**Translational Myology in Aging and Neuromuscular Disorders**

Terme Euganee Conference Hall, Hotel Augustus, Montegrotto Terme, Padova, Italy

March 12 & 14, 2015

**Thursday March 12, 2015**

**Terme Euganee Conference Hall, Hotel Augustus, Montegrotto Terme, Padova, Italy**

09.00 **Partners Meeting of the CBC SK-AT 2007-15 “Mobility in elderly”** – H Kern, Chairman

12.30 Lunch

14.00 Registrations

14.00 **Lecture of the Interdepartmental Research Center of Myology (CIR-Myo)** – Carlo Reggiani, Chairman

**Stanley Salmons**, Liverpool, UK: Stimulation of denervated muscle: questions answered, questions raised

14.30 **News on Myo-Imaging** – P Gargiulo, R Stramare, Chairman

14.30 Correlations between muscle profiles from CT scans and heart failure in aging, associated to life styles and co-morbidities, P Gargiulo, Reykjavik, Iceland

15.00 Muscle hypertrophy with concentric and eccentric training: architectural, molecular, metabolic and functional adaptations, M Franchi, Nottingham, UK

15.20 High resolution micro-CT with iodine contrast in skeletal and cardiac muscle, Stephenson RS and Jarvis JC, Liverpool, UK

15.40 Role of radiologic imaging in genetic and acquired neuromuscular disorders, R Stramare et al., Padova, Italy

16.00 Proteomics of single skeletal muscle fibers: focusing on structural and metabolic diversity, M Murgia et al., Padova, Italy

16.20 Functional electrical stimulation in horses for musculoskeletal and neuromuscular rehabilitation, S Schils et al., River Falls, WI, USA

16.40 Mitochondrial density and distribution by histochemical morphometry in horse muscles submitted to FES, B Ravara et al., Padova, Italy

17.00 Coffee break

17.20 **Rise4EU & SAVe-ALS** – W Mayr, S Masiero, Chairmen

17.20 From RISE to SAVe: technical concepts for delay of ventilator dependency in ALS, W Mayr, Vienna, Austria

17.40 Ventilation problems in ALS - Present solutions, J Zidar, Ljubljana, Slovenia

18.00 Structural and functional characteristics of denervated muscles from oldest old rat: a relevant animal model for FES of denervated myofibers of the diaphragm in ALS? S Mosole et al., Padova, Italy

18.20 Delivering myogenic cells in diseased muscles, M Pozzobon et al., Padova, Italy

18.40 Persistent muscle fiber regeneration in denervated human muscle: past, present and future. U Carraro, Venice, Italy

20.00 Dinner

21.00 Organizing Meeting of “The EU Initiative for Translational Myology”
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Terme Euganei, Padova (Italy), March 12 - 14, 2015

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U Carraro, H Kern, W Lindenthaler, J Jarvis, C Leeuvenburgh, W Mayr, R Quinlivan, D D’avella, S Masiero, A Musarò, F Piccione, M Sandri, G Vescovo

