

## The 5<sup>th</sup> Seminar on Exercise in Medicine, Trondheim, 11-13<sup>th</sup> December 2013

Dear Colleagues and Friends:

It is a pleasure to invite you to "The 5<sup>th</sup> Seminar on Exercise in Medicine" in Trondheim the 11-13<sup>th</sup> of December 2013. The seminar is hosted by the Cardiac Exercise Research Group ([www.ntnu.edu/cerg](http://www.ntnu.edu/cerg)) at the Department of Circulation and Medical Imaging, at Norwegian University of Science and Technology (NTNU), Trondheim, Norway.

This seminar brings together young and experienced researchers in the field of clinical cardiology, exercise in medicine and basic mechanism of cardiac function. The main purpose is to discuss recent progress in identifying the cellular and molecular mechanisms underlying cardiovascular disease and the observed beneficial effects of physical exercise on the cardiovascular system.

In contrast to the large international conferences, an intension by organizing this small seminar is to create an informal and intimate setting, which we know set the stage for open discussions and brainstorming to create new ideas for good research.

**Wednesday evening** we will welcome you with an opening session with two of the most renowned exercise physiologists throughout time Bengt Saltin & Jerome Dempsey. This session will combined with soft drinks and snacks.

**Thursday** will be a very busy day from early morning to late night. The final program closes at 1630. You will have some time to relax before departure for an outdoor dinner in the forest of Trondheim. Although this seem to be stressful we promise that we will be taken good care of in a relaxing environment as soon as you have put on your warmest clothes. Right now the autumn is setting in and it is still warm, but in December we are hoping for nice cold weather with plenty of snow. Please also bring outfit for bathing as we plan to look at the stars from a wooden bath tub before the dinner starts.

**Friday** we start up with program from the morning of and end the scientific session at 1630. For those of you that are interested you will be invited to join a seminar called "Man in extreme environment" at 1900 on Friday night, with the following program:

**Paul Rose:** A man at the front line of exploration and one of the world's most experienced divers and polar experts, Paul Rose has been helping scientists unlock global mysteries for the past 30 years in the most remote and challenging regions of the planet. Paul is Vice President of the Royal Geographical Society and Chair of the Expeditions and Fieldwork Division. He is an expert polar, environmental, exploration and field science consultant.

**Børge Ousland:** With solo expeditions to both the South- and the North Pole as well as solo crossings of both the Arctic and the Antarctic, from coast to coast, Børge Ousland has firmly established himself as the leading polar explorer of our time.

**Christopher McDougall:** Author of the bestselling book "Born to run" a hidden tribe, super athletes and the greatest race the world has ever seen.

As organizers for this seminar we provide "the playing ground", but it's the players that make the game fun. We are therefore deeply grateful if you would like to participate and share your time with us these days. We welcome you to participate in this multidisciplinary setting.



Pictures from earlier seminars on Exercise in Medicine in Trondheim

Evening session 11<sup>th</sup> December, 19.00 hours

## The history of exercise physiology and future challenges

### **Professor Bengt Saltin**

Copenhagen Muscle Research Centre - University of Copenhagen, Denmark

### **Professor Jerome A Dempsey**

University of Wisconsin – Madison, USA



Program 12<sup>th</sup> December 2013  
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	<b>Section 1: Epidemiological approach to physical activity and cardiovascular disease</b> Chair: Lars vatten
Keteyian SJ	<b>Physical Activity and Fitness in the Prevention and Treatment of Chronic Diseases</b> Prevention Research Center Public Health Research, University of South Carolina
Conrad P Earnest	<b>Unlocking the barriers to improved functional capacity in the elderly</b> University of Bath, UK
Gaziano JM	<b>Viewing cardiovascular research through the eyes of past, present, and future generations.</b> Massachusetts Veterans Research and Information Center, VA Boston Healthcare System, and Division of Aging, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA.
	<b>Section 2: Diastolic heart failure</b> Chair: Rune Wiseth & Asbjørn Støylen
Burkert M. Pieske	<b>Medical University Graz, Department of Cardiology, Graz, Austria.</b> Heart failure with preserved ejection fraction—what do we know and what do we need to know?
Barry A Borlaug	<b>Cardiac output response to exercise in heart failure with preserved ejection fraction.</b>
Eva Gerdtz	<b>The female heart and heart failure with preserved ejection fraction</b>
	<b>Session 3: Molecular regulation of cardiac function</b> Chair: Gianluigi Condorelli & Patricia Brum
Eva van Rooij	Department of Internal Medicine, Akershus University Hospital <b>Prognostic and diagnostic value of cardiovascular biomarkers</b>

Program 13<sup>th</sup> December 2013  
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	<b>Session 1: Mitochondrial function</b> Chair: Øivind Rognmo & Steven L Britton
Erich Gnaiger	<b>Mitochondrial measurements, pathways and respiratory control: Mitochondrial respiratory control and early defects of oxidative phosphorylation in the failing human heart.</b> D. Swarovski Research Laboratory, Department of Visceral, Transplant and Thoracic Surgery, Medical University of Innsbruck, A-6020 Innsbruck, Austria.
	<b>Session 2: Basic mechanisms of cardiac function</b> Chair: Geir Christensen & David Eisner
Stephan E. Lehnart	<b>Understanding the physiology of heart failure through cellular and in vivo models-towards targeting of complex mechanisms.</b> University Medicine Goettingen, Department of Cardiology & Pulmonology, Robert-Koch-Straße 40, 37075 Goettingen, Germany.
Roger J Hajjar	<b>Altered sarcoplasmic reticulum calcium cycling—targets for heart failure therapy.</b> Cardiovascular Research Center, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029, USA.
Mark Boyett	<b>Exercise training reduces the resting heart rate via downregulation of the funny channel, HCN4, and the funny current, If</b> University of Manchester, Manchester, United Kingdom.
Luigi Venetucci	<b>Inherited calcium channelopathies in the pathophysiology of arrhythmias</b> Institute of Cardiovascular Sciences, University of Manchester, Manchester, United Kingdom.

	<p><b>Section 3: Sports cardiology and lifestyle interventions</b>  Chair: Jan Pål Loennechen Charlotte B Ingull</p>
Lance Gould	<p><b>Combined Intense Lifestyle and Pharmacologic Lipid Treatment Further Reduce Coronary Events and Myocardial Perfusion Abnormalities Compared with Usual-care Cholesterol-lowering Drugs in Coronary Artery Disease.</b>  Martin Bucksbaum Distinguished University Chair, Professor and Executive Director of the P.E.T. Center for Preventing and Reversing Atherosclerosis, The University of Texas Medical School at Houston.</p>
Robert Lustig	<p><b>The toxic truth about sugar.</b>  Department of Pediatrics, University of California, San Francisco, California 94143, USA.</p>
	<p><b>Section 4: Cardiopulmonary exercise testing and sports cardiology</b>  Chair: Trine Karlsen</p>
Mike Grocott	<p><b>Cardiopulmonary Exercise Testing – more than <math>VO_{2max}</math>?</b>  University of Southampton, UK</p>

