



# INTERNATIONAL SOCIETY FOR GRAVITATIONAL PHYSIOLOGY

Hosted by Prof. Floris Wuyts

42nd Annual ISGP Meeting in Antwerp  
July 2 – 7, 2023



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### European Low Gravity Research Association (ELGRA)

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### Belgian Science Policy Office (BELSPO)

BELSPO, the Federal Science Policy, is one of the main actors of scientific research in Belgium. It brings together many prestigious research programs and manages ten federal scientific institutes. With 2,300 employees, BELSPO brings together a wide range of expertise in astrophysics, meteorology, history, climatology, anthropology, molecular biology... BELSPO's "Space Research and Applications" department manages the Belgian contributions to the international space programs from ESA and other intergovernmental organisations (EUMETSAT, ECMWF, ESO...) as well as those developed in the framework of bilateral agreements. It is also in charge of the follow-up of the space activities and programmes of the European Union. The department also manages specific national R&D programmes mainly in the domain of Earth Observation. For more information visit <https://www.belspo.be/>.



# Program Overview

	Monday 3	Tuesday 4	Wednesday 5	Thursday 6	Friday 7
	Registration	Registration	Registration	Registration	
09:00	Opening word				
09:30	Plenary 1: Keynote lectures "Current Concepts"	Plenary 2: Discussion pannel "Exercise and Countermeasures"	Plenary 3: Keynote lectures "Hibernation and hypometabolic state"	Plenary 4: Keynote lectures "Neuroscience"	
10:00					
10:30					
11:00	Coffee break	Coffee break	Coffee break		
11:30	Young Investigators Session	Young Investigators Session	Young Investigators Session	Closing ceremony	
12:00					
12:30	Lunch Break	Lunch Break	Lunch Break	Lunch Break	
13:00	Lunch & poster	Lunch & poster	Lunch & poster	ISGP General assembly	Social Day
13:30					
14:00	Spaceflight analogues and countermeasures	Space Agency Session	Metabolism and Immunology		
14:30	Reproduction and biology		Neuroscience		
15:00					
15:30					
16:00	Coffee break	Coffee break	Coffee break		
16:30	Cardiovascular and respiratory system	Spaceflight Applications	Cardiovascular system	Royal Museum of Fine Arts (KMSKA) visit	
17:00	Bone and musculoskeletal system	Neuroscience	Bone and musculoskeletal system		
17:30		ELGRA General Assembly			
18:00	Welcome Reception (20:00 - 22:00)	Careers & Beers (18:30 - 20:00)	Gala Dinner and Young Investigators Award Ceremony (19:00 - 01:00)		

Plenary sessions

Student sessions

Parallel sessions

Poster sessions

Social & Others

July 03, 2023 - Monday

	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
8:00 – 9:00	<i>Registration</i>			
9:00 – 9:15	<p><b>Opening word</b></p> <p><u>Speakers</u>            Marc-Antoine Custaud – President of ISGP            Floris Wuyts – Host of the 42nd Annual ISGP Meeting            Representative Belgian Science Policy (BELSPO)</p>			
9:15 – 11:00	<p><b>Plenary session “Current Concept”</b></p> <p><u>Moderators</u>            Brandon Macias and Danielle Greaves</p> <p><u>Speakers</u>  <b>9:15</b> Michael Stenger – “NASA physiological research for human space exploration”  <b>10:00</b> Erik Houglund – “Human research program plans on Artemis research”  <b>10:45</b> Frank De Winne – “ESA’s Terrae Novae and Master Plan”</p>			
11:00 – 11:30	<i>Coffee Break</i>			
11:30 – 12:30	<p><b>Young Investigators Session</b></p> <p><u>Moderators</u>            Anna-Maria Liphardt, Catho Schoenmaekers, Rodrigo Coutinho De Almeida</p> <p><u>Speakers</u>  <b>11:30</b> Katherine Warthen – “Quantification of intracranial tissue, fluids, and ocular structural changes due to long-duration spaceflight”  <b>11:45</b> Silvana Miranda – “Gravity’s Effect on T-Cell Activation: Unraveling the Mechanisms of Immune System Dysregulation in Space”  <b>12:00</b> Constance Badali – “SpaceBike – Preliminary data on cycling neuromechanics in weightlessness”  <b>12:15</b> Laurent Opsomer – “Movement direction drift in astronauts performing point-to-point arm movements without visual feedback”</p>			