Organizing Meeting for proposal(s) to the EU Program HORIZON 2020 - I

Friday March 13, 2015

**Muscle Meeting in Villa Veneta**
**Villa dei Vescovi, Luvigiano, Euganei Hills**

09.30  **Coverage Bus to Luvigiano di Torreglia, Euganei Hills (Padova)**
09.00  **Openings**
      Marco Sandri, CIR-Myo, Director, University of Padua, Italy
      Rosario Rizzuto, Department of Biomedical Science, Head, University of Padua, Italy
      Annalena Venneri, IRCCS Fondazione San Camillo Hospital, Scientific Director, Venice-Lido, Italy
09.10  **Lecture of the Interdepartmental Research Center of Myology (CIR-Myo) – Marco Sandri, Chairman**
      Ros Quinlivan, London, UK. An update on treatment for Duchenne Muscular Dystrophy
09.40  **Pharmacological management & physical rehabilitation of muscle dystrophies** – R Quinlivan, U Carraro, Chairmen
09.40  Diagnosis and pharmacological management of muscle channellopathies, E Matthewes, London, UK
10.00  Small molecules for novel therapeutic approaches in sargocyanopathies, D Sandonà, Padova, Italy
10.20  Toward a mitochondrial therapy of muscular dystrophies: a progress report, P Bernardi, Padova, Italy
10.40  **Coffee Break**
11.00  **Physical rehabilitation & cellular management of muscle dystrophies** – W Lindenthaler, R Quinlivan, Chairmen
11.00  Functional data and response to exercise in McArdle's disease: from reporting to training patients' empowerment, A Martinuzzi, Conegliano, Italy
11.20  FES in genetic neuromuscular disorders, A Marcante, et al., Padova & Venezia-Lido, Italy
11.35  Abnormal lactate levels affect motor performance in Myotonic Dystrophy type 1, C Tramonti et al., Pisa, Italy
11.50  The ERG1a K⁺ Channel Increases Intracellular Calcium Concentration and Calpain Activity in Skeletal Muscle Cells, A, Pond, Carbondale, IL, U.S.
12.10  Genetic and acquired factors in decline of muscle power with age: indications from the Master World Record Series, P Gava et al., Padova, Italy
12.30  **Lunch**
13.30  Role of tissue niche in aging and neuromuscular disease, A Musarò, Rome, Italy
14.00  Exercise in sedentary elderly: effects on muscle tropism and MUC expression, S Zampieri et al., Padova, Italy & Vienna, Austria
14.20  Migrating tumor cells and muscle wasting: Role of DOG1 (Discovered On Gastrointestinal Stromal Tumor 1) in tumor cell motility and skeletal muscle colonization, E Berardi, Leuven Belgium
15.40  Perilipins in human muscle aging and atrophy, M Conte, Bologna, Italy
15.00  Ergo-Cell: A multi-sensor system offering new opportunities for research in elderly, N Sarabon et al., Koper, Slovenia
15.20  Effect of high intensity vs. normal intensity acute strength loading on bone resorption/formation in pre- and postmenopausal women, J Kovarova et al., Bratislava, Slovakia
15.40  Muscle analysis to assess motor impairments in cancer patients, C Tramonti et al., Pisa, Italy
15.50  **Coffee Break**
16.00  **Workshop CBC SK-AT 2007-15 – Molecular Biology** – A Musarò, R Rizzuto, Chairmen
16.00  Novel routes for muscle mass regulation: Focus on mitochondria, M Sandri, Padova, Italy
16.30  Mitochondrial biogenesis and autophagy & targets for improved longevity, Ch Leeuvenburgh, Gainesville, FL, USA
17.00  Mitochondrial Calcium Unipporter controls skeletal muscle tropism in vivo, C Mammucari et al., Padova, Italy
17.30  Keeping mitochondria in shape: a matter of life or death, L Scorrano, Padova, Italy
18.00  Spritz and vines of Euganei Hills
18.30  **Coverage Return Bus to Terme Euganei Hotel Augustus**
20.00  **Dinner**
21.00  **Organizing Meeting for proposals(s) to the EU Program HORIZON 2020 - I**
Translational Myology in Aging and Neuromuscular Disorders

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Muscle Imaging - Physical & Pharmacological Managements in Neuromuscular Disorders - Rehabilitation in Aging & Cardiac Failure - Voice Rejuvenation

Saturday March 14, 2015

Terme Euganeo Conference Hall, Hotel Augustus, Montegrotto Terme, Padova, Italy

09.00 Lecture of the Interdepartmental Research Center of Myology (CIR-Myo) – Ugo Carraro, Chairman
Feliciano Protasi, Chieti, Italy: Link between malignant hyperthermia and environmental heat stroke: just an hypothesis?

09.30 MED*EL Workshop: Voice rejuvenation – J Jarvis, M Gugatschka, Chairmen
09.30 Efficiency of electric neurostimulation in treatment of presbyphonia in an animal model, M Gugatschka, Graz, Austria
09.50 Outcome measure for segmentation in an animal model for presbyphonia, C Gerstenberger, Graz, Austria
10.00 Laryngeal pacing for the treatment of bilateral vocal fold paralysis: preliminary long term results of a prospective First-in-Human Study, W Lindenthaler et al., Innsbruck, Austria
10.20 Optimized stimulation patterns for increased efficacy of muscle activation, P Cavallari, Milan, Italy
10.40 Coffee Break

11.00 MED*EL Workshop: Neuromodulation in Neurological Disorders – P Cavallari, Graupe D, Chairmen
11.00 Neuromodulation with implanted devices: models of resistance exercise in rodent limbs, J Jarvis, Liverpool, UK
11.15 Facial nerve pacing to restore eye blink in acute facial palsy, act II, P Cavallari et al., Milan Italy and Boston, USA
11.30 Implantable neuromuscular stimulator for small animals, Lammueller H, Liverpool, Vienna, Austria
11.45 The Vienna Liverpool mini neuromodulator: improved lifetime, user interface and versatility, Schmoll M, Bijak M, Unger E, Jarvis JC and Lammueller H, Liverpool, UK and Vienna, Austria
12.00 Daily electrical muscle stimulation enhances functional recovery and upregulates muscular Brain Derived Neurotrophic Factor (BDNF) following nerve transaction and repair in rats, M Willand, Toronto, Canada
12.15 CAPs in an isolated sciatic nerve of a rat elicited with quatsirapezoidal stimulating pulses, J Rozman, Ljubljana, Slovenia
12.30 Lunch and Poster Session

