

# The Italian Forum on Medical HAL, 2019

- Innovative Neurorehabilitation through Cybernetics Treatment -



**5<sup>th</sup> October 2019, 15:00 – 19:00  
in Florence, Italy**

**at the Auditorium of IRCCS Don Carlo Gnocchi  
Firenze**

**Via di Scandicci, 269, 50143 Firenze FI**

## PROGRAM

15:00

Welcome coffee and Reception opens

15:20 – 15:30

Greeting and Welcome

Dr. Francesco Converti  
CEO of Fondazione Don Carlo Gnocchi - Onlus  
Prof. Dr. Maria Chiara Carrozza  
Scientific Director of Fondazione Don Carlo Gnocchi - Onlus

15:30 – 16:15

Future of regenerative medicine and Cybernetics Treatment

Prof. Dr. Yoshiyuki Sankai  
Director and CEO of CYBERDYNE INC.

16:15 - 16:45

3 years experiences with HAL and how to build selective contract with private insurance

Mr. Jacek Walukiewicz  
Chairman of the Board of Constance Care Robotics Rehabilitation Center

16:45 – 18:00

Panel Discussion & Questions from the floor

Moderator: Dr. Francesco Chiampo | President of Centro San Girolamo

Prof. Dr. Yoshiyuki Sankai | Director and CEO of CYBERDYNE INC.  
Mr. Jacek Walukiewicz | Chairman of the Board of Constance Care Robotics Rehabilitation Center  
Prof. Dr. Maria Chiara Carrozza | Scientific Director of Fondazione Don Carlo Gnocchi - Onlus  
Dr. Loredana Cavalli | Physician and Medical Director of Centro Giusti

18:00 – 18:10

Conclusion

Prof. Dr. Maria Chiara Carrozza  
Scientific Director of Fondazione Don Carlo Gnocchi - Onlus

18:10 – 19:00

Appetizer

## BACKGROUND

HAL (Hybrid Assistive Limb) is known to be the world's first Wearable Cyborg. It is described as a "Cyborg" due to its unique ability to generate a movement according to intension-based motion information from the brain-nervous system. While there are many various gait support robots and exoskeletons used for different purposes, HAL for Medical Use is considered to be one of the most innovative treatment devices that attempt to actively improve and regenerate the function of the patient's own brain-nerve-physical systems, instead of an orthosis that physically supports the patients to walk or a robot that repeatedly performs specific movements for its patients.

The first introduction of HAL in Europe was in 2013 at a German city of Bochum. Over 5.000 session worth of clinical data (out of which, 3.300 for spinal cord injury) was collected. Due to research in Bochum as well as research in medical centers around the world, HAL obtained medical CE Marking on 2013 for the entire EU region. HAL also obtained PMDA approval from the Japanese Government in 2015 for 8 types of slowly progressive rare neuromuscular disease such as SMA (Spinal Muscular Atrophy), ALS (Amyotrophic Lateral Sclerosis), Spinobulbar Muscular Atrophy (SBMA), Charcot-Marie-Tooth Disease (CMT) etc, becoming the first effective treatment method to maintain the physical function or to delay the progress of the disease. It is also worth noting that HAL is only Wearable Cyborg that is covered by public health insurance in Japan. HAL also obtained the US FDA Clearance on 2017, as the first device under 510k with acknowledged therapeutic effects. It is also the only product classified under the combination of Neurological Devices and Physical Medicine Devices. HAL is now promoted as a global standard of treatment and it is currently offered in 9 countries.

This International Forum marks the beginning of the ground breaking Cybernetics Treatment with HAL in Italy, a country that always has been the center of ground breaking discovery and innovation. The event will not only highlight the technology itself but also the findings in Italian medical facilities so far and how it may change the clinical scene of the nation.