



Rigshospitalet



UNIVERSITY OF  
COPENHAGEN



Danish  
Cardiovascular  
Academy

# The 22<sup>nd</sup> Integrative Human Cardiovascular Control Course

**Date:** 19-23 May, 2025

**Venue:** Danske Studenters Roklub & Copenhagen University Hospitals

Monday, 19 May

**Venue:** Danske Studenters Roklub (DSR) - Strandvænget 55, 2100 Copenhagen, 1<sup>st</sup> floor

## Session I

**Grand opening**  
**Moderator: Damian Bailey**

08:15 - 08:25 **Welcome and introduction to the program**

08:25 - 08:35 **Meet and greet**

08:35 - 09:20 **Cardiovascular Conundrum - Introduction to the course**  
Associate Professor, James A. Pawelczyk, Penn State University, USA

09:20 - 10:05 **My 25-year path of studying burn survivors: an introduction to hypothesis-driven research**  
Professor Craig Crandall, UT Southwestern Medical Center, USA

10:05 - 10:15 **Coffee Break**

10:15 - 11:00 **Heart function in animals - the adaptive nature of physiology in animal and man**  
Professor Tobias Wang, Aarhus University, DK

11:00 - 11:45 **ECG and Purkinje fibers in mammals**  
Associate Professor Morten Bækgaard Thomsen, University of Copenhagen, DK

11:45 - 12:30 **Embedding research in clinical practice**  
Professor Anders Perner, Copenhagen University Hospitals - Rigshospitalet, DK

12:30 - 13:30 **Lunch**

## Session II

## Student Presentations

13:30 - 14:15 **Introduction to a pig model for assessing the risk of atrial fibrillation in an obstructive sleep apnea**  
PhD Student Julie Norup Hertel, University of Copenhagen, DK

14:15 - 16:15 **Student presentations: 3x3 pitches**

Tuesday, 20 May

Venue: Danske Studenters Roklub (DSR) - Strandvænget 55, 2100 Copenhagen, 1<sup>st</sup> floor

Session III

**Exploring cardiovascular regulation and adaptation – In Motion, In Balance, In Sight**  
**Symposium moderated by Jakob Solgaard Jensen**

08:25 - 08:35 **Welcome - Intro to the day**

08:35 - 09:05 **Blood pressure regulation in adolescents born after assisted reproductive technologies**  
PhD Student Jakob Solgaard Jensen, Copenhagen University Hospitals - Rigshospitalet, DK

09:05 - 09:50 **Translational research primer. Understanding hypertension through animal and human investigation**  
Professor Scott Smith, UT Southwestern Medical Center, USA

09:50 - 10:35 **Sympathetic activity and methods to assess sympathetic nerve activity**  
Professor Paul Fadel, University of Texas at Arlington, USA

10:35 - 10:55 Coffee Break

10:55 - 11:40 **The exercise pressor reflex - interaction between cardiac output and muscle metabolism and blood flow**  
Associate Professor James Fisher, The University of Auckland, NZ

11:40 - 12:25 **Impact of age, sex-hormones, and physical activity on vascular function.**  
Professor Ylva Hellsten, University of Copenhagen, DK

12:25 - 13:25 Lunch

Session IV

13:25 - 14:10 **Evaluation of cardiac adaptations to endurance training.**  
Associate Professor, Katarina Steding-Ehrenborg, Lund University, SE

14:10 - 15:00 **MRI evaluation of cardiac function and myocardial perfusion.**  
Consultant Per Lav Madsen, Copenhagen University Hospitals - Herlev and Gentofte, DK

15:00 - 18:00 **Networking and reception**

18:00 - 20:00 Social dinner at the venue

Wednesday, 21 May

**Venue:** Frederiksberg Campus, Room: Gris, Dyrmlægevej 68, Frederiksberg C &  
August Krogh Institute, Room: Ultralyd, Universitetsparken 13, København

