



IIM – Interuniversity Institute of Myology
 University of Padua – cirMYO Interdepartmental Research Center of Myology
 University of Chieti – BAMS Department of Basic and Applied Biomedical Sciences



2009Spring PaduaMuscleDays

Terme Euganee & Padova (Italy), April 26 - 28, 2009

Terme Euganee Conference Hall, Hotel Augustus, Viale Stazione 150 - 35136 Montegrotto Terme (Padova), Italy
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Archivio Antico, Palazzo Bo, University of Padova, Via VIII Febbraio 3, Padova

Topics: 1. RISE2-Italy Project; 2. Functional Imaging of Muscle Tissue; 3. Physical activity at high altitude; 4. Myopathies

Organizers: H. Kern, G. Fanò, C. Reggiani, U. Carraro

Sunday April 26, 2009

Terme Euganee Conference Hall, Hotel Augustus, Viale Stazione 150 - 35136 Montegrotto Terme (Padova), Italy

14.00 – 19.00 Registration

14.00 **TM Workshop** To train denervated muscles with Therapeutic Electrical Stimulation (TES)
 H. Kern, S. Masiero, U. Carraro, *Organizers*

Session 1. RISE2-Italy Project – Stanley Salmons and Winfried Mayr, *Chairmen*

- 15.00 **Lecture:** Rehabilitation strategies from infrequent paraplegic syndromes to common aging-related muscle weaknesses *Helmut Kern, Wien, Austria*
- 15.30 *FES-induced recovery of skeletal fibers lacking innervation*, Feliciano Protasi, Simona Boncompagni et al., Chieti, Italy
- 15.45 *EC-C related gene expression is up-regulated in long-standing rat muscle denervation: Implications for muscle rehabilitation*, Marina Marini, Bologna, Italy
- 16.00 *First experience of TES for difficult-to-stimulate paraplegics*, Emiliana Bizzarrini. et al., Udine, Italy
- 16.15 *TES of denervated muscles after peripheral nerve lesion*, Stefano Masiero et al., Padova, Italy
- 16.30 *Rise2-Italy Trial. Structural and psychological effects of home electrical stimulation at 6 months treatment after complete SCI*, Marco Ferraro et al, Padova, Italy
- 16.45 *Study of muscular activation during whole body vibration training*, Paolo Bifulco et al., Napoli, Italy
- 17.00 *Joint stability and balance training in injury prevention and rehabilitation protocols*, Nejc Sarabon. et al., Koper, Slovenia
- 17.20 Break

Session 2. Functional Imaging of Muscle Tissue –Helmut Kern & Claudio Ferraro, *Chairmen*

- 17.40 *Muscle density distribution within Rectus Femoris due to Electrical Stimulation Therapy*, Thordur Helgason et al., Reykjavik, Iceland
- 18.00 *Direct and indirect effects on bone mineral density in paraplegic patients due to TES*, Paolo Gargiulo et al., Reykjavik, Iceland
- 18.20 *Ultrasonography of medium and small muscle vessels*, Romeo Martini et al., Padova, Italy
- 18.40 *Functional EchoMyography of denervated muscle. Preliminary results*, Roberto Stramare et al., Padova, Italy
- 19.00 General Discussion
- 20.00 *Dinner*
- 21.30 RISE2-Italy Project & Functional Imaging of Skeletal Muscle: Two steps toward Brussels (money)?
T. Helgason, H. Kern, S. Salmons, U. Carraro, Organizers
 All conference participants are invited to discuss a proposal for an international project

BAM On-Line

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8.00 Complimentary Bus to Padova

Monday April 27, 2009

Archivio Antico, Palazzo Bo, University of Padova, Via VIII Febbraio 3, Padova

cirMYO Lectures – Helmut Kern & Francesco Mascarello, Chairmen

- 8.55 Introduction, Ugo Carraro, Padova, Italy
- 9.00 Muscle design strategies, Clara Franzini-Armstrong, Philadelphia, USA
- 9.40 Sarcomeric myosin genes: evolution and transcriptional control, Stefano Schiaffino, Padua, Italy
- 10.20 Plasticity and adaptive change: lessons from a paradigm shift, Stanley Salmons, Liverpool, U.K.
- 11.00 Break
- 11.20 Muscle transcriptional pathways with electrical stimulation, Jonathan C Jarvis, Lauren Fisher, Liverpool, UK
- 11.40 Malignant hyperthermia in mice lacking calsequestrin, Feliciano Protasi, Chieti, Italy
- 12.00 Histological characteristics of cultured human muscle tissue, Istvan Gati, Linköping, Sweden
- 12.20 MYH16: the masticatory myosin unveiled, Carlo Reggiani, Padova, Italy
- 12.50 Visit to the Anatomical Theatre & Lunch at the Piazza della Frutta Bar Margherita

Session 3. Physical activity at high altitude: general, cellular and molecular adaptations

