SCIENTIFIC PROGRAM

INTERNATIONAL CONFERENCE:
NEW IDEAS, PERSPECTIVES AND APPLICATIONS IN FUNCTIONAL NEUROSUGERY

STATE OF THE ART OF THE DEEP BRAIN STIMULATION
OF THE PEDUNCULOPONTINE TEGMENTAL NUCLEUS (PPTg)
(4th SYMPOSIUM)

DECEMBER 18th-20th 2014
ROMA

* The Logo of the Conference represents the Ethernal Father - Fresco Painting of Raffaello Sanzio's School (1517-1520) detached in 1860 from the Chapel of St. John of the Magliana Castle, and currently exposed at the Louvre Museum in Paris.
Thursday, December 18th

Pontifical University of St. Thomas Aquinas
(Angeficum)
Main Hall - St. John Paul II

- 15-17: Overview of the technology and future directions of Deep Brain Stimulation
Chaired by: J. Krauss (University of Hannover, Germany),
F. Viselli (St. John the Baptist Hospital, Italy)

D.M. Moffitt, Boston Scientific Neuromodulation (USA):
Technical Aspects of the VeriseTM Deep Brain Stimulation System

S. Manker, Medtronic Eindhoven Design Centre Site (USA):
Technological advances and clinical implications

N. Hofkens, Product Manager Neuromodulation, St. Jude Medical Inc. (USA):
Innovations in Deep Brain Stimulation: St. Jude Medical’s vision for the future

- 18-20: Plenary lectures on Structure and Functions of the Basal Ganglia
Chaired by: E. Scarnati (Dept. DISCAB, University of L’Aquila, Italy) and
P. Mazzone (CTO Hospital, ASL Roma C, Italy)


A. Nambu (National Institute for Physiological Sciences, Okazaki, Japan):
Motor functions of the Basal Ganglia

W. Schultz (University of Cambridge, UK):
Non-motor functions of the Basal Ganglia

Friday, December 19th

Magliana Castle - St. John the Baptist Hospital - Hall Julius II

- 8.30: Plenary lecture on Parkinson’s disease:
P. Riederer (University of Wuerzburg, Germany)
Loss of Innovation in Neuropharmacotherapy

4th International Symposium on the Deep Brain Stimulation of the PPTg area: State of the Art

Session I

Chaired by: E. Garcia-Rill (University of Arkansas for Medical Sciences, Little Rock, USA),
J. Krauss (University of Hannover, Germany),
E. Scarnati (Dept. DISCAB, University of L’Aquila, Italy)

- 09.05: J. Mena-Segovia (University of Oxford, UK):
Neurons, neurotransmitters and connections of the PPTg

- 09.30: S. Takakusaki (Asahikawa Medical University, Asahikawa, Japan):
Brainstem control of locomotion and posture

- 09.55: J.C. Rothwell (University College London, London, UK):
Reflex effects of PPTg stimulation

- 10.20: C.C. McIntyre (Case Western Reserve University, Cleveland, USA):
Characterizing the Biophysics of Deep Brain Stimulation

- 10.45-11.00: Break

Session II

Chaired by: E. Garcia-Rill (University of Arkansas for Medical Sciences, Little Rock, USA),
A. Lozano (Toronto University, Canada),
P. Mazzone (CTO Hospital, ASL Roma C, Italy)

- 11.00: E. Garcia-Rill (University of Arkansas for Medical Sciences, Little Rock, USA),
A. Lozano (Toronto University, Canada),
P. Mazzone (CTO Hospital, ASL Roma C, Italy):
Waking and the RAS: role of the PPN

- 11.25: A. In sola (CTO Hospital, ASL Roma C, Italy):
Somatosensory Evoked Potentials and Deep Brain Stimulation of the PPTg area

- 11.50: P. Brown (University of Oxford, UK):
What can recordings from the human PPN region tell us

- 12.15: M.D. Johnson (University of Minnesota, Minneapolis, USA):
Computational modeling of Deep Brain Stimulation within the brainstem

- 12.40 General discussion

- 13.00 -13.30: Break
Session III
Chairmen: E. Scarnati (Dept. DISCAB, University of L’Aquila, Italy), J. Mena-Segovia (University of Oxford, UK), G. Broggi (IRCSS Galeazzi, Milan, Italy)

- 13.30: A. Lozano (University of Toronto, Canada): The Deep Brain Stimulation of the PPTg region: a review
- 13.55: F. Viselli (St. John the Baptist Hospital, Italy): Neurological analysis of Deep Brain Stimulation of the PPTg area: our point of view
- 14.20: E. Garcia-Rill (University of