#### Basic and Clinical Research in Musculo-skeletal and Oral Sciences

Post graduate research program, Faculty of Health and Medical Sciences – University of Copenhagen

in collaboration with

# Clinical Academic Groups, Copenhagen Health Science Partners (Region H and University of Copenhagen)



# "Physical Activity and Sports in Clinical Medicine – Disease Prevention, Treatment and Rehabilitation"

# **Annual Symposium**

Thursday 29th November – Friday 30th November 2018

Comwell Borupgaard Nørrevej 80, 3070 Snekkersten

# **THURSDAY 29th NOVEMBER**

10.00 - 10.45

### **Key-note lecture:**

Circadian rhythm in the Musculo-Skeletal System – does it

matter in relation to exercise?

Professor Qing-Jun Meng, Univ Manchester, UK

Chairs: Professor Michael Kjaer and post doc Chloé Yeung

### 10.50 – 12.30 Free oral presentations from PhD students

#### **Auditorium B**

Chairs: Professor Peter Magnusson, Professor Julie Gehl

Presentations each 8+4 min

The oral presentations are follow by feedback on the presentation technique (20 min)

**Comments on presentation technique**: MA in rhetoric Thea Feveile Sejr Hansen

10.50 - 11.02

#### Adam E. M. Jørgensen

"Collagen Growth of Human Knee Cartilage in Health and Osteoarthritis"

11.02 - 11.14

#### **Jacob Frandsen**

"Repeated prolonged exercise in young and old well-trained cyclists"

11.14 - 11.26

#### Annesofie T. Olesen

"Effects of aging and training on intramuscular connective tissue"

11.26 - 11.38

#### Karen Lindhardt Madsen

"No Effect of Triheptanoin on Exercise Performance in Patients with McArdle Disease – A Randomized Controlled Trial"

11.38 - 11.50

#### **Peter Tran**

"Fibrillin deficiency leads to weakened, smaller tendons in both trained and untrained mice"

11.50 - 12.02

#### Grith Højfeldt

"Does habitation to a high protein diet influence whole body protein turnover in a postprandial state?"

#### **Auditorium C**

**Chairs**: Professor Per Hølmich, Senior Researcher Peter Schjerling

Presentations each 8+4 min

The oral presentations are follow by feedback on the presentation technique (20 min)

**Comments on presentation technique**: MA in rhetoric Mads Højlyng

10.50 - 11.02

#### Mikkel Jensen

"Influence of carbohydrates on amino acid absorption from dietary protein"

11.02 - 11.14

#### Jens R. Jakobsen

"Adipocytes are present at the human myotendinous junction (MTJ)"

11.14 - 11.26

#### **Jacob Bülow**

"Is muscle protein synthesis associated with the metabolic profile: A cross sectional analysis of the CALM-cohort"

11.26 - 11.38

#### Maria Swennergren Hansen

"Reliability of Copenhagen Achilles Length Measure on patients with an Achilles tendon rupture"

11.38 - 11.50

#### **Rasmus Skov Husted**

"Orthopaedic surgeon's perspectives on exercise for patients with end-stage knee osteoarthritis – a qualitative study"

12.30 – 13.15 Lunch

### **SYMPOSIUM 1 (auditorium B):**

# What physical activity should we promote for the improvement of health in diseases?

Chairs: Professor Ylva Hellsten, Professor Flemming Dela

13.15 – 13.40	High intensity interval training – a feasible and effective strategy for the improvement of health in clinical populations?  Professor Martin Gibala, McMaster University, Hamilton, Canada
13.40 – 14.05	High intensity interval training is not an optimal strategy for the improvement of health – a clinical perspective Professor Martin Halle, TUM München, Germany

14.05 - 14.45 Battle and Discussion with Audience

### **SYMPOSIUM 2 (auditorium C):**

### How to present scientific results

Chairs: Professor Thomas Bandholm, Professor Peter Schwarz

13.15 – 14.00	When the tail is wagging the dog – the importance of structure and focus in a scientific presentation Associate Professor Thea Feveile Sejr Hansen, Univ of Copenhagen
14.00 – 14.45	Use of Power Point in presentation of scientific results? MA (Rhetoric) Mads Højlyng, Dept. of Management, CBS

## 14.45-15.15 Break (coffee/tea)

### **SYMPOSIUM 3 (auditorium B):**

#### Metabolism

Chair: Professor Peter Schwarz, Professor Tina Vilsbøll

15.15 – 15.40 Exercise and insulin action; when once is enough or even too

much

Professor Jørgen Wojtaszewski, Section of Molecular Physiology

Department of Nutrition, Exercise and Sports

University of Copenhagen

15.45 – 16.10	Metabolic myopathies Professor Antonio Toscano, University of Messina, Italy
16.15 – 16.40	Development of type 2 diabetes – who is to blame – the muscle, the liver or the gut? Professor Sten Madsbad, Dept. of Endocrinology, Hvidovre Hospital

