



3rd SYMPOSIUM&WORKSHOP "Skeletal muscle research – from cell to human 2019"

Ljubljana, Slovenia, 26th – 28th May 2019

Organised by: Institute of Pathophysiology, Faculty of Medicine, University of Ljubljana, Slovenia (PAFI UL MF)

In collaboration with: University Medical Centre Ljubljana, Slovenia (UKC)

Institute of Anatomy, Faculty of Medicine, University of Ljubljana, Slovenia (IA UL MF)

Department of Physiotherapy, Faculty of Health Sciences, University of Ljubljana (DP UL ZF)

Venue: Institute of Pathophysiology, Faculty of Medicine, University of Ljubljana (Zaloška cesta 4, Ljubljana, Slovenia),

Participants: researches, academics, PhD students, students, postdocs, A4L project members

PROGRAMME

SUNDAY 26th May 2019 (14:00 – 19:30)

14:00-15:00 Registration, welcome

14:45-15:00 Symposium & Workshop opening

Opening words: Tomaž Marš (Slovenia), Organising Committee

Welcome address: Samo Ribarič (Slovenia), Head of Institute of Pathophysiology, Faculty of Medicine

A few historical aspects: Sergej Pirkmajer (Slovenia), Scientific Committee

15:00-15:40 Keynote plenary lecture: Marc Gilbert (France) *Role of skeletal muscle lipid content in the pathogenesis of insulin resistance of obesity and type 2 diabetes. Where do we stand today?*

15:40-16:20 Keynote plenary lecture: Kathy Myburgh (South African Republic): *Exosomes in the context of skeletal muscle: from cells to humans*

Coffee Break

16:50-18:10 Section I: In vitro and In vivo models for studying skeletal muscle (organised by Tomaž Marš, chaired by Kathy Myburgh)

16:50-17:15 Carlo Reggiani (Italy): "Sarcoplasmic Reticulum-Mitochondria interactions in skeletal muscle fibers"

17:15-17:35 Natasa Nikolic (Norway): "Primary defects in lipid handling and resistance to acute exercise in myotubes from obese donors with and without type 2 diabetes"

17:35-17:55 Jozef Ukropec (Slovak Republic): "Exercise-induced changes in insulin sensitivity and cognitive performance are linked to improvements in muscle functional and metabolic state in the elderly"

17:55-18:10 Jenny Lund (Norway): "Exercise in vivo marks human myotubes in vitro - increased energy metabolism with improved exercise status"

18:10-18:20 **Rhys McColl (South African Republic): "Genetically modified primary human myoblasts: the question of fusion competence"**

Get-together dinner for all participants

MONDAY 27th May 2019 (8:40 – 20:00)

8:30-9:00 Registration, welcome

9:00-10:30 Section II: Skeletal muscle metabolism: physiological regulation and pharmacological modulation (organised by Sergej Pirkmajer and Alexander V. Chibalin, chaired by Alexander V. Chibalin)

9:00-9:25 Alexander V. Chibalin (Sweden, Russia): "Pumps, ions, exercise and energy metabolism: signaling to and from the Na,K-ATPase"

9:25-9:50 Pablo Garcia-Roves (Spain): "Cost Action MitoEAGLE: Evolution-Age-Gender-Lifestyle-Environment: mitochondrial fitness mapping. Data repository on muscle tissue"

9:50-10:10 Anna Zakharova (Russia): "Physical activity as major factor of myokines producing: regulation mechanisms"

10:10-10:30 Helena Chowdhury (Slovenia): "Cytosolic glucose measurements and dynamics in 3T3L1 cells"

Coffee and discussion

11:00-12:30 Section III: Skeletal muscle and nerve interactions, NMJ (organised by Tomaž Marš and Sergej Pirkmajer, chaired by Igor Križaj)

11:00-11:25 Boris Rogelj (Slovenia): "Cellular modelling in amyotrophic lateral sclerosis"