July 03, 2023 - Monday				
	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
12:30 – 13:00	Lunch Break			
13:00 – 14:00		<p><b>Lunch &amp; Posters</b></p> <p>Tatiana Kostrominova – <i>“P2Y1 and P2Y2 receptors differ in their role in the regulation of signaling pathways during unloading-induced rat soleus muscle atrophy”</i></p> <p>Bing Han – <i>“Modulation of macrophage pyroptosis by acute or chronic stress - an in vitro approach”</i></p> <p>Sharon van Rijthoven – <i>“Ageing and altered gravity: a cellular perspective”</i></p> <p>Debora Angeloi – <i>“Microgravity and space radiation inhibit autophagy in human capillary endothelial cells”</i></p> <p>Natassi Navasiolava – <i>“Chronic increase in renin-angiotensin-aldosterone activity at steady state of microgravity: why and by which mechanisms?”</i></p> <p>Roman Zhedyaev – <i>“Direct comparison of tilt test and lower body negative pressure effects on human hemodynamics and baroreflex regulation after dry immersion”</i></p> <p>Artur Fedianin – <i>“The effect of various spinal cord stimulation and support afferentation on the condition of the muscles of the rat’s lower leg during simulated gravitational unloading”</i></p> <p>Daniela Santucci – <i>“Neurobehavioural evaluation in mice exposed to acute 2G hypergravity in normothermic or synthetic torpor conditions”</i></p> <p>Ann-Sofie Schreurs – <i>“Candidate countermeasure to mitigate adverse effects of spaceflight on musculoskeletal, cardiovascular and central nervous systems tissues”</i></p> <p>Kevin Tabury – <i>“A blood vessel microfluidic chip to study vascular remodeling in space”</i></p> <p>Stijn Meel – <i>“Influence of prolonged exposure to microgravity on perception of verticality”</i></p> <p>Victoria Sampson – <i>““Space dentistry” - An invention or a modern necessity?”</i></p> <p>Margot Winters – <i>“Optimizing Scientific Output: Assessing the Benefits and Risks of Analog Astronaut Missions for Human Physiology Research”</i></p>		

July 03, 2023 - Monday

	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
14:00 – 15:45			<p><b>Spaceflight analogues and countermeasures</b></p> <p><u>Moderators</u> Angelique Van Ombergen and Philip Carvil</p> <p><u>Speakers</u>  <b>14:00</b> Ilya Rukavishnikov – <i>“Comparative Results Of 21-Day Dry Immersion And 21-Day Head Down Tilt Bed Rest”</i>  <b>14:15</b> Bjorn Baselet – <i>“Combined biological effects of ionizing radiation, psychological stress and microgravity in space: the hind limb unloading mouse model”</i>  <b>14:30</b> Vivekanand Vimal – <i>“Vibrotactile Feedback as a Countermeasure to Spatial Disorientation”</i>  <b>14:45</b> Carole-Anne Vollette – <i>“A wearable-based system to reduce space motion sickness by multi-sensory pre-habitation”</i>  <b>15:00</b> Jonathan Scott – <i>“Effects of body size and countermeasure exercise on estimates of life support resources during all-female crewed exploration missions”</i>  <b>15:15</b> Jack van Loon – <i>“Reduce Cost by Permanent Artificial Gravity”</i></p>	<p><b>Biology</b></p> <p><u>Moderators</u> Sharmila Bhattacharya and Sarah Baatout</p> <p><u>Speakers</u>  <b>14:00</b> Elena Gorbacheva – <i>“Hormonal Status Of Woman And Structural Characteristics Of The Ovaries And Uterus After A 5-Day “Dry” Immersion”</i>  <b>14:15</b> Irina V. Ogneva – <i>“Cell Stiffness And Protein Content In Drosophila Melanogaster’ Oocytes After Space Flight”</i>  <b>14:30</b> Dagmara Stasiowska – <i>“Impact of honey bee (Apis mellifera) queen exposure to hypergravity on colony development - case study”</i>  <b>14:45</b> Simon Wuest – <i>“Analyzing Calcium Signaling by CaMPARI2 during Parabolic Flights”</i>  <b>15:00</b> Christian Liemersdorf – <i>“Human Neural Network Activity Reacts to Gravity Changes”</i>  <b>15:15</b> Jess Bunchek – <i>“VEG-04: How Lighting Affects Crop Production, Quality, And Acceptability of Mizuna Mustard Grown on the International Space Station”</i>  <b>15:30</b> Jennifer-Vernice Pauly – <i>“Veggie on ICE: The Effects of Plant Production on Human Behavioral Health in Long-Duration Antarctic Overwintering Missions”</i></p>
15:45 – 16:15	<i>Coffee Break</i>			



