



2020 PaduaMuscleDays, March 19-21, Montegrotto and Padova, Italy

# MOBILITY MEDICINE

## 30 YEARS OF TRANSLATIONAL RESEARCH

Euganei Hills, Padova (Italy), March 19 - 21, 2020

Hotel Augustus, Montegrotto, Euganei Hills (Padova), Italy & University of Padova Archivio Antico, Padova, Italy

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Organizers: Ugo Carraro, Helmut Kern, Christiaan Leeuwenburgh, Marco Narici, Feliciano Protasi, Marco Sandri



**THURSDAY March 19, 2020**

Department of Biomedical Sciences, Padova University, Italy  
Via Ugo Bassi, 58/B 35131 Padova, Italy (Walking and car entrance)

**9.00 Complimentary Bus to the Department of Biomedical Sciences, University of Padova**

### 10.00 **SARCOPENIA AND AGING, SESSION I**

*Nutritional, Pharmacological and Physiological Interventions*

**Christiaan Leeuwenburgh, Ugo Carraro, Chairs**

- 10.00** Effects of epicatechins on endothelial, mitochondrial and physical function: Clinical Trial Results. *Christiaan Leeuwenburgh, University of Florida, Gainesville, FL, US*
- 10.30** The impact of Fermented Papaya Product (FPP) on cognitive and brain function in older adults: a pilot clinical trial, *Adam J. Woods, University of Florida, Gainesville, FL, US*
- 11.10** FPP for Aging and Cancer prevention, *Stefano Fais, Istituto Superiore di Sanità, Rome, Italy*
- 11.20** Dietary phosphorus, as a possible modifier of dystrophic muscle degeneration in mdx mice, *Ryoichi Matsuda, Department of Life Sciences, University of Tokyo, Japan*
- 11.40** Natural products can regulate agrin-induced acetylcholine receptor clustering, *Masayuki Arakawa, Microbial Chemistry Research Foundation, Tokyo, Japan*
- 12.00** Osato Research Institute preventive medicine, *Yuki Hayashi, Gifu, Japan*
- 12.40 Lunch

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**14.00** **Commitment to reproducibility in targeting mitochondrial respiratory control: basic and advanced applications of the O2k-FluoRespirometer, a practical course**  
*Erich Gnaiger, Oroboros Instruments*

16.40 *Break*

**17.00** **SARCOPENIA AND AGING, SESSION II**  
**Nutritional, Pharmacological and Physiological Interventions**  
**Russ Hepple, Paolo Bernardi, Chairs**

**17.00** Mitochondrial Permeability Transition in Aging Muscle Atrophy, *Russel T. Hepple, University of Florida, Gainesville, FL, US*

**17.30** Neuromuscular activity of *C. elegans* and zebrafish models of FBXL4-based mitochondrial respiratory chain disease: translational platforms for drug screening, *Manuela Lavorato et al., Department of Pediatrics, The Children's Hospital of Philadelphia, Philadelphia, PA, US*

**17.40** Single-cell analysis reveals importance of non-coding RNAs for muscle plasticity, *Stefano Cagnin, Dept of Biology, University of Padova, Italy*

**18.00** Prevention of skeletal muscle atrophy, *Paula Tavares, Faculty of Sport Sciences and Physical Education, University of Coimbra, Portugal*

**18.20** Relationship between ETFDH mutations, expression levels of serum myomiRNAs and response to riboflavin treatment in RR-MADD patients, *Sara Missaglia et al., Milan, Padova, Venice, Italy*

**18.40** **Complimentary Bus to Hotel Augustus, Terme Euganee (Padova), Italy**

**19.20** **Get together at the top of the Hill**

**2020 PaduaMuscleDays, March 19-21, Montegrotto and Padova, Italy****FRIDAY March 20, 2020****8.30 Complimentary Bus to Padova****Archivio Antico, Palazzo Bo, University of Padova, Italy****9.00 Openings**

*Prof. Rosario Rizzuto, University of Padova, Rector*

*Prof. Raffaele De Caro, Department of Neurosciences, Head*

*Prof. Marco Sandri, Department of Biomedical Sciences, Head*

*Prof. Marco Narici, CIR-Myo, Head*

**9.20 Translational Lecture: Ear Stimulation, from Padua 1600 to cochlear implants, Alessandro Martini, Department of Neurosciences, Padua University, Italy****10.00 SESSION III: News on EMS, FES, TMS and more,**

