



Department of
Biomedical Sciences

2014Spring PaduaMuscleDays



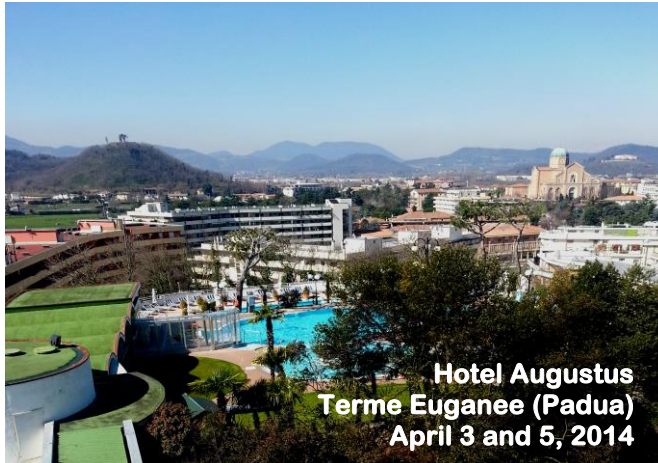
Ludwig Boltzmann Institute
of Electrical Stimulation
and Physical Rehabilitation

Activity-dependent trophism of neurons and their target organs in aging, pathology and rehabilitation

Padova and Terme Euganee, Padua (Italy), April 3 - 5, 2014

Palazzo Bo, University of Padova and Terme Euganee Conference Hall, Hotel Augustus, Viale Stazione 150 - 35136 Montegrotto Terme, Padova, Italy
Phone +39 049 793 200 - Fax +39 049 793518 - http://www.hotelaugustus.com/english/pages/hotel_augustus.php - E-mail: info@hotelaugustus.com

Organizers: H. Kern, J. Jarvis, W. Mayr, F. Bassetto, D. D'Avella, S. Masiero, F. Piccione, C. Reggiani, M. Sandri, S. Schiaffino, U. Carraro



Hotel Augustus
Terme Euganee (Padua)
April 3 and 5, 2014



Openings 9.00
Padua University
Aula Nievo, April 4, 2014

Thursday April 3, 2014

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

- 11.00 Cycling Exercise & Lunch in Euganei Hills
- 14.00  **Partners Meeting of the CBC SK-AT 2007-13 "Mobility in elderly"** – Helmut Kern, Chairman
- 15.00 Registrations
- 15.55 **Reports of the Interdepartmental Research Center of Myology (CIR-Myo)**, Carlo Reggiani, Chairman
- 16.00 In vivo studies on muscle protein turnover in ageing, P. Tessari, Dept. Medicine, Padua, Italy
- 16.30 Multidisciplinary approach to Myotonic Dystrophy: clues to treatment, C. Angelini, et al, IRCCS SanCamillo, Dept. Neuroscience, University of Padua, Italy
- 16.45 Effects of two weeks of bed rest and subsequent rehabilitation on size and function of single muscle fibres, L. Cancellara et al., DBS, Padua, Italy
- 17.00 Molecular signalling response to short duration high intensity/low volume resistance training in human skeletal muscle, T. Moro et al., DBS, Padua, Italy
- 17.15 BMP-SMAD1/5/8-MUSA1 axis is crucial for cancer cachexia, R. Sartori, DBS, Padua, Italy
- 17.30 Use It or Lose It: High level of physical activity increases reinnervation of aging muscle, S. Mosole, DBS, Padua, Italy
- 17.45 Coffee Break
- 18.00 **Workshop FES4SEF, Rise-3 or SAVE-ALS?** – Winfried Mayr, Stefano Masiero, Chairmen
- 18.00 FES4SEF, Italy or EU? Multidimensional model of prevention of falls in the elderly, A. Paoli, CIR-Myo, DBS, University of Padova, Italy
- 18.20 RISE-3, Italy or EU? Further validation and new approaches, S. Masiero, CIR-Myo, Dept. Neuroscience, University of Padova, Italy
- 18.40 SAVE-ALS-Italy or EU? and FES4ALL (in need): Joining three weak options in a winning EU proposal, U. Carraro, CIR-Myo, DBS, University of Padova, Italy
- 20.00 Dinner
- 21.00 **Organizing Meeting for proposal(s) to the EU Program HORIZON 2020 - I**