## July 03, 2023 - Monday

	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
16:15 – 18:00			<p><b>Cardiovascular and respiratory system</b></p> <p><u>Moderators</u> Jérémy Rabineau and Ana Diaz-Artiles</p> <p><u>Speakers</u> <b>16:15</b> Dag Linnarsson – “Lung diffusing capacity for nitric oxide in space: microgravity gas density interactions”</p> <p><b>16:30</b> Paniz Balali – “Adaptive Changes in Heart Rate Variability and Cardiac Function during Long-Term Spaceflight: Insights from Wearable Devices”</p> <p><b>16:45</b> Jason Fisher – “Cardiovascular And Cutaneous Blood Flow Responses To Artificial Gravity And Temperature: A Pilot Study”</p> <p><b>17:00</b> Damien Lanéellé – “Cerebral Blood flow distribution according to cerebral arterial pattern variations during hemodynamic stress induced by simulated hypovolemia or hypercapnia: a triplex ultrasound and magnetic resonance imaging study”</p> <p><b>17:15</b> Danielle Greaves – “Robotic Ultrasound on ISS Operated from Canadian University’s Mission Control Center - Results from Vascular Echo Experiment”</p> <p><b>17:30</b> Philippe Arbeille – “Spaceflight and Dry Immersion Increases the Reflectivity of the Arterial Wall to Ultrasound Radio Frequency Waves”</p> <p><b>17:45</b> Damian Bailey – “Gravitational transitions increase blood-brain barrier permeability in humans; focus on the redox-regulation of cerebral hyper-fusion”</p>	<p><b>Bone and musculoskeletal system</b></p> <p><u>Moderators</u> Anna-Maria Liphardt and Stefan Schneider</p> <p><u>Speakers</u> <b>16:15</b> Ivan Ponomarev – “Effect of 5-day dry immersion on viscoelastic and contractile properties of the lower extremities muscles in women”</p> <p><b>16:30</b> Alexandra Ryabova – “Effects of 5-day dry immersion on characteristics of shin muscles motor evoked potentials in women”</p> <p><b>16:45</b> Maren Dreiner – “Sex-specific cartilage biomarker response to 5 days of dry immersion”</p> <p><b>17:00</b> Alessandra Bosutti – “Impact of 60-bed rest and human artificial gravity on serum oxidative stress biomarkers and skeletal muscle protein oxidative modifications”</p> <p><b>17:15</b> Peter Fernandez – “Insights and Conundrums Involving Spaceflight and Bone - An 18-Month Perspective”</p> <p><b>17:30</b> Anna-Maria Liphardt – “Effect of microgravity during long-duration spaceflight on transverse relaxation times of the femorotibial cartilage (MRI T2) - the ESA Cartilage Health study”</p>
20:00 – 22:00	<b>Welcome reception at Horta</b>			

July 04, 2023 - Tuesday

Plenary room (M.01)

Poster hall

Parallel room (M0.4)

