

The 21st Integrative Human Cardiovascular Control

A Danish Cardiovascular Academy Ph.D. course

Rigshospitalet and The August Krogh Institute, University of Copenhagen,
Denmark
May 13 –17, 2024

Course secretary: Jaime Latorre Finkelstein

Email: Jaime.finkelstein@regionh.dk

Telephone daytime: +45 3545 6120/private: +45 2735 1573

Updated: 01 August 2024

Venue: Danske Studenter Roklub (DSR) - Strandvaenget 55, 2100 Copenhagen, 1st floor

Monday 13/5	Study Design & translational physiology Moderator: Damian Bailey	Speaker
8.15 - 8.30	Welcome and introduction to the program – Explanation of the course requirements, presentation of participants, groups, and speakers	
8.30 - 9.15	My 25-year path of studying burn survivors: an introduction to hypothesis-driven research	Craig G. Crandall, USA
9.15 - 10.00	Translational Research Primer. Understanding Hypertension through Animal and Human Investigation	Scott Smith, USA
10.00 - 10.30	Coffee/ refreshment break	
10.30 - 11.15	Sympathetic activity and methods to assess sympathetic nerve activity.	Paul Fadel, USA
11.15 - 12.00	Endothelia function and coagulation in health and disease	Jakob Stensballe, DK
12.45 - 13:45	Lunch	
13.45 - 14.30	Embedding research in clinical practice	Anders Perner, DK
14.30 - 15.00	Student presentation 3 x 3 (3 slides, 3 minutes in total)	
14.45 - 15.30	Coffee/ refreshment break	
15.30 - 16.15	Student presentation 3 x 3 (3 slides, 3 minutes in total)	
Evening (18:30)	Social networking dinner in DSR	

Tuesday 14/5	In vivo human and animal research models Moderator: James A. Pawelczyk	Speaker
9.00 – 9.15	Meetup/setup	
9.15 – 10.00	Impact of the space environment on the human autonomic function	James A. Pawelczyk, USA
10.00-10.15	Coffee/ refreshment break	
10.15 – 11.00	Determination of blood volume	Carsten Lundby, DK
11.00 – 11.45	MRI Evaluation of Cardiac function and myocardial perfusion	Per Lav Madsen, DK
11.45 – 12.15	Lunch	
12.15 – 13.00	Determination of cardiac output at rest and during exercise	Johannes Van, NL
13.00 – 13.45	Determination of peripheral vascular flow	Lasse Gliemann, DK
13.45 – 14.00	Coffee/ refreshment break	
14.00 –14.45	ECG and Purkinje fibers in mammals	Kirstine Callø, DK
14.45 – 15.30	The exercise pressor reflex - interaction between cardiac output and muscle metabolism and blood flow.	James Fisher, NZ
15.30 – 16.00	Introduction to a Pig Model for Risk of Atrial Fibrillation in an Obstructive Sleep Apnea	Julie Norup Hertel, DK
Evening	Social networking time on your own	

Wednesday 15/5	Special circulations I - Central blood flow Moderator: Paul Fadel	Speakers
<p>08.15 - 11.00 <u>Pig Demonstration</u> Frederiksberg campus (Dyrlægevej 68)</p> <p>8.30 - 10.30 <u>Ultrasound demo</u> At the August Krogh Institute (Universitetsparken 13)</p>	<p>Group 1. Demonstration. Cardiovascular regulation in the pig.</p> <p>Group 2. Ultrasound: Echocardiography and peripheral blood flow</p>	<p>Demonstration Frederiksberg Julie Norup Hertel, DK Jakob Overgaard Larsen, DK</p> <p>August Krogh Per L Madsen, DK Kim Bredahl, DK and Mads Fischer DK</p>
<p>11.45 - 12.15</p>	<p>Return to and lunch at Danske Studenters Roklub (DSR) Strandvænget 55, 2100 København, 1st floor</p>	
<p>12.15 - 13.00</p>	<p>Cerebral blood flow, central fatigue, and hyperthermia – Evaluation of the importance of oxygen delivery to the brain and exercising muscles</p>	<p>Lars Nybo, DK</p>
<p>13.00 - 13.45</p>	<p>Heart function in animals</p>	<p>Tobias Wang, DK</p>
<p>13.45 - 14:00</p>	<p>Coffee break</p>	
<p>14.00 - 14.45</p>	<p>Quantification of dynamic cerebral autoregulation: Welcome to the jungle!</p>	<p>Patrice Brassard PhD, CA</p>
<p>14.45 - 15.15</p>	<p>Coffee break</p>	
<p>15.15 - 16.00</p>	<p>Why the brain needs oxygen and gravity; a (free) radical perspective.</p>	<p>Damian Bailey, Wales, UK</p>
<p>Evening</p>	<p>Social networking time on your own</p>	

Thursday 16/5	Special circulations II – Peripheral blood flow Moderator: James Fisher	Speakers
<p>8.15 – 11.00 <u>Pig Demonstration</u> Frederiksberg campus (Dyrlægevej 68)</p> <p>8.30 – 10.30 <u>Ultrasound demo</u> At the August Krogh Institute (Universitetsparken 13)</p>	<p>Group 2. Demonstration. Cardiovascular regulation in the pig.</p> <p>Group 1. Ultrasound: Echocardiography and peripheral blood flow</p>	<p>Demonstration Frederiksberg Julie Norup Hertel, DK Jakob Overgaard Larsen, DK</p> <p>August Krogh Per L Madsen, DK Kim Bredahl,DK and Mads Fischer DK</p>
11.45 – 12.15	Return to and lunch at Danske Studenters Roklub (DSR) Strandvænget 55, 2100 København, 1st floor	
12.15 – 13.00	Student talk with professors	
13.00 – 13.45	Regulation of skeletal muscle blood flow	Ylva Hellsten, DK
13.45 – 14:00	Coffee break	
14.00 – 14.45	Cerebral and leg blood flow during exercise - influence of dehydration and hyperthermia	José González-Alonso, UK
14.45 – 15.30	The orthostatic challenge as evaluated in the giraffe.	Christian. Aalkjaer, DK
15.30 – 15.45	Coffee break	
15.45 – 16:15	The History of the Danish Students Rowing Club	Mads Fischer Link (Danish)
18.00	Experimental Physiology's Young Investigator Prize Celebratory dinner at Mad klubben, national Museet, glyptoteket, Carlsberg, absalon	

Friday 17/5	Special issues and summing up Moderator: Scott Smith	Speakers
9.00 – 9.15	Meetup/setup	
9.15 – 10.00	Preparing the circulation for surgery	Nicolai B. Foss, DK
10.00 – 10.45	Cardiac adaptations to endurance training	Katarina Steding Ehrenborg
10.45 - 11.00	Coffee break	
11.00 – 11.45	The Cardiovascular Conundrum of Orthostatic Intolerance following Spaceflight	James A. Pawelczyk, USA
11.45 - 12.15	Lunch	
12.15 – 13.00	From Academia to Pharma: My Epic Journey of Transformation and How Pharma's Regulatory Fire Ignites Scientific Brilliance.	Peter Rasmussen, DK
13.00 – 13.15	Coffee break	
13.15 – 14.00	What to look for in, as well as being, an excellent mentor: two sides of the same coin	Craig G. Crandall, USA
14.00 – 14.45	Evaluation: Integrative cardiovascular aspects, questions. and discussion of topics from the week	