11:25-11:40 Tomaž Marš (Slovenia): "Co-culture of skeletal muscle cells and spinal cord explants as model for studying neurodegenerative diseases"

11:40-12:05 Igor Križaj (Slovenia): "Unravelling snake venom sPLA2 neuro-muscular blockade mechanism provides insight into pathophysiology of mammalian sPLA2"

12:05-12:20 Maja Katalinić (Croatia): "Neural and muscle cells in organophosphorus compound antidote research"

12:20-12:30 **Alessandra Bosutti** (Italy): "Electrical stimulation to counteract skeletal muscle atrophy"

Lunch for all participants

14:00-15:30 Section IV: Skeletal muscle training response in healthy and injured subjects (organised by Alan Kacin, chaired by Alan Kacin and Truls Raastad)

14:00-14:25 **Truls Raastad** (Norway): "Muscular adaptations to low-load blood-flow restricted exercise"

14:25-14:50 **Jakob Nielsen** (Denmark): "The effect of aging on muscular adaptations to resistance exercise - what we currently know?"

14:50-15:05 **Sigve Nyvik Aas** (Norway): "Effects of strength training on muscle quality in frail elderly"

15:05-15:15 **Nejc Šarabon** (Slovenia): "Characteristics of eccentric exercise for the hamstrings and their potential for injury prevention"

15:15-15:30 **Alan Kacin** (Slovenia): "The effect of low-load blood flow restricted training on muscle activation and hemodynamics in people with joint injuries"

Coffee and discussions

15:50-17:10 Section V: Clinical Skeletal Muscle Physiology and Pathophysiology (organised by Matej Podbregar and Sergej Pirkmajer, chaired by Matej Podbregar)

15:50-16:15 **Alojzija Hočevar** (Slovenia): "Inflammatory myopathies – clinical aspects"

16:15-16:35 **Katja Lakota** (Slovenia): "Multifaceted role of adiponectin in rheumatic diseases"

16:35-16:55 **Sergej Pirkmajer** (Slovenia): "Metabolic effects of anti-rheumatic drugs in skeletal muscle"

16:55-17:10 Discussion

Coffee and discussions

17:30-19:00 Section VI: New approaches for studying skeletal muscle morphology, physiology, plasticity and diseases (organised by Erika Cvetko)

17:30-17:55 **Stefano Schiaffino** (Italy): "Human skeletal muscle: proteomic analysis of single muscle fibers and specific myofiber domains"

17:55-18:20 **Jiri Janaček, Ida Eržen** (Czech Republic, Slovenia): "Measuring capillaries in 3D"

18:20-18:40 **Lea Leonardis** (Slovenia): "Myasthenia gravis and congenital myasthenic syndrome in adults"

18:40-18:50 **Nejc Umek** (Slovenia): "3D analysis of capillary network in diabetic mice"

18:50-19:00 **Marija Meznarič** (Slovenia): "Pompe disease in Slovenia"

Closing Remarks

19:00 – 21:00 DINNER for all participants

TUESDAY 28th May 2019 (8:45-12:00)

09:00–12:00 Individual discussions, networking, Laboratories and Clinics tour and presentation

Scientific committee: Alan Kacin, Kathy H. Myburgh, Sergej Pirkmajer, Stefano Schiaffino, Matija Tomšič, Vika Smerdu, Alexander V. Chibalin

Organising committee: Tomaž Marš, Sergej Pirkmajer, Matej Podbregar, Alan Kacin, Erika Cvetko, Matija Tomšič, Marija Meznarič, Vika Smerdu, Vita Čebašek, Nejc Umek, Matej Drobnič, Tatjana Stopar Pintarič, Katja Perdan Pirkmajer, Katarina Miš, Urška Matkovič, Vid Jan, Nives Škorja, Metka Petrič, Klemen Dolinar in Ksenija Babič



Slovensko biokemijsko društvo / Slovenian Biochemical Society

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