Parallel room (M0.5)

8:00 – 9:00

Registration

9:00 – 11:00

**Plenary session “Discussion panel exercise and countermeasures”**

Moderators

Anna-Maria Liphardt and Rodrigo Fernandez-Gonzalo

Discussion panel

**9:05** Meghan Everett – “Enabling the Human to Explore the Moon and Beyond”

**9:20** Rodrigo Fernandez-Gonzalo – “Is the “optimal exercise” for future exploratory missions optimal for everyone? The individual variability issue”

**9:35** Martina Heer – “Is the pantry on the way to Mars big enough? The tangle relationship between exercise load and energy requirements”

**9:50** Jonathan Scott – “One giant leap for Mankind: Why plyometric exercise could be the future of countermeasure exercise in space”

**10:05** Stefan Schneider – “Exercise recommendations? A hedonistic brain perspective!”

11:00 – 11:30

Coffee Break

11:30 – 12:30

**Young Investigators Session**

Moderators

Rodrigo Fernandez-Gonzalo, Steven Jillings, Inês Antunes

Speakers

**11:30** Roxy Fournier – “Increased cerebrovascular tone following long duration spaceflight is associated with increased pulsatility and reduced conductance”

**11:45** Emil Rehnberg – “Compartmentalized chip for improved formation of human cardiac spheroids using simulated microgravity”

**12:00** Timo Frett – “Comparison between maximal rowing ergometry in artificial gravity and terrestrial conditions”

**12:15** Carmen Possnig – “Influence of gravitational gradients on cerebral and ocular blood flow”

12:30 – 13:00

Lunch Break





July 04, 2023 - Tuesday

	Plenary room (M.01)	Poster hall		
<p>13:00 – 14:00</p>		<p><b>Lunch &amp; Posters</b></p> <p>Patrick Lau – <i>“FLUMIAS - high-resolution live-cell fluorescence microscopy and identification of gravity-dependent thresholds on-board the ISS”</i></p> <p>Fuminori Kawano – <i>“Histone chaperone SPT16 triggers histone turnover in mouse skeletal muscle”</i></p> <p>Junya Shimizu – <i>“Role of exercise-induced H3K27me3 for the gene response to exercise in mouse skeletal muscle”</i></p> <p>Simon Vandergooten – <i>“Directional accuracy of point-to-point arm movements in different body orientations with respect to gravity”</i></p> <p>Katharina Biere – <i>“Isolation and lack of stimuli in Antarctica temporarily increase the alertness of the innate immunity”</i></p> <p>Vivek Mann – <i>“Blood vessels and microgravity”</i></p> <p>Ryo Masuzawa – <i>“Examination of histone variant induction as a novel countermeasure for long term stay in space using mouse model”</i></p> <p>J.J.W.A. van Loon – <i>“Effect of 30 day-3G-exposure on C57BL6J mice: neurobehavioural and biomolecular effects on ocular and brain tissues”</i></p> <p>Nelly Abu Sheli – <i>“Practical applications of electrical stimulation space model with “Russian Currents” in neurological elderly patients”</i></p> <p>Margot Winters – <i>“Assessing the Resilience of Lab-On-Chip Devices with OoC-STRAT: A study on High-Radiation Effects Using Stratospheric Balloons”</i></p>		
<p>14:00 – 15:30</p>	<p><b>Space Agency Session</b> <u>Moderators</u> Sarah Baatout and Catho Schoenmaekers</p> <p><u>Speakers:</u> Angelique Van Ombergen (ESA), Markus Braun (DLR), Didier Chaput (CNES), Sara Piccirillo (ASI), Valerie Gil (CSA), Sharmila Battacharya (NASA BPS), Jancy McPhee (NASA HRP)</p>			

