Thursday November 14, 2013
Terme Euganee Conference Hall, Hotel Augustus, Montegrotto Terme, Padova, Italy

13.00 Pre-Conference course on functional assessment of seniors CBC SK-AT 2007-13 “Mobility in elderly”: force measurement, balance and functional performance measures – H. Kern, S. Löfler, Austria; J Cvecka, Slovakia

15.00 Rise2-Italy Workshop: Practical Course on Stimulation of Large and Small Denervated Muscles in SCI and beyond - I
S. Masiero, U. Carraro, Chairmen

15.30 Introduction: Electrical stimulation of denervated muscle in SCI, when and how, H. Kern, Vienna, Austria

15.45 Ultra-structural rescue of long-term denervated human muscle by Functional Electrical Stimulation (FES), S. Boncompagni et al. Chieti, Italy

15.50 Stimulators and electrodes for large and small denervated muscles. Surface versus implantable devices, W. Mayr, Vienna, Austria, U. Carraro, Padova, Italy

15.50 Practical Course on Stimulation of Large and Small Denervated Muscles in SCI and beyond - II
H. Cerrel-Bazo, U. Carraro, Chairmen

16.00 FES for large denervated muscles: Comments of patients and practical demonstrations, R. Fiorucci, Città di Castello, Italy

16.10 FES for small denervated muscles. Comments of patients and educational case reports, A. Marcante, R. Zanato, et al. Padova, Italy


18.00 Workshop “VNS, Facts and Perspectives”, D. D’Avella, Mayr, Chairmen

18.00 Performance of electrodes within the nerve cuff tested in vagus nerve stimulation and in vitro, J. Rozman & P. Peclin, Ljubljana, Slovenia

18.30 Vagus nerve stimulation (VNS) and focal cerebral ischemia: a rodent model using an implantable electrical stimulator, D. D’avella, Padova, Italy, J.C. Jarvis, Liverpool, U.K.


21.00 Organizing a perspective EU Horizon 2020 Program: FES4SEF - Functional Electrical Stimulation for Seniors at Early Falls - I
**Friday November 15, 2013**

07.30  Physical activity in warm water

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

09.00  **Workshop CBC SK-AT 2007-13 “Mobility in elderly”: Force, Balance and Falls** – H. Kern, F. Protasi, Chairmen

09.00  Mobility rehabilitation in denervation, aging and oncology: Introduction, H. Kern, Vienna, Austria

09.15  Histology results in sedentary seniors after 9-week of only 3 times a week Electrical Stimulation, S. Zampieri et al., Padua, Italy

09.30  Muscle activity controls the association between Ca\(^{2+}\) release units and mitochondria in skeletal fibers, F. Protasi, Chieti

10.00  Surface electrical stimulation vs. proprioceptive strength training in enhancement of muscle strength and functional performance in sedentary seniors, J. Cvecka et al., Bratislava, Slovakia

10.15  The role of strength for balance in elderly, N. Sarabon, Koper, Slovenia

10.30  Improving stair-negotiating ability in older people, C. Maganaris, Liverpool John Moores University, UK

11.00  **CBC SK-AT 2007-13 “Mobility in elderly” – Molecular Biology** – H. Kern, M. Sandri, Chairmen

11.00  Role of the mitochondrial fission machinery in muscle atrophy and sarcopenia, M. Sandri, Padova, Italy

11.30  Insights into the molecular and cellular mechanisms of sarcopenia and into potential therapeutic approaches, A. Musarò, Rome, Italy

12.00  ERG1a K\(^+\) channel induces expression of MuRF1, but not MAFbx-Atrogin1 or E3α-II, E3 Ligases, A. Pond, Carbondale, IL, USA

12.20  The genetic association with the variable response to resistance training, R. Erskine, Liverpool John Moores University, UK

12.40  Gender differences in the decline of muscle power up to the most advanced age, Gava P, et al., Padova, Italy

12.50  Posters & Cycling Exercise for Senior Sportsmen

14.00  **Reactions of different muscle fibers to activity, denervation and aging – Session I**, G. Vrbova, U. Carraro, Chairmen

14.00  Exon skipping as a potential therapy for specific laminopathies, P. Zammit, London, UK

14.30  The effects of ageing on mouse satellite cells, J.E. Morgan, London, UK

14.50  Regulation of myoblast differentiation and hypertrophy, C. Stewart, Liverpool John Moores University, UK

15.10  Hypoxia increases mouse satellite cell clone proliferation maintaining both in vitro and in vivo heterogeneity and myogenic potential, M. Pozzobon et al., Padova, Italy

15.30  Nutrient-gene interactions: manipulations of carbohydrate availability to maximize training adaptations, J. Morton, John Moores University, UK

15.50  Exercise, vitamin D and human skeletal muscle: is sarcopenia inevitable?, G. Close, Liverpool John Moores University, UK

16.30  **Reactions of different muscle fibers to activity, denervation and aging – Session II**, G. Vrbova, A. Musarò, Chairmen

16.30  The effect of innervation on the development of fast twitch and slow tonic muscle fibres, T. Gordon, Toronto, Canada and G. Vrbova, London, UK

17.00  Mitochondrial functional alterations in aging muscle: cause or effect(or)?, R.T. Hepple, Montreal, Canada

17.30  The influence on muscle growth in aged animals and diet mediated starvation by Myostatin, K. Patel, Reading, UK

18.00  Bone morphogenetic protein controls muscle mass and dominates over Myostatin signaling, H. Anthor, Paris, France

18.30  How and why slow muscle fibers prevail in aging human muscle, S. Mosole, et al., Padova, Italy

21.00  Organizing a perspective EU Horizon 2020 Program: FES4SEF - Functional Electrical Stimulation for Seniors at Early Falls - II
Skeletal muscle: Biology, Pathology, Rehabilitation
Terme Euganee, Padova (Italy), November 14 - 16, 2013