Session V

Demonstrations in groups

08:15 - 11:00 **Group I - Frederiksberg Campus**  
Demonstration. Animal model

**Group II - August Krogh Institute**  
Demonstration. Ultrasound assessment in human

11:30 - 12:30 Lunch (at the Roklub)

Session VI

**Special circulations I - Central blood flow**  
**Moderator: Per Lav Madsen**

12:30 - 12:40 **Welcome (back!) - setting the frame**

12:40 - 13:25 **Role of mitochondrial respiration on lactate release in experimentally-induced sepsis**  
Postdoc. Hannah Caldwell, University of Copenhagen, DK

13:25 - 14:10 **Measuring Cardiac Function at Rest and During Stress: Why Bother?"**  
Postdoc. Mads Fischer, University of Copenhagen, DK

14:10 - 14:30 Break

14:30 - 15:15 **The Forgotten Circulation - Lymphatics in health and disease**  
Postdoc. Benjamin Kelly, Copenhagen University Hospitals - Rigshospitalet, DK

Evening Free time

Thursday, 22 May

**Venue:** Frederiksberg Campus, Room: Gris, Dyrllægevej 68, Frederiksberg C &  
August Krogh Institute, Room: Ultralyd, Universitetsparken 13, København

## Session VII

## Demonstrations in groups

08:15 - 11:00

### Group I - August Krogh Institute

Demonstration. Ultrasound assessment in human

### Group II - Frederiksberg Campus

Demonstration. Animal model

11:30 - 12:30

Lunch (at the Roklub)

## Session VIII

## Special circulations II – Peripheral blood flow

Moderator: James Fisher

12:30 - 12:40

**Welcome (back!) - setting the frame**

12:40 - 13:25

### Cerebral and leg blood flow during exercise - influence of dehydration and hyperthermia

Professor José González-Alonso, Brunel University of London, UK

13:25 - 14:10

### Why the brain needs oxygen and gravity; a (free) radical perspective.

Professor Damien Bailey, University of South Wales, UK

14:10 - 14:30

Break

14:30 - 15:15

### Quantification of dynamic cerebral autoregulation: Welcome to the jungle!

Professor Patrice Brassard, Université Laval, CA

15:15 - 16:00

### Endothelia function and coagulation in health and disease

Professor Jakob Stensballe, University of Copenhagen, DK

16:00 - 16:30

**Experimental Physiology's Young Investigator Prize**

18:00 - 21:30

### Celebratory dinner at restaurant Flakfortet

By boat from Nyhavn (Address TBA)

Friday, 23 May

**Venue:** Danske Studenters Roklub (DSR) - Strandvaenget 55, 2100 Copenhagen, 1<sup>st</sup> floor

Session IX

**Special issues and summing up**  
**Moderator: Mads Fischer**

09:00 - 09:15 **Welcome - setting the stage**

09:15 - 10:00 **Determination of cardiac output at rest and during exercise**  
Professor Johannes Van Lieshout, Amsterdam UMC, NL

10:00 - 10:45 **Preparing the circulation for surgery**  
Professor Nicolai Bang Foss, Copenhagen University Hospitals - Hvidovre, DK

10:45 - 11:10 Coffee break

11:10 - 11:55 **The cardiovascular conundrum of orthostatic intolerance following spaceflight**  
Associate Professor James A. Pawelczyk, Penn State University, USA

11:55 - 13:00 Lunch

13:00 - 13:45 **From academia to pharma: My epic journey of transformation and how pharma's regulatory fire ignites scientific brilliance.**  
Associate Director Peter Bonde Ernst-Rasmussen, Genmab, DK

13:45 - 14:30 **What to look for in, as well as being, an excellent mentor: two sides of the same coin**  
Professor Craig Crandall, UT Southwestern Medical Center, USA

14:30 - 15:15 **Evaluation: Integrative cardiovascular aspects, questions, and discussion of topics from the week**