July 04, 2023 - Tuesday

	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
15:30 – 16:00	<i>Coffee Break</i>			
16:00 – 17:45			<p><b>Spaceflight applications</b></p> <p><u>Moderators</u> Angelique Van Ombergen and Jonathan Scott</p> <p><u>Speakers</u> <b>16:00</b> Inês Antunes – “ESA’s SciSpace team”</p> <p><b>16:15</b> Masahiro Terada – “The implementation of the educational programs for space medicine in Japan”</p> <p><b>16:30</b> Andrei Saperu – “New commercial applications for space physiology and human spaceflight”</p> <p><b>16:45</b> Ryan T. Scott – “Open Science for Life in Space: Data Sharing, Standards, and Informatics for Reuse and Knowledge Discovery”</p> <p><b>17:00</b> Anna Catharina Carstens – “Fluorescent live cell imaging on a centrifuge in space: FLUMIAS”</p> <p><b>17:15</b> Alamelu Sundaresan – “Development and Characterization of 3D culture of bone tissue as a physiological test bed for pharmaceutical formulations”</p> <p><b>17:30</b> Marina Cara Tuschen – “μIMMUNE - Development of automated microfluidic immune monitoring for spaceflight, a first report”</p>	<p><b>Neuroscience</b></p> <p><u>Moderators</u> Steven Jillings and Kunihiko Tanaka</p> <p><u>Speakers</u> <b>16:00</b> Nikita Shishkin – “Sensory Organization of Postural Control After Long Term Space Flight”</p> <p><b>16:15</b> Kunihiko Tanaka – “Magnetic Vestibular Stimulation Amplifies Posture and Arterial Pressure Control”</p> <p><b>16:30</b> Maria Bekreneva – “Effect of 5-day Dry Immersion On Vertical Stability And Voluntary Walking in Woman”</p> <p><b>16:45</b> Olga Kuldavletova – “Comparison of postflight mission critical tests between astronauts and bilateral vestibular patients”</p> <p><b>17:00</b> Philippe Lefèvre – “A haptic illusion created by gravity”</p> <p><b>17:15</b> Michele Tagliabue – “The Role of Gravity in Eye-Hand Coordination: Effects of Short-Term and Long-Term Head-Gravity Misalignment”</p> <p><b>17:30</b> Deborah Cecilia Navarro Morales – “Duration judgement in astronauts and patients with idiopathic bilateral vestibular loss”</p>
18:00 – 18:30	<b>ELGRA General Assembly</b>			
18:30 – 20:00	<b>Careers &amp; Beers</b>			



July 05, 2023 - Wednesday				
	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
8:00 – 9:00	Registration			
9:00 – 11:00	<p><b>Plenary session “Hybernation and hypometabolic state”</b></p> <p><u>Moderators</u> Alexander Choukér and Jürgen Bereiter-Hahn</p> <p><u>Speakers</u> <b>9:00</b> Dominique Moser – <i>“Is torpor slumbering in all of us? A comparative cross-species analysis”</i></p> <p><b>9:40</b> Matteo Cerri – <i>“Hypometabolism in hypergravity: metabolic and behavioral effects”</i></p> <p><b>10:20</b> Fabrice Bertile – <i>“Hibernation as a source of innovation for space biology and biomedicine: a focus on brown bears”</i></p>			
11:00 – 11:30	Coffee Break			
11:30 – 12:30	<p><b>Young Investigators Session</b></p> <p><u>Moderators</u> Anna-Maria Liphardt, Kimia Seyedmadani, Rodrigo Coutinho De Almeida</p> <p><u>Speakers</u> <b>11:30</b> Peter Fernandez – <i>“Preliminary insights into bone adaptation and differences in energy metabolism between males and females under (DI) conditions”</i></p> <p><b>11:45</b> Florian Pfeiffer – <i>“Inspired by Space: E-Nose technology provides diagnostic tool for SARS-CoV-2 infection by breath analysis”</i></p> <p><b>12:00</b> Federico D’Amico – <i>“Immune cell activation state in 5-day Dry Immersion: a comparative study between a female and male cohort”</i></p> <p><b>12:15</b> Angela Kubik – <i>“Defining CDKN1a/p21-induced changes to the functional and regenerative capabilities of bone-marrow derived stem cells in models of aging, loading, and spaceflight”</i></p>			
12:30 – 13:00	Lunch Break			

