel. +45 8942 2804; Fax +45 8612 9065; e-mail ca@fi.au.dk

Tilmelding: Både til fakultetet og kursussekretæren *senest 25. august 2003*.



Danish Cardiovascular Research Academy

Methods in artery research

September 8-12, 2003

Aims and content: This course aims at providing the students with theoretical aspects of methods and techniques used to evaluate cardiovascular function in experimental animals and to some extent humans. The course will also focus on practical aspects of the techniques used with demonstrations of some of the techniques. The course will include a journal club of relevant papers. Hands-on experience will be optional on an individual basis and will be arranged depending on demand.

A faculty of 17 experts will be involved in teaching the course, not only by giving lectures but also by their active participation in the discussion and demonstrations. As far as possible, all lecturers will be present for the whole of the course, providing maximum possibility for interaction.

Participants: 10-20 Ph.D. students.

Language: English

Director and secretary: Christian Aalkjær, Dept. Physiology, University of Aarhus.

Place: Eventually Victor Albeck Building, Aarhus University.

Preliminary programme:

Day 1:

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| 8.30-8.45 | Welcome |
| 8.45-9.30 | Vascular physiology (Christian Aalkjær) |
| 9.30-10.00 | Coffee |
| 10.00-10.55 | Vascular smooth muscle (Anders Arner, Lund, Sweden) |
| 11.00-12.00 | Techniques for evaluating small arteries - force transducers, recording of signals (Mike Mulvany) |
| 12.00-13.00 | Lunch |

- 13.00-14.00 Techniques for evaluating small arteries – perfusion (Ole Skøtt)
- 14.00-14.30 Coffee
- 14.30-15.30 Small arteries and hypertension – is it interesting? (Kent Lodberg Kristensen)
- 15.30-16.30 Presentation of students' projects

Day 2:

- 8.30-9.25 Fluorescence techniques (Christian Aalkjær)
- 9.30-10.30 Electrophysiological techniques (Holger Nilsson)
- 10.30-11.00 Coffee
- 11.00-12.00 Assessing vascular nerve function (Holger Nilsson)
- 12.00-13.00 Lunch
- 13.00-13.55 Whole organ studies (Niels-Henrik Holstein Rathlou)
- 14.00-14.45 Coffee
- 14.45-16.00 Demonstration of equipment (electrophysiology, fluorescence microscopy, organ culture, isometric myography, isobaric myography, forearm blood flow, NO and noradrenaline measurements).

Day 3:

- 8.30-9.25 Measuring lipids and other biochemistry (Jacqueline Ohanian, Manchester, UK)
- 9.30-10.30 Pharmacology and pharmacodynamics of small arteries and the microvasculature (Paul Vanhoutte, Paris, France)
- 10.30-11.00 Coffee
- 11.00-11.30 Endothelial control of vascular tone (Paul Vanhoutte, Paris, France)
- 11.35-12.30 Measuring NO (Ulf Simonsen)
- 12.30-13.30 Lunch
- 13.30-14.30 Endothelial dysfunction (Paul Vanhoutte, Paris, France)

- 14.30-15.00 Coffee
15.00-16.15 Presentation of student project

Day 4:

- 8.30-9.25 Current questions in capillary physiology (Börje Haraldsson)
9.30-10.45 Techniques in capillary research (Börje Haraldsson)
10.45-11.15 Coffee
11.15-12.00 Growing small arteries (Mike Mulvany)
12.00-13.00 Lunch
13.00-14.00 Transfection of arteries in vitro (Steffen Bolz, Munich Germany)
14.00-14.45 Transfection of arteries in vivo (Jens Kastrup)
14.45-15.15 Coffee
15.15-16.15 Journal club.

Day 5:

- 8.30-9.25 Techniques in angiogenesis research (Michael Horsman)
9.30-10.25 Growing smooth muscles (Thomas Ledet)
10.30-11.00 Coffee
11.00-12.00 Journal club
12.00-13.00 Lunch
13.00-13.45 Human small arteries in vivo – how to assess them? (Christian Torp-Pedersen)
13.50-14.45 Large arteries in vivo – how to assess them? (Niels Wiinberg)
14.45-15.15 Coffee
15.15-16.00 Microvascular disease in diabetes – the eye as an organ chamber (Toke Bek)
16.00-16.15 Evaluation

