



Effect of physical exercise on biological age using omics

In motu salus 6th annual meeting

Institut d'Estudis Catalans (IEC), Carrer del Carme 47, 08001 Barcelona
October 18th, 2024

9:00-9:20 Welcome: Benjamín Fernández, Laura Herrero

Session 1. Chairmans: Benjamín Fernández, Laura Herrero

9:20-9:40 **Maribel Hernández** *Universitat de Barcelona*
Hepatic Mfn2 induced by exercise modifies LD-mitochondria communication

9:40-10:00 **Martin Whitham** *University of Birmingham*
Understanding, (leveraging?) the impact of physical activity on health in the context of small extracellular vesicles

10:00-10:20 **Isabel Gálvez Galán** *Universidad de Extremadura*
MCP-1 and crown-like structures in white adipose tissue are involved in the anti-inflammatory effects of regular exercise in obese mice: a model of bioregulatory exercise

10:20-10:30 **Miriam Martínez Cantón** *Universidad de las Palmas de Gran Canaria*
Molecular adaptations of the antioxidant system mediated by Zynamite PX and intense exercise

10:30-10:40 **Francisco J. Amaro-Gahete** *Universidad de Granada*
Does the Exercise Timing Matter on Energy Metabolism in Humans? A Crossover and Randomized Study

10:40-11:15 Coffee break

Session 2. Chairmans: Cristina Lafarga, Pasqualine Buono

11:15-11:35 **Jørn Helge** *University of Copenhagen*
Fat oxidation and metabolic flexibility

11:35-11:55 **Eduardo Iglesias** *Universiad de Oviedo*
Arterio-venous balance of mirRNA during physical exercise

11:55-12:15 **Sara Samino** *Biosfer Teslab*
Metabolomics: understanding the metabolic basis of exercise adaptation and recovery

12:15-12:35 **Guillermo Sanchez-Delgado** *Universidad de Granada*
Investigating exercise from a clinical/metabolic perspective

12:35-12:45 **Carmen Navarro Pérez** *Universidad de Extremadura*



Exercise-induced anxiety and its impact on metabolic and inflammatory responses: A model of dangerous exercise

12:45-12:55 **Sandra Cutanda-Tesouro** *Universitat de Barcelona*
Tuning the assessment of coenzyme Q redox state and respiration in skeletal muscle permeabilized fibers

12:55-14:30 Lunch Break

Session 3. Chairmans: Jørn Helge, Eduardo Iglesias

14:30-14:50 **Steen Larsen** *University of Copenhagen*
Impact of different exercise modalities on mitochondrial function

14:50-15:10 **Pablo M. Garcia-Roves** *Universitat de Barcelona*
Analyzing the Redox Balance of Coenzyme Q, Mitochondrial Membrane Potential, and Respiratory Functions in Skeletal Muscle Post-Exercise

15:10-15:30 **Paul Coen** *Translational Research Institute, AdventHealth*
The Molecular Transducers of Physical Activity Consortium (MoTrPAC): Overview and Initial Findings from Acute Exercise Studies

15:30-15:50 **Pasqualina Buono** *Università Parthenope*
Exercise and sport training effects on skeletal muscle ageing

15:50-16:10 **Víctor Galván Álvarez** *Universidad de las Palmas de Gran Canaria*
Skeletal muscle Nrf2/Keap1 and antioxidant enzymes as determinants of exercise capacity in humans

16:10-16:40 Coffee break

Session 4. Chairmans: Eduardo Ortega, Pau Gama-Perez

16:40-16:50 **Jordi Monferrer Marín** *Universidad de Valencia*
The role of time intervals in metabolic flexibility assessment and its relationship with parasympathetic withdrawal

16:50-17:00 **Paola Pinto Hernández** *Universidad de Oviedo*
Role of miR-29a-3p as an epigenetic myokine in response to exercise

17:00-17:10 **Eduardo García González** *Universidad de las Palmas de Gran Canaria*
Is Vitamin D an ergogenic aid in humans?

17:10-17:20 **Giovanni García Pérez** *Universidad de las Palmas de Gran Canaria*
Intra- and inter-day variability of ACE2 expression in human skeletal muscle

17:20-17:30 **María Fernández del Valle** *Universidad de Oviedo*
The Patient with Anorexia Nervosa from a Comprehensive Perspective



- 17:30-17:40 **Alex del Valle Pagador** *Universidad de Oviedo*
Physical Activity Levels in Patients with Anorexia Nervosa:
Contextualization and Exploratory Analysis
- 17:40-17:50 **Annamaria Mancini** *Università Parthenope*
TBA
- 17:50-18:00 **Hugo Olmedillas Fernández** *Universidad de Oviedo*
Groin Pain Gender Differences
- 18:00 **Concluding Remarks**

Scientific committee: Benjamín Fernández, Pablo M. Garcia-Roves, Jonatan Ruiz, José Antonio López Calbet, Eduardo Ortega, Cristina Blasco-Lafarga, Eduardo Iglesias-Gutiérrez

Organising committee: Pablo M. Garcia-Roves, Sandra Cutanda-Tesouro, Laura Herrero, Mariàngels Gallego, Paqui Lorite