Human Physiology Workshop – Program

Saturday, December 7, 2019

08:00  Registration
08:30  Welcome (DLR)

Session 1: Chair: Joachim Fandrey & Markus Gruber
08:45  Block, Katharina: The in vitro neuromuscular junction (NMJ) as an experimental model to explore Muscle and Nerve cell-cell communication in Space: The “NEMUCO” 1g ground-based analyses
09:00  Trautmann, Gabor: Increased Homer long isoforms expression and subcellular compartmentalization during myogenesis in vitro. The “NEMUCO” ground based analyses
09:30  Richter, Charlotte: In vivo muscle-tendon unit behaviour of human gastrocnemius medialis muscle during body weight supported walking on the lower body positive pressure treadmill (AlterG)

9:45–10:15  Coffee break

Session 2: Chair: Simon Schäfer & Thomas Smith
10:15  Attias, Julia: Motor unit properties are not altered during 60-days head-down bed rest with and without artificial gravity exposure – preliminary results from the AGBRESA study
10:30  Heieis, Jule: Atrophy of thigh muscles in elite mountaineers after two weeks of simulated 7000m altitude
10:45  Hoffmann, Fabian: Evolution of human pulmonary hemodynamics during severe sustained hypoxia
11:00  Dreiner, Maren: Impact loading under artificial gravity affects articular cartilage metabolism
11:15  Michély, Sarah: Contraction-related muscle fascicle dynamics in master athletes between 35 and 95 years of age
11:30  Kagelmann, Niklas: External Cooling as a stabilizing cardiovascular countermeasure in Hyper-G

11:45–12:45  Lunch break

Session 3: Chair: Christoph Clemen
12:45  Piechowski, Sarah: Virtual Reality and Eyetracking during Docking Training
13:00  Rettberg, Petra: The microbiome of the International Space Station (ISS)
13:15  Koch, Stella: Living with mold: importance of studying filamentous fungi under simulated spaceflight conditions
13:30  Thot, Georgina: Adaptive Response in Intra-Muscular Connective Tissue: Endomysium Content of Soleus Muscle is Altered during Long-Term Immobilization in Humans

13:45–14:15  Coffee break

Session 4: Chair: Justin Lawley & Anja Niehoff
14:15  Friedrich, Jan: Markers for nitric oxide metabolism and oxidative stress in human during an endurance capacity test
14:30  De Martino, Enrico: Hypogravity reduced trunk admittance and lumbar muscle responses to external spinal perturbation
14:45  zu Eulenburg, Peter: Changes in position-, volume- and surface-based parameters of the human brain after long-duration spaceflight
15:00  Di Giulio, Irene: Postural and Gait stability are improved in healthy participants wearing a 0.2g axial load Skinsuit
15:15  Fahrion, Jana: Microbial Monitoring in the EDEN ISS greenhouse, a mobile test facility in Antarctica

15:30–16:30  Limper, Ulrich: The MyoCardiogen Study

Awards

16:30  Adjourn