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H. Kern, G. Vrbova, J.C. Jarvis, J-C. Chachques, S. Masiero, and U. Carraro

Saturday November 16, 2013

07.30 Physical activity in warm water

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

09.00 MED*EL Workshop FES of Skeletal Muscles, Session I – J.C. Jarvis, Chairman
09.00 Neuromuscular pathology in equine recurrent laryngeal neuropathy, R.J. Piercy, London, UK
09.30 Case selection and effect of functional electrical stimulation on reinnervation in a preclinical laryngeal model, J. Cheetham, et al., Ithaca, NY, USA
10.00 Early reinnervation is improved by daily electrical muscle stimulation following nerve injury and immediate repair, M.P. Willand et al., Toronto, Canada
10.30 Interest of combining posterior cricoarytenoid muscle reinnervation and functional electrical stimulation in horses with naturally occurring disease, C. Mespoulhès-Rivière, J.-P. Marie, Maison-Alfort, Rouen, France

11.00 MED*EL Workshop FES of Skeletal Muscles, Session II – W. Mayr, Chairman
11.00 New Vienna/Liverpool implantable stimulator, J.C. Jarvis, Liverpool, UK; M. Bijak, H. Lanmueller, M. Haller, E. Unger, Vienna; W. Lindenthaler, Med-El, Innsbruck, Austria
11.20 An implantable, modular telemetry system for bio-signal recordings in large animals, L. Kneisz, et al., Vienna, Austria
11.40 Neuromuscular stimulation training for sedentary elderly, M. Krenn et al., Vienna, Austria
12.00 New model systems for activation of muscle in culture, C. Stewart, A. Sharples, Liverpool, UK
12.20 Image processing and segmentation in preparation for the simulation of electrical field during Functional Electrical Stimulation of musculus cricoarythenoideus dorsalis, P. Gargiulo et al., Reykjavik, Iceland
12.40 Rational selection of activation patterns in electrical stimulation of muscle, J.C. Jarvis, Liverpool, UK

14.30 MED*EL Workshop FES of Skeletal Muscles, Session III – Tessa Gordon, Franco Bassetto, Chairmen
14.30 The impact of intramuscular-inserted hooked wire electrodes and specific stimulation parameters, D. Arnold et al., Jena, Germany
14.50 Measurement of the 3D electrical field distribution with different multiplexed stimulation electrode configurations in a constant pressure ex-vivo model of the equine larynx, S. Otto, et al. Leipzig, Germany
15.10 Simulation of the electrical field during Functional Electrical Stimulation of musculus cricoarythenoideus dorsalis – a feasibility study, M. Reichel et al., Austria
15.30 EMG biofeedback muscle training with a wireless signal transmission, T. Helgason et al., Reykjavik, Iceland
15.50 Electrical Stimulation in neural repair: First experience in Padova, V. Vindicini et al., Padua, Italy

16.30 Cell Stemness Capacity and Tissue Reconstruction - J-C. Chachques, M. Patruno, Chairmen
16.30 Stem cells and tissue engineering for myocardial regeneration and ventricular support, J-C. Chachques, Paris, France
17.00 Bioactive implant development to assist cardiac recovery, C. Semino, C. Castells, Barcelona, Spain
17.20 Biomimetic and biofunctionalization approaches in cardiovascular tissue engineering for stem cells differentiation: getting closer to nature, getting closer to patient, C. Spadaccio, Leuven, Belgium.
17.40 Cardiac progenitor cells: current and future directions for cell therapy, I. Chimenti, G. Frati, Sapienza, Latina, Italy
18.00 In vivo application of adult stem cells and platelet rich plasma: recent experiences and future perspective in veterinary orthopaedics, M. Patruno, Padua, Italy
18.20 U. Carraro - Arrivederci, Auf Wiedersehen, Aurevoir, Bácsá, Despedida, Poslovite, Sjámsst, See You to 2014 Spring PaduaMuscleDays
POSTERS

Friday November 15, 2013

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

12.45  Discussion of Posters, U. Carraro, Chairman

P 1. The short-term denervated hemidiaphragm: a mixture of “hypertrophy” and “denervation” features
Carraro U, Mosole S, Zampieri S, Gobbo V, Germinario E, Danielli D

P 2. 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

P 3. Gender differences in the decline of muscle power up to the most advanced age
Gava P, Kern H, Carraro U

P 4. Nuclear wandering and nuclear grouping in human and rodent denervated skeletal muscle
Rossini K, Biral D, Zampieri S, Mosole S, Löfler S, Kern H, Carraro U

P 5. Scalp Potentials Changes due to Fontanels in an Infant's Head Model
Gargiulo P, Belfiore P, Friðgeirsson E A, Vanhatalo S, Ramon C

P 6. Reinnervation of muscle fibers in aging muscle: Indirect immuno-histochemical evidence
Mosole S, Carraro U, Zampieri S, Kern H

P 7. FES training protocols for the functional recovery of permanently complete denervated human muscles,
Löfler S, Mayr W, Moedlin M, Burggraf S, Kern H

P 8. Myosin isoforms in small and large mammals: SDS PAGE demonstrates co-migration of slow, but not fast MHC
Carraro U, Rizzi C, Rossini K

P 9. Ribosomal profiles of denervated muscle
Carraro U, Catani C, Margreth A