July 05, 2023 – Wednesday

	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
13:00 – 14:00		<p><b>Lunch &amp; Posters</b></p> <p>Katharina Block – <i>“Project NEMUCO - The neuromuscular junction-like structure in vitro to study muscle and nerve cell-cell communication in space”</i></p> <p>Kyung-Ju Shin – <i>“Microgravity induces oxidative stress and mitochondrial dysfunction which is mitigated by TPP-niacin in retinal epithelial cells”</i></p> <p>Darshan Chandramowli – <i>“Targeted proteomic analysis of S. cerevisiae in microgravity conditions in response to antifungal stress”</i></p> <p>Ivan Vasilev – <i>“Study of vascular hemodynamics in healthy men undergoing 21-day antiorthostatic hypokinesia”</i></p> <p>Hendrik Bouwman – <i>“Effects of sustained hypergravity on growth and reproduction in earthworms”</i></p> <p>Laurence Stevens – <i>“Chronic recording of EMG activity by telemetry in mice skeletal hindlimb muscles during long-term inactivity”</i></p> <p>Danielle Greaves – <i>“Cervical intervertebral distance measured using 3D ultrasound after dry immersion and 6 month spaceflight”</i></p> <p>Adriana Salatino – <i>“Motor awareness in microgravity: action self-monitoring during parabolic flights”</i></p> <p>Sarah Schunk – <i>“Astrocyte reactivity can be modulated by altered gravity”</i></p> <p>Alina Saveko – <i>“Human postural responses to artificial gravity training”</i></p> <p>Judith Nottage – <i>“Alterations in gravity influences conscious experiences”</i></p> <p>Pinja Kääriäinen – <i>“The influence of spaceflight experience on structural brain changes”</i></p> <p>Dirk Neefs – <i>“Dental care in space as an interdisciplinary procedure”</i></p>		



## July 05, 2023 - Wednesday

	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
14:00 – 15:45			<p><b>Metabolism and immunology</b></p> <p><u>Moderators</u> Bjorn Basalet and Alexander Choukér</p> <p><u>Speakers</u>  <b>14:00</b> Mathieu Horeau – “Simulated microgravity differentially affects the iron metabolism in male and female rats”  <b>14:15</b> Frédéric Derbré – “Iron metabolism regulation in women and men exposed to simulated microgravity: results from the randomized trial AGBRESA”  <b>14:30</b> Martina Heer – “Glucose tolerance onboard the International Space Station: First results from an Oral Glucose Tolerance Test”  <b>14:45</b> Dominique Moser – “Preconditioning with mild hypergravity mitigates simulated microgravity-induced T cell dysfunctions”  <b>15:00</b> Judith-Irina Buchheim – “Role of individual immune profiles for wound healing under chronic stress during long-term space flight”</p>	<p><b>Neuroscience</b></p> <p><u>Moderators</u> Angelique Van Ombergen and Katherine Warthen</p> <p><u>Speakers</u>  <b>14:00</b> Ge Tang – “Establishing a link between brain and eye in long-duration spaceflight”  <b>14:15</b> Kimia Seyedmadani – “Superior Baseline Oculomotor Performance Viewing with the Dominant Eye”  <b>14:30</b> Jean Pauly – “Psychological and cognitive adaptation during a 3-weeks confinement in a space-like environment”  <b>14:45</b> Gabriel De La Torre – “Neurocognitive assessment in microgravity: Review under a clinical perspective”  <b>15:00</b> Elisa Raffaella Ferrè – “Cognition in Zero-G: How Altered Gravity Influences Human Brain and Behaviour”  <b>15:15</b> Steven Jillings – “Brain structural and functional changes after long duration spaceflight”  <b>15:30</b> Jennifer-Vernice Pauly – “Brains on ICE - Hippocampal Changes in Response to Prolonged Isolation and Confinement”</p>
15:45 – 16:15	Coffee Break			