## **SYMPOSIUM 4 (auditorium C):**

### Physical activity before, during and after surgery

Chair: Professor Julie Gehl, Professor Per Hølmich, Professor Peter Magnusson

15.15 – 15.40	Surgical stress response and recovery after abdominal surgery Professor Ismail Gögenur, Dept of Abd Surgery, Køge Hospital
15.45 – 16.10	Blood flow restriction training as a prehabilitation concept in total knee arthroplasty Associate Professor Ulrik Frandsen, Dept of Sports Science and Clinical Biomechanics, University of Southern Denmark
16.15 – 16.40	Prehabilitation: The new kid on the block? Professor Franco Carli, McGill University, Montreal, Canada

17.00 - 18.30 **Poster presentation in Aud A** (3 min for each poster)
Posters from all others than MUSKOS PhD students. Posters are placed in **Aud E** throughout the meeting.

Chairs: Professor Jørn Wulff Helge, Associate Professor Abigail Mackey

Combination of GLP-1 receptor agonist (GLP-1RA) treatment and physical activity for maintenance of diet-induced weight loss and metabolic health

Simon B. K. Jensen

Department of Biomedical Sciences and NNF Center for Basic Metabolic Research, University of Copenhagen, Department of Endocrinology, Hvidovre Hospital, Hvidovre, Denmark

Reduced skeletal muscle fat oxidation during exercise in an adult with lipin-1 deficiency

Daniel Raaschou-Pedersen Copenhagen neuromuscular Center, Department of Neurology, Rigshospitalet, University of Copenhagen 3

#### Maximal fat oxidation in a ski-ergometer and relation to performance in Vasaloppet

Mikkel T. Hansen

Xlab, Department of Biomedical Science, Denmark

4.

#### Growth and differentiation factor 15 as a biomarker for mitochondrial disease

Nanna Scharff Poulsen

Copenhagen Neuromuscular Center, Rigshospitalet, University of Copenhagen, 2100 Copenhagen, Denmark

5.

#### Axial muscular affection in patients with LGMD2L

Tahmina Khawajazada

Copenhagen Neuromuscular Center, Department of Neurology

6.

#### The ATOM study: Asthma severity in women: The influence of training and menopause

Frik Hansen

Respiratory Research Unit, Bispebjerg Hospital, NEXS, University of Copenhagen, Cardiology Department, Bispebjerg Hospital

7

# Blood-flow restricted training vs heavy-load training on mechanical muscle function. Systematic review and meta-analysis

Birk Grønfeldt

University of Southern Denmark, Institute of Sport Science and Clinical Biomechanics, Hogskulen pa Vestlandet, Centre for Evidence-Based Prectice, Odense University Hospital, Department of Neurosurgery

8

# Between-limb asymmetry in leg muscle mass, strength and power in older home-dwelling independently living people. Association with functional ability

Kenneth H. Mertz

Institute of Sports Medicine and Department of Orthopedic Surgery M, Bispebjerg Hospital, Copenhagen, Denmark

9.

# Effect of an unhealthy lipoprotein distribution on muscle protein synthesis response to whey feeding

Mie Cecilie Faber Zillmer

Institute of Sports Medicine Copenhagen, Department of Orthopaedic Surgery M, Bispebjerg Hospital, Copenhagen, Center for Healthy Ageing, Faculty of Health Sciences, University of Copenhagen

10.

# Circadian clock gene expression in human tendons in response to physical activity and immobilization

Ching-Yan Chloé Yeung

Institute of Sports Medicine Copenhagen, Bispebjerg Hospital, Center for Healthy Aging, University of Copenhagen

11.

# Acute Response of Biochemical Bone Turnover Markers to High-impact Exercise for Postmenopausal Women

#### R. S. Prawiradilaga

Department of Nutrition, Exercise and Sports, University of Copenhagen, Department of Clinical Biochemistry, Rigshospitalet, Copenhagen

12.

Larger osteogenic effect in postmenopausal than in premenopausal women after 19 weeks of supervised gymnastics training

Eva W. Helge

University of Copenhagen: Department of Nutrition, Exercise and Sports; Department of Biomedical Sciences, Xlab.

Rigshospitalet/Glostrup: Department of Clinical Biochemistry

13

Association between weight loss and changes in physical inactivity in overweight/obese individuals with knee osteoarthritis: an 8-week cohort study

Cecilie Bartholdy

The Parker Institute, Copenhagen University Hospital Bispebjerg and Frederiksberg, Department of Physical and occupational therapy, Copenhagen University Hospital Bispebjerg and Frederiksberg

14.

