

Program

International seminar 17th -19th of August 2016

Venue: The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark

Host: Institute of Sports Medicine, Bispebjerg Hospital, University of Copenhagen

“MUSCLE-TENDON FUNCTION: CELL-MATRIX INTERPLAY”

Wednesday 17th of August 2016

Tendon use, overuse and healing

- 13.00 Tendinopathy in humans – role of inflammation
Andrew Carr, Oxford University, UK
- 13.30 Tendon rupture and its repair
Per Aspenberg, University of Linköping, Sweden
- 14.00 Breakdown of connective tissue – physiology and pathology
Graham Riley, University of East Anglia, Norwich, UK
- 14.30 Role of neural pathways in tendon injury and tendinopathy
Paul Ackerman, Karolinska Institute, Stockholm, Sweden
- 15.00 Coffee/tea break
- 15.30 Documented and undocumented treatments of tendinopathy
Roger Smith, Royal Veterinary College, London, UK

Chair: Michael Kjaer

Skeletal muscle adaptation to load and overload – role of different cells

- 16.00 Role of satellite cell in muscle hypertrophy – interplay with fibrosis
Charlotte Peterson, University of Kentucky, Lexington, USA
- 16.30 Satellite cell regulation in skeletal muscle with loading – role of inflammation
Abigail Mackey-Sennels, University of Copenhagen, Denmark

17.00 Interplay between cells in skeletal muscle regeneration
Benedicte Chazaud, Université de Lyon 1 Claude Bernard, France

Chair: Miranda Grounds

17.30 End of program

18.30 Social program: Speakers dinner at Restaurant Studio at the Standard

Thursday 18th of August 2016

Development of connective tissue structures

9.00 Development of the muscle-tendon-bone unit – An overview
Ronen Schweitzer, Shriners Hospital for Children, Portland, Oregon, USA

9.30 Biochemical and mechanical characteristics of the developing tendon
Catherine Kuo, University of Rochester, Rochester NY, USA

10.00 Connecting tendon to bone and muscle – from development to maturity
Elazar Zelzer, Weizmann Institute of Science, Rehovot, Israel

10.30 Coffee/tea break

11.00 Role of chemical bindings for function in connective tissue
David Eyre, University of Washington, Seattle, USA

11.30 Tissue turnover in tendon and cartilage – influence of mechanical loading
Peter Schjerling, University of Copenhagen, Denmark

Chair: Karl Kadler

12.00 Lunch

Regulation of connective tissue forces – from structure to function

12.45 Circadian rhythm in tendon homeostasis
Karl Kadler, Manchester University, UK

13.15 Role of collagen type V for tendon and ligaments
Louis Soslowsky, University of Pennsylvania, Philadelphia, USA

13.45 Collagen synthesis modulation
Jeffrey Ruberti, Northeastern University, Boston, USA

Chair: David Eyre

14.15 Coffee/tea break

Force and tissue regulation in muscle and tendon

14.45 Structure and biology of muscle ECM—Implications for muscle plasticity
Richard L.Lieber, Rehabilitation Institute of Chicago, USA

15.15 Stem cells and growth factors in tissue repair of tendon and muscle
Christopher Mendias, University of Michigan, Ann Arbor, USA

15.45 Tendon differentiation and repair – how is it regulated?
Delphine Duprez, Sorbonne University and INSERM, Paris, France

Chair: Keith Baar

16.15 End of program

18.30 Social program: Dinner at Restaurant Lumskebugten

Friday 19th August 2016

Formation, regeneration and repair of connective and muscle tissue

9.00 Skeletal muscle myoblast and ECM - role in muscle regeneration
Miranda Grounds, University of Western Australia, Perth, Australia

9.30 Collagens in the formation of the myotendinous junction and the neuromuscular system
Florence Ruggiero, ENS Université de Lyon, France.

10.00 Fibrillin-1, a key structural determinant of cardiac and tendon function
Francesco Ramirez, Icahn School of Medicine at Mt Sinai, New York, USA

10.30 Coffee/tea break

11.00 Collagen alignment in scars forming under mechanical load
Jeffrey Holmes, University of Virginia, Charlottesville, USA

Chair: Ronen Schweitzer

Tendon force properties – age-related alterations

11.30 Hierarchical mechanical loading of collagen structures – fibril to whole tendon
René Svensson, University of Copenhagen, Denmark

12.00 Intratendinous force transfer – influence of aging
Hazel Screen, Queen Mary University of London, UK

12.30 Lunch

13.15 Role of collagen AGE on tendon properties in aging and disease
Jess Snedeker, University of Zürich, Switzerland

13.45 Role of non-collagenous matrix in the tendon function
Chavaunne Thorpe, Queen Mary University of London, UK

Chair: Peter Magnusson

Experimental models to study connective tissue structures

14.15 Engineering tendon, ligament and skeletal muscle – challenges?
Keith Baar, University of Davies, California, USA

14.45 Coffee/tea break

15.15 Craniofacial development as a model for matrix formation
Matthias Chiquet, University of Bern, Switzerland

15.45 Using –omics to understand tendon biology
Peter Clegg, University of Liverpool, UK.

Chair: Richard L. Lieber

16.15 End of symposium