Giorgio Fanò & Carlo Reggiani, Organizers & Chairmen

- 14.30 **Lecture:** Adaptation of man to hypoxia: from the integrative to the molecular level
Paolo Cerretelli, Milan, Italy
- 15.00 *Manaslu Expedition 2008: physiological adaptations to chronic altitude hypoxia*, Vittore Verratti, Camillo Di Giulio, Federico Schena, Giorgio Fanò, Chieti, Italy
- 15.30 *Anaerobic capacity and isometric contraction strength in six Italian climbers selected for Himalaya expedition*, Christian Doria, Gerardo Bosco, Guglielmo Di Tano, Tiziana Pietrangelo
- 15.50 *Molecular and cellular muscle adaptations to physical activity in hypobaric hypoxia*, Luana Toniolo, P Cancellara, M Canato, L Dal Santo, Antonio Paoli, Carlo Reggiani, Padova, Italy
- 16.10 *Oxygen supply and oxygen utilization in muscles after chronic exposure to hypobaric hypoxia*, Valeria Marconi, Alessandra Adami, Carlo Capelli et al., Verona, Italy
- 16.30 *Red blood cell neocytolysis in humans after high altitude de-acclimatization*, Guglielmo Antonutto, Angela Risso, Udine, Italy
- 16.50 Break
- 17.10 *The cellular basis of muscle regenerative capacity after physical activity under severe hypoxic conditions*, Tiziana Pietrangelo, Rosa Mancinelli, Rita La Rovere, Stefania Fulle, Chieti, Italy
- 17.30 *Genomic analysis of skeletal muscle under severe hypoxic conditions and physical activity*, Rosa Mancinelli, Tiziana Pietrangelo, Rita La Rovere, Stefania Fulle, Chieti Italy
- 17.50 *Proteome analysis of human vastus lateralis muscle (hVLM) from climbers after mountaineering expedition to Himalayas*, Stefania Angelucci, Fabrizio Di Giuseppe, Sulpizio Marilisa, et al., Chieti Italy
- 18.10 *Endocrine and metabolic response to extreme altitude and physical exercise in "elite" climbers*, Andrea Benso, Silvia Grotto, Turin, Italy
- 18.30 *Closing remarks from Manaslu project: perspectives for an interdisciplinary approach in hypoxic studies*, Federico Schena, Rovereto (Tn), Italy
- 20.00 cirMYO Dinner at Hotel Augustus
- 21.30 cirMYO Educational Workshop & TM Review Series

BAM On-Line

<http://www.bio.unipd.it/bam/bam.html>

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Tuesday April 28, 2009

Terme Euganee Conference Hall, Hotel Augustus, Viale Stazione 150 - 35136 Montegrotto Terme (Padova), Italy

Session 4. Myopathies I – Istvan Gati & Libero Vitiello, Chairmen

- 9.00 **Lecture:** *Electrophysiological evaluation of denervated skeletal muscle fibres*, Fabio Francini, Roberta Squecco, Florence, Italy
- 9.30 *The expression of developmental markers in muscle fibers in diagnostic biopsies*, Olaf Danielsson, et al., Linköping, Sweden
- 9.45 *A defective SERCA1 protein is responsible for congenital pseudomyotonia in chianina cattle*, Roberta Sacchetto, et al., Padova, Italy
- 10.00 *Disferlinopathies, pathogenesis and effects of physical activity* Carlo Borsatto et al., Padova, Italy
- 10.15 *Injectable, photocuring biomaterial shaping 3d cell delivery*, Marina Flaibani, Nicola Elvassore, Padova, Italy
- 10.30 *Cell therapy for muscle dystrophies: delivery of myogenic precursor cells in mdx mice via polymeric scaffolds*, Silvia Carnio et al., Padova, Italy
- 10.45 *Clues to the formation of cores in a mouse model of malignant hyperthermia*, Simona Boncompagni et al., Chieti, Italy
- 11.00 Break

Session 4. Myopathies II – Stefano Merigliano & Fabio Francini, Chairmen

- 11.15 *Identification of cachexia predictive biomarkers in serum and muscle biopsies from patients bearing colon rectal cancer*, Sandra Zampieri, Nicoletta Adami, Massimo Vecchiato, Stefano Merigliano, Padova, Italy
- 11.30 *Aging strength ability: a “strenght condition” program in over 60 years aged fall prevention*, Silvia Corbianco, Cristina Ciappetta, Paolo Bongioanni, Bruno Rossi, Marco Dini, Pisa, Italy
- 11.45 *Neuroregenerative effect of oxandrolone. A case report*, Vittorio Bianchi, Adriana Marbini, San Marino, Italy
- 12.00 *Enhanced myogenic potential of CD44+ low bone marrow murine cells and Pax7+ cells formation after their injection in mdx mice*, Martina Piccoli, et al., Padova, Italy
- 12.15 *Different muscle stem cell sources delivered through photopolymerizable Hydrogel scaffold improve muscle regeneration*, Carlo Alberto Rossi et al., Padova, Italy
- 12.30 *The long-lasting denervated muscle: What we know from animal research?* Ugo Carraro, Padova, Italy
- 12.55 *U. Carraro Auf Wiedersehen, Sjámsst, Aurevoir, Arrivederci, See You to 2009 Autumn Padua Muscle Days*
- 13.00 Lunch
- 15.00 Pool Session!