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Organizing Secretariat: Ugo Carraro, Department of Biomedical Sciences, Padua University
Via Ugo Bassi 59/B, I-35131 Padova, Italy - E-mail: ugo.carraro@unipd.it
Phone: +39 049 8276030; fax +39 049 8276040;



Travel and Transfer: LUZ DE LUNA
E-mail: luzdeluna@luzdeluna.it
Phone +39 049 8774705; Fax +39 049 8774733

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Friday April 4, 2014

08.00 Complimentary Bus to Padua

Aula Nieveo, Palazzo Bo, University of Padua, Via VIII Febbraio 2, Padua, Italy

- 09.00 **Openings** *Rosario Rizzuto, Head of the Biomedical Sciences Department, University of Padua*
Davide Ferrara, President of the School of Medicine, University of Padua
- 09.10 **Lectures of the Interdepartmental Research Center of Myology (CIR-Myo)** – Carlo Reggiani, Ugo Carraro, Chairmen
- 09.15 **Regulation of body temperature by tonic motor unit activity**, Terje Lomo, University of Oslo, Norway
- 09.45 **Activity-dependent control of circadian gene expression in skeletal muscle**, Stefano Schiaffino, VIMM, Padua, Italy
- 10.15 **Activity-dependent synaptic competition at developing neuromuscular junctions**, Alberto Cangiano, University of Verona, Italy.
- 10.45 Coffee Break
- 11.00 **Structure-function relationships in skeletal muscles. Lessons from ultrastructure**, Clara Franzini-Armstrong, University of Pennsylvania, Philadelphia, PA, USA
- 11.30 **Sarcopenia: definition, diagnosis and functional/metabolic implications**, Marco Narici, University of Nottingham, UK
- 12.00 **Muscle rehabilitation and training in older adults**, Helmut Kern, Wilhelminenspital, Wien, Austria
- 12.25 **Decline of skeletal muscle power with age: world records of Master athletes point to a human life span of 110 years**. Paolo Gava et al., University of Padua, Italy
- 12.45 Lunch
- 14.30  **Workshop CBC SK-AT 2007-13 “Mobility in elderly”** – Helmut Kern, Feliciano Protasi, Chairmen
- 14.30 Mitochondria association to Ca²⁺ release units is controlled by muscle activity, Feliciano Protasi, Chieti University, Italy
- 15.00 Delaying aging of skeletal muscle: use it or lose it, Sandra Zampieri et al., University of Padua and LBI, Wien, Austria
- 15.20 Exercise and FES influence on functional, histological and molecular parameters of prostate cancer patients, Jan Cvecka et al., Faculty of Physical Education & Sport, Comenius University, Bratislava, Slovakia
- 15.40 Stability of the lumbo-pelvic region and its role for fall prevention and healthy back, Nejc Sarabon, University of Primorska, Science and Research Centre, IKARUS, Koper, Slovenia
- 16.00 Coffee Break
- 16.30  **Workshop CBC SK-AT 2007-13 – Molecular Biology** – Marco Sandri, Antonio Musarò, Chairmen
- 16.30 Impairment of autophagy in muscle induces neuro-muscular junction degeneration and precocious aging, Marco Sandri, Dept. Biomedical Sciences, University of Padua, Italy
- 17.00 Molecular signature of electrical stimulation in seniors, Antonio Musarò, Sapienza University, Rome, Italy
- 17.30 Molecular mechanisms and therapeutics approaches for cancer cachexia, Dario Coletti, Rome, Italy and Paris, France
- 17.50 An anti-oxidant treatment prevents/reduces formation of cores in a mouse model of Central Core Disease, Simona Boncompagni, Chieti, Italy
- 18.10 Coordination of energy demand and ATP production in the mitochondria of working cardiomyocytes, Marcus C. Schaub, Zurich, Switzerland
- 18.30 Complimentary Return Bus to Terme Euganee Hotel Augustus
- 19.30 Dinner
- 21.00 **Organizing Meeting for proposal(s) to the EU Program HORIZON 2020 - II**