14.00 Mobility Rehabilitation in Aging & Cardiac Failure – Ch Leeuwenburgh, G Vescovo, Chairmen
14.00 Resistance training and skeletal muscle: a healthy virtuous relationship, A Paoli, Padova, Italy
14.20 The contribution of stem cell therapy to skeletal muscle remodeling in heart failure, G Vescovo, Padova, Italy
14.40 Multicomponent interventions against sarcopenia and frailty, E Marzetti, Rome, Italy
15.00 Role of mitochondrial DNA-TFAM interactions in the age-related mitochondrial dysfunction, AMS Lezza, Bari, Italy
15.20 Ageing causes severe ultra-structural modification of CRU and mitochondria in cardiomyocytes, S Boncompagni, Chieti, Italy
15.40 Evolution of gravity detection and muscle tone, H Petersen, Reykjavik, Iceland
16.00 Postural control of elderly, H Petersen, Reykjavik, Iceland
16.20 Coffee Break

16.40 EMG, FES and EMS in Aging – W Mayr, D Graupe, Chairmen
16.40 Functional Magnetic Stimulation (FMS) and FES, useful synergic options with specific limitations, W Mayr, Vienna, Austria
17.00 Recording of EMG signal within a prosthetic socket of a transfemoral amputee, T Helgason, Reykjavik, Iceland
17.15 Advanced processing of electromyography signals in measurements of trunk postural actions, Neje Sarabon et al., Koper, Slovenia
17.30 Patient data concerning EMG-Based On-Demand predictive control of Deep-Brain Stimulation in Parkinson patients and their significance, D Graupe, Chicago, IL, USA
17.45 Vagus nerve stimulation and brain ischemia: an update, L. Denaro et al., Padova, Italy
18.00 ALS and Related Neuromuscular Disorders – V Moresi, F Piccione, Chairmen
18.00 Histone deacetylase 4 is protective in Amyotrophic Lateral Sclerosis and modulates the response to oxidative stress, V Moresi, Rome, Italy
18.30 Leg muscle stimulation in ALS, A Baba, Venice, Italy
18.45 Cattle pseudomyotonia associated to ATP2A1 gene mutations in Romagnola breed, F Busato, M Patrano et al., Padova, Italy
19.00 FES in Central Core Disease, P Iodice et al., Chieti, Italy
19.15 SAVE-ALS Project: An update, U Carraro et al, Venice, Italy
19.30 U. Carraro - Adjó, Arrivederci, Auf Wiedersehen, Auverseei, Rückti, Despedida, Poslovite, Sjálst, See You to the next Padua Muscle Days
20.00 Dinner

21.00 Organizing Meeting for proposal(s) to the EU Program HORIZON 2020 – II
Posters

P1. Abnormal lactate levels affect motor performance in Myotonic Dystrophy type 1, Caterina Tramonti, Stefania Dalise, Federica Bertolucci, Bruno Rossi, Carmelo Chisari, Unit of Neurorehabilitation, Department of Neuroscience, University Hospital, Pisa, Italy

P2. Muscle analysis to assess motor impairments in cancer patients, C Caterina Tramonti, Stefania Dalise, Federica Bertolucci, Bruno Rossi, Carmelo Chisari, Unit of Neurorehabilitation, Department of Neuroscience, University Hospital, Pisa, Italy

P3. Tissue-specific effects on TFAM amount, mtDNA and TFAM-binding to mtDNA in aged and calorie-restricted rat Anna Picca, Vito Pesce, Flavio Fracasso, Anna-Maria Joseph, Christiaan Leeuwenburg, Angela Maria Serena Lezza, University of Bari, Italy; Department of Aging and Geriatric Research, Institute on Aging, Division of Biology of Aging, University of Florida, Gainesville, FL, USA

P4. Rise4EU: Prevention of thromboembolism and fall in surgical units by volitional exercise, FES and FMS Carraro U, et al., Venice, Italy

P5. FES training protocols for the functional recovery of permanently complete denervated human muscles, Loeftler S, Kern H

P6. Rise4EU: Prevention of thromboembolism and fall in surgical units by volitional exercise, FES and FMS muscle, Carraro U, et al., IRCCS, Fondazione San Camillo Hospital, Venice, Italy

P7. Assessment of muscle fibers, connective tissue and fat, using µCT data: a feasibility study for meat quality control Gargiulo P, Rizzi C, Örlygsson G, Carraro U Padova, Italy; Rejkyavik, Iceland

P8. Age upper limits for everyday key tasks: lessons from Master World Records Series Gava P, Carraro U, Padova, Italy