Patient Reported Outcome and Body Mass Index in 3,327 total knee arthroplasty patients

**Anders Overgaard** 

The Parker Institute, Copenhagen University Hospital Frederiksberg

15.

Morbidity and mortality in children with low muscle mass undergoing scoliosis surgery. A retrospective cohort study

Marie Mostue Naume

Copenhagen Neuromuscular Center, Department of Neurology, Department of Intensive Care 4131, Department of Pediatrics, Department of Orthopedic Surgery, HOC, Department of Anesthesiology, HOC – All from University of Copenhagen, Rigshospitalet, Copenhagen

16.

Improved functional capacity before surgery & postoperative complications: A study in colorectal cancer

Enrico M. Minnella

Departments of Anesthesia and Surgery, McGill University Health Centre, Montreal, Canada

19.30 Pre-dinner drink

20.00 - **Dinner** (including PhD CUP)

**Chairs**: Professor Thomas Bandholm, Associate Professor Kristian Thorborg

## FRIDAY 30th NOVEMBER

8.30 – 9.15 **Key-note lecture**:

Physical Activity and Brain Function Professor Carl-Johan Boraxbekk, Hvidovre Hospital

Chair: Professor Michael Kjaer

### 9.20- 10.40 Free oral presentations from PhD students

#### **Auditorium A**

**Chairs:** Professor Jens Bangsbo, Professor Thomas Bandholm

Presentations each 8+4 min

The oral presentations are follow by feedback on the presentation technique (20 min)

**Comments on presentation technique**: MA in rhetoric Thea Feveile Sejr Hansen

9.20 - 9.32

#### Ronni Eg Sahl

"Energy balance in younger and older well-trained men during 15 days cycling at near-maximal energy expenditure rates"

9.32 - 9.44

#### Nikoline Løkken

"12-minutes walking test in mitochondrial myopathy: a potential screening test"

9.44 - 9.56

#### **Christian Pilely Olsen**

"Management of acute lateral ankle sprains: A randomized, controlled trial"

9.56 - 10.08

#### **Anne-Sofie Agergaard**

"Treatment of patellar tendinopathy; Influence of load magnitude on clinical outcome, tendon structure and function"

10.08 - 10.20

#### **Cheng Zhang**

"Regional differences in collagen content and tendon Mechanics"

#### **Auditorium B**

**Chairs:** Senior Researcher Jesper Løvind Andersen, Associate Professor Kristian Thorborg

Presentations each 8+4 min

The oral presentations are follow by feedback on the presentation technique (20 min)

**Comments on presentation technique**: MA in rhetoric Mads Højlyng

9.20 - 9.32

#### **Karina Husted**

"Biological Age in Health Promotion: protocol for Biological Age assessment"

9.32 - 9.44

#### **Kristian Buch**

"Metabolic changes induced by adjuvant chemotherapy and/or aromatase inhibitors in women diagnosed with early breast cancer – effect of two different exercise training regimens on recovery"

9.44 - 9.56

#### Signe Hulsbæk

"Preliminary effect and safety of physiotherapy with strength training and protein-rich nutritional supplement in combination with anabolic steroid in patients with hip fracture – the HIP-SAP trial"

9.56 - 10.08

#### Julia R. Dahlqvist

"Disease progression and outcome measures in spinobulbar muscle atrophy"

10.08 - 10.20

#### Kirsten Lykke Knak

"Current Validity of Muscle Strength, Balance and Functional Outcome Measures in Myotonic Dystrophy Type 1: the MyDOM cohort"

# **SYMPOSIUM 5 (auditorium A):**

### Inflammation

Chair: Professor Vibeke Backer, Professor Michael Kjaer

11.00 – 11.25	Inflammation and metabolism – focus on IL-6 Associate Professor Helga Ellingsgaard, Univ of Copenhagen
11.30 – 11.55	Exercise in connective tissue: Mechanical overload of tendon Professor Neal Millar, Dept Orthop Surgery, Univ of Glasgow, UK
12.00 – 12.25	Asthma, training and inflammation Professor James Hull, Dept of Pulmonology, Royal Bromton, London, UK

## **SYMPOSIUM 6 (auditorium B):**

# Exercise compliance: How to initiate and maintain physical activity in individuals

Chair: Professor Jørn Wulff Helge, Professor Bente Klarlund

11.00 – 11.25	How to engage patients in physical activity? Professor Julie Midtgaard, Univ of Copenhagen
11.30 – 11.55	Training in patients who undergo bariatric operation Professor Jens Meldgaard Bruun, Aarhus University
12.00 – 12.25	Physical activity in patients with neuromuscular diseases Professor John Vissing, Rigshospitalet, Univ of Copenhagen
12.30 – 13.15	<b>Lunch</b> (and separate board meeting Basic and Clinical Research in Musculoskeletal and Oral Sciences)