



EUROPEAN MASTER GAMES 2019 science workshop

SPACELAND - AGING WELL PROGRAM

1 August 2019, 12.00

PIAZZA SAN CARLO - ITALIAN ENGINEERS COUNCIL Board Room

(entrance from via Giolitti 1 Torino)

Followed by a Space Lunch at 13.30 hrs in via Madama Cristina 116 Torino - Pasta & Basta

(free aperitif and 10% reduction on the bio-lunch to all registered EMG athletes & players)

with

- Franco Bertoli, Olympic Medalist for Volleyball, frm. European and Italian volleyball champion
- Bernardino Chiavola, EMG 2019 Program Manager
- Alessio Toneguzzo, Italian Engineers Council - Province of Torino - President
- Antonio Scalabrino, surgeon, dental doctor, clinical nutritionist - EMG Aging Well Program
- Carlo Viberti, Sub-orbital Engineer-Astronaut nominee, NASA/ESA Moon-Gravity Flight Veteran, frm. Italian Masters high-jump champion and former National Division Volleyball player in the Netherlands

Moderator: Antonio Lo Campo (La Stampa)

Learning from the genius of Leonardo, 500 years after his passing away, and the extraordinary achievements of the Apollo 11 crew, 50 years after their historic landing on the Moon, in the framework of the never-ending “*challenge vs. gravity & ageing*” common for both *astronauts and master athletes*, this social lunch brings together experts from space, biomedicine and sport to enjoy, together with registered EMG participants, an informal “*talk & taste*” social event addressing new theories for life-style & nutritional health.

The mission is NOT impossible: enhancing performance in extreme environments such as space and sport, at any age, while aiming at a better quality of life for everybody.

Pasta & Basta welcomes all guests to taste the perfect combination of dietary requirements and benefits from Torino’s typical bio-food & wines, in light of know-how and tips provided by the experts

Videos will feature SpaceLand flights showing nutrition in zero-gravity taking off from the NASA Space Shuttle L.F.

Max capacity 50 seats: please register by email before 18.00 hrs on 31 July 2019, to SpaceLand@SpaceLand.it

copy to info@torino2019emg.org

Info: www.SpaceLand.it - www.torino2019emg.org

SPORT and SPACE: the COMMON CHALLENGE for GRAVITY and AGEING

LESSONS LEARNT from ASTRONAUT TRAINING and SPACEFLIGHT RESEARCH PROGRAMS

A contribution to the EUROPEAN MASTER GAMES 2019 "SpaceLand Aging Well workshop"

Ever since our ancestors started walking upright, our body has adapted to the **effects of gravity**, learning to deal with physical and physiological issues which are of major relevance in **daily sport activities** as well.

Humans' weight-bearing bones and anti-gravity muscles have adapted during millions of years of evolution to ensure adequate support during standing, enabling healthy women and men to stand up with no psycho-motorial issue; physical activities and, more recently, sport have facilitated such an evolution, triggering the endurance of such skills over the lifetime of humans, as an outstanding factor also to ameliorate what is today called "*holistic health*".

The utmost importance of the "G-factor" on human physiological systems can be appreciated **when gravity is reduced** as in the *microgravity environment* of weightless research and aerospace flight programs, starting from the so-called *zero-G flights* such those coordinated for the NASA/ESA International Space Station development and for the SpaceLand group by the speaker since 1989 (*). During his 30 years of work in such areas, sport revealed itself as a fundamental factor of his work and life, as he experienced how gravity and its reduction can indeed have an impact on most body functions, including cardiovascular, immunological, musculoskeletal, visual and sensorimotor systems as well as cerebral self-regulation, also affecting psycho-motorial functions during and after weightlessness.

Sport is a major positive therapy for all of that, providing fundamental data for new discoveries in life sciences and biomedicine: a breakthrough perspective, for instance, has been opened by analyzing the analogy between *sport & physiology in microgravity* and *aging processes on Earth*; *constantly practicing sport* is a *must*, for both astronauts and master athletes, as in general sport plays a fundamental role to **slow down aging** while drastically *enhancing well-being and psycho-physical fitness* also in the so-called *third age*, ameliorating *life quality*.

During both pre-flight training and post-flight rehab periods, particularly volleyball, athletics and swimming are important for astronauts and 0-G flight crews, as shown by astronauts and people trained and brought to fly by the SpaceLand team. Such synergies, providing unprecedented insight between masters' sport and astronauts' programs, include a myriad valuable results also in terms of nutritional sciences and biomedicine, as recently presented during Doct. Viberti's invitational speech at the United Nations for the SpaceLand Center program: all this will be highlighted with multi-media videos from flight missions taken off from the NASA Space Shuttle L.F. in Cape Canaveral during the workshop.

* proposed in 2009 by the Italian Space Agency's Head as 1st engineer-suborbital astronaut for upcoming sub-orbital research flights, he spent in absence of gravity triple the time of Yuri Gagarin. After a long career as NASA/ESA zero-gravity flight veteran and playing volleyball at national level in Italy and in the Netherlands, he became nr. 132 in the beachvolley FIVB world rank in the late 1990's, Italian high-jump master champion and silver medalist in eptathlon at the Italian Master Champs in the 2000's, nr. 5 in beachvolley at the 2013 World Masters Games in Torino. Still flying at almost 57 years of age in 0-G, also for Nobel-Prize-winning scientist's research experiments, he is now leading the construction of the first SpaceLand City on a beautiful tropical island in the Indian Ocean, with the support of Torino's Olympic Games TOBO design supervisor Architect Celeste Petraroli. For more details on his bio, search for Carlo Viberti on <http://www.iafastro.org/events/global-series-conferences/glec-2019/programme/session-3-technology-and-skills-development/>