*Helmut Kern, Alessandro Martini, Chairs*

**10.00 Surface Electro Stimulation for Facial Paralysis, Gerd Fabian Volk et al., ENT-Department, Jena University Hospital, Jena, Germany****10.20 Remediating age-related cognitive and physical decline with transcranial direct current stimulation (tDCS), Adam J. Woods, University of Florida, Gainesville, US****10.40 Using high density EEG to assess TMS treatment in patients with schizophrenia, Paolo Gargiulo, et al., Biomedical and Neural Engineering, Reykjavík University, Iceland****11.00 FES, long-term denervated muscles, and other old good friends, Ugo Carraro, University of Padova, Italy****10.20 Body mass, muscle mass and mitochondrial fitness, Erich Gnaiger, Medical University of Innsbruck, Austria****11.40 Skeletal muscle: A significant novel neurohypophyseal hormone-secreting organ, Sergio Adamo, Sapienza University of Rome, Italy****12.00 Guided visit to the Anatomical Theater and the Galileo Galilei's Cathedra of Palazzo Bo, University of Padova****12.30 Guided tour of Palazzo della Ragione****13.00 Lunch in Piazza della Frutta**



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### FRIDAY March 20, 2020

Archivio Antico, Palazzo Bo, University of Padua, Italy



### 15.00 SESSION IV - Muscle Imaging

15.00 **Ultrastructural Muscle Imaging**, Feliciano Protasi, Ugo Carraro, Chairs

15.00 15 years of Vienna-Padova-Chieti collaboration: what did we learn?  
*Feliciano Protasi, Chieti University, Italy*

15.30 To be announced

16.20 **Clinical imaging of human muscles**, Marco Narici, Paolo Gargiulo, Chairs

16.20 Bye, Bye Biopsy: Extracting muscle tissue microstructure from Magnetic Resonance Imaging, Validation to Biopsy and Application to the aging muscle,  
*Shantanu Sinha, University of California, San Diego, Ca, US*

16.40 Skeletal Muscle Mechanics in the Aging Muscle: Advanced MRI technologies provide Insights into Skeletal Muscle Dynamics and Physiology, *Usha Sinha, University of California, San Diego, Ca, US*

17.00 To be announced

17.20 To be announced

17.40 To be announced

17.50 To be announced

18.00 Variability and inter rater reliability of ultrasound imaging of fasciae/muscles,  
*Carmelo Pirri, et al., Dept. Neurosciences, University of Padova, Italy*

18.30 **Complimentary Bus to Hotel Augustus**

19.30 *Candle Dinner at the Hotel Augustus*

**2020 PaduaMuscleDays, March 19-21, Montegrotto and Padova, Italy****SATURDAY March 21, 2020****Hotel Augustus, Montegrotto, Euganei Hills, (Padova), Italy****9.00 SESSION V – The Center of Active Aging - Helmut Kern, Chair**

- 9.00** Research in rehabilitation, past & future programs, *Helmut Kern, Wien, Austria*
- 9.20** 15 years of Vienna-Padova-Chieti collaboration: what did we learn? *Feliciano Protasi, Chieti, Italy*
- 10.00** Centre of Active Ageing: current status and update, *Stefan Loeffler, Department of Physical Medicine and Rehabilitation, Wilhelminenspital, Vienna, Austria.*
- 10.20** CAA: present and future activities in Bratislava, *Jan Cvecka, Faculty of Physical Education and Sports, Comenius University, Bratislava, Slovakia*
- 10.40** Speed-power based training in elderly and its potential for daily movement function enhancement, *Nejc Sarabon, Department of Health Sciences, University of Primorska, Koper, Slovenia.*
- 11.00** Coffee Break
- 11.20** Comparison of morphological and serological analyses of denervation biomarkers in skeletal muscle wasting conditions, *Sandra Zampieri, Dipartimento di Scienze Chirurgiche Oncologiche e Gastroenterologiche DiSCOG, Padova, Italy and Wien, Austria*
- 11.40** Resistance training as supplemental therapy in hypogonadal men, *Milan Sedliak, Faculty of Physical Education and Sports, Comenius University, Bratislava, Slovakia*
- 12.00** Saliva, skin and other non-standard CAA analyses to evaluate biological age in older and oldest persons, *Giovanna Albertin et al., Dept. Neuroscience, University of Padova, Italy*
- 12.30** **Lunch and Guided Tour of Posters**
- 14.00** To be announced, *Sascha Sajer, Wien, Austria*
- 14.20** To be announced, *Christian Hofer, Wien, Austria*
- 14.40** To be announced