July 05, 2023 - Wednesday

	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
16:15 – 18:00			<p><b>Cardiovascular system</b></p> <p><u>Moderators</u> Roxy Fournier and Damian Bailey</p> <p><u>Speakers</u>  <b>16:15</b> Adrien Robin – <i>“Venous filling and emptying properties during 5-day strict dry immersion microgravity simulation”</i>  <b>16:30</b> Ana Diaz Artilles – <i>“Quantification Of The Internal Jugular Vein Characteristics During Fluid Shift Induced By Lower Body Negative Pressure”</i>  <b>16:45</b> Richard Hughson – <i>“Is fainting after 14-day head-down bed rest in 55-65 year-old men and women a chicken and egg question?”</i>  <b>17:00</b> Jérémy Rabineau – <i>“Correlation of changes in aortic stiffness with other parameters of cardiovascular health after 60-day head-down bed rest”</i>  <b>17:15</b> Jacques-Olivier Fortrat – <i>“Increased Cardiovascular Self-Organized Critically After Prolonged Head-Down Bed Rest”</i>  <b>17:30</b> Stefan Möstl – <i>“Autonomic cardiovascular control following 30 days strict head down tilt bedrest - Results from the SANS CM studies”</i>  <b>17:45</b> Danniella Hurt – <i>“Cephalad fluid shifts associated with neuroprotective alterations in cerebral perfusion and haemostasis independent of systemic oxygenation status”</i></p>	<p><b>Bone and musculoskeletal system</b></p> <p><u>Moderators</u> Rodrigo Fernandez Gonzalo and Laurence Vico</p> <p><u>Speakers</u>  <b>16:15</b> Britt Schoenrock – <i>“Muscle stiffness in astronauts during long duration missions onboard the International Space Station (MYOTONES)”</i>  <b>16:30</b> Elena Fomina – <i>“The weight load simulation mode every other day is quite effective for preserving muscular strength on long space missions”</i>  <b>16:45</b> Philip Carvil – <i>“Effects of a proposed microgravity countermeasure, the MK VI SkinSuit, upon markers of lumbar geometry and kinematics following unloading”</i>  <b>17:00</b> Margot Issertine – <i>“The NEBULA Project: effect of preflight endurance and resistance training as a countermeasure against microgravity-induced musculoskeletal deconditioning”</i>  <b>17:15</b> Thomas Angeli – <i>“Implementation of Blood Flow Restricted Exercising for Strength Increase in Quadriceps Muscle on the Multifunctional Dynamometer for Application in Space”</i>  <b>17:30</b> Mona Nasser – <i>“Jaw movement in microgravity”</i>  <b>17:45</b> Elie-Tino Godonou – <i>“Changes in urinary concentration of the cartilage degradation marker Coll2-1NO2 in response to bed rest immobilization and countermeasures”</i></p>
19:00 – 1:00	<b>Gala dinner at Handelsbeurs and announcement of Young Investigator Awards (YIA)</b>			



July 06, 2023 - Thursday				
	Plenary room (M.01)	Poster hall	Parallel room (M0.4)	Parallel room (M0.5)
8:45 – 9:45	Registration			
9:45 – 12:20	<p><b>Plenary session “Neuroscience”</b></p> <p><u>Moderators</u> Floris Wuyts and Elisa Raffaella Ferrè</p> <p><u>Speakers</u> <b>9:45</b> Floris Wuyts – “How does the brain react to space”</p> <p><b>10:20</b> Brandon Macias – “Spaceflight Associated Neuro-ocular Syndrome: The Gravity of the Mission”</p> <p>----- 15 min Break -----</p> <p><b>11:10</b> Jay Buckley – “A re-evaluation of the acute adaptation to weightlessness and what it means for SANS”</p> <p><b>11:45</b> Elena Tomilovskaya – “Effects of Dry Immersion on the sensory-motor system”</p>			
12:20 – 12:30	Closing Ceremony			
12:30 – 13:30	Lunch Break			
13:30 – 15:30	ISGP General Assembly			
15:30 – 18:00	Royal Museum of Fine Arts (KMSKA) visit			

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