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Saturday April 5, 2014

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

- 09.00 **MED^{EL} Workshop: FES of reinnervating muscle, I** – Terje Lomo, Franco Bassetto, Chairmen
- 09.00 How to stimulate muscles regarding their inherent adaptive capacity, *Jonathan Jarvis, Liverpool John Moores University, UK*
- 09.30 Scar wars – A new hope, *Markus Gugatschka, Graz, Austria*
- 10.00 Chronic electrical muscle stimulation following nerve injury and immediate repair enhances reinnervation, *Mike Willand, Toronto, Canada*
- 10.30 Coffee Break
- 10.50 **MED^{EL} Workshop: FES of reinnervating Muscle, II** – Jonathan Jarvis, Markus Gugatschka, Chairmen
- 10.50 Liverpool/Vienna implantable neuromuscular stimulator: update, *Jonathan Jarvis, Liverpool John Moores University, UK*
- 11.10 Rejuvenation of aged vocalizing muscles by electrical stimulation, *Markus Gugatschka, Graz, Austria*
- 11.30 Laryngeal pacing in horses, *Jonathan Jarvis, Liverpool John Moores University, UK*
- 11.50 Correlations between muscle and bone density in aging is associated to life style and muscle atrophy, *Paolo Gargiulo, et al., Reykjavik, Iceland*
- 12.10 Estimation of signal strength in application of Acousto-Electric-Interaction Effect to monitor denervated muscle stimulation, *Thordur Helgason et al., Reykjavik, Iceland*
- 13.30 Lunch
- 14.30 **Neuromodulation in Neurological Disorders** – Domenico D'Avella, Stefano Masiero, Chairmen
- 14.30 Vagus nerve stimulation to limit aura of focal cerebral ischemia: a rat model using an implantable neuromodulator, *Luca Denaro, University of Padova, Italy*
- 15.00 Neuromodulation in motor nerve trauma: Accelerating traumatic nerve repair and sustaining muscle trophism, *Vincenzo Vindigni et al., University of Padova*
- 15.30 Can Dynamic Echomyography combined with EMG analyses of fibrillation/fasciculation increase sensitivity and specificity in the follow-up of denervation atrophy and neuromodulation of denervated/reinnervating muscles? *Riccardo Zanato et al., University of Padova, Italy*
- 16.00 **Partners Meeting of the Vagus Nerve Stimulation Project**
- 16.30 Coffee Break
- 17.00 **ALS and other Neuromuscular Disorders** – Francesco Piccione, Ugo Carraro, Chairmen
- 17.00 Myofiber-motoneuron interactions in ALS, *Antonio Musarò, Rome, Italy*
- 17.30 SAVE-ALS - Ventilation by total implantable options recruiting denervated myofibers, *Ugo Carraro, Padova, Italy*
- 18.00 Excitation-Contraction Coupling is affected in Ankyrin 1.5 Null Mice, *Roberta Squecco et al., Florence, Italy*
- 18.30 The role of myopalladin and associated myopathies in mammalian skeletal muscle, *Marco Linari et al., Florence, Italy*
- 19.00 U. Carraro - Adjö, Arrivederci, Auf Wiedersehen, Aurevoir, Búcsú, Despedida, Poslovite, Sjámt, See You to 2014Autumn Padua Muscle Days

Monday April 7, 2014

Hotel Majestic Toscanelli, Via dell'Arco 2, I-35122 Padova (Italy) Phone +39 049.66.32.44 - E-mail: majestic@toscanelli.com - Padua, Italy09.15 **Partners Meeting of the MED^{EL} Project Rejuvenation of aged vocalizing muscles****BAM On-Line** <http://www.bio.unipd.it/bam/bam.html>
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