**15.00 SESSION VI – Mobility Disorders & Rehabilitation – U Carraro, Chair**

- 15.00** Treatment of Central Core Disease with Functional Electrical Stimulation (FES): a Case Report, *Feliciano Protasi, University of Chieti, Italy*
- 15.20** Modulation of some vital functions in a patient with angina pectoris using transcutaneous auricular nerve stimulation, *Janez Rozman, et al, University of Ljubljana, Slovenia*
- 15.40** Predicting cardiovascular pathophysiology from a mid-thigh CT image, *Paolo Gargiulo, et al., Institute for Biomedical and Neural Engineering, Reykjavik University, Iceland*
- 16.00** Evaluation of sympathetic arousal by skin conductance measurement: A tool to optimize rehabilitation strategies? *Manfred Bijak, Center for Medical Physics and Biomedical Engineering, MedUni Vienna, Austria*
- 16.20** Comparison of reflex period in pendulum test done in SCI and Stroke patients, *Thordur Helgason et al., Reykjavik University, Iceland*
- 16.40** Coffee Break
- 17.00** Sensitivity of the fasciae to endocannabinoid system and remodeling of fascial matrix: consequences for fascial fibrosis and inflammation, *Caterina Fede et al., Dept. Neurosciences, University of Padova, Italy*
- 17.20** Age-related changes of mechanical stiffness of extra-cellular matrix in human skeletal muscle, *Lorenzo Marcucci, et al., Department of Biomedical Sciences, Padua University, Italy*
- 17.40** Relationship between ETFDH mutations, expression levels of serum myomiRNAs and response to riboflavin treatment in RR-MADD patients, *Pegoraro Valentina, Marozzo Roberta, Missaglia Sara, Taviani Daniela, Angelini Corrado, Padova Venice, Milan, Italy*
- 18.00** To be announced

**2020 PaduaMuscleDays, March 19-21, Montegrotto and Padova, Italy****Posters always on display****Saturday March 21, After Lunch Guided Tour to Posters**

- P1. Co-activation of denervated thigh muscles: h-bFES improves agonist and antagonist human thigh muscles in complete spinal cord injury, *Ugo Carraro, et al., Dept. Biomedical Sciences, University of Padova, Italy*
- P2. Blood contamination of human saliva: a non-invasive approach for serological analyses in old and very old persons, *Barbara Ravara, et al., Dept. Biomedical Sciences, University of Padova and A&C M-C Foundation, Padova, Italy*
- P3. Master World Records reveal minimal gender differences of aging performance decay, *Paolo Gava et al., A&C M-C Foundation, Padova, Italy*
- P4. Skin analyses to evaluate biological age of aging persons, *Giovanna Albertin, et al., Dept. Neurosciences, University of Padova, Italy*
- P5. Effect of age on muscle spindles in mouse triceps surae, *Chenglei Fan et al., Dept. Neurosciences, University of Padova, Italy*
- P6. Circulating microRNAs as promising biomarkers for monitoring of NLSDM clinical phenotype evolution, *Pegoraro Valentina, Missaglia Sara, Marozzo Roberta, Tavian Daniela, Angelini Corrado, Milan, Padova, Venice, Italy*
- P7. Relationship between ETFDH mutations, expression levels of serum myomiRNAs and response to riboflavin treatment in RR-MADD patients, *Missaglia Sara, Marozzo Roberta, Pegoraro Valentina, Tavian Daniela, Angelini Corrado, Milan, Padova, Venice, Italy*
- P8. Variability and inter rater reliability of ultrasound imaging of fasciae/muscles, *Carmelo Pirri, et al., Dept. Neurosciences, University of Padova, Italy*
- P9. Age-related changes of mechanical stiffness of extra-cellular matrix in human skeletal muscle, *Lorenzo Marcucci, et al., Department of Biomedical Sciences, Padua University, Italy*
- P10. A role for fermented papaya in preventing and treating aging, through a potent and systemic antioxidant effect, *Mariantonia Logozzo et al., Istituto Superiore di Sanità, Rome, Italy*
- P11. Total body in bed gym, *Ugo Carraro et al., Dept. Biomedical Sciences, University of Padova, Italy*
- P12. To be announced
- P13. To be announced
- P14. To be announced
- P15. To be announced

**Call for Abstracts (up to 250 words)****Dead Line: December 10, 2019****Submit to: [ugo.carraro@unipd.it](mailto:ugo.carraro@unipd.it)****EJTM Communications****(up-to 1500 words + 100-word summary + 3-5 key words +  
2 Figures/Tables + 10-20 key full references)****will be published in EJTM 30 (1), 2020****EJTM is indexed in PUBMED, ESCI and SCOPUS****CiteScoreTracker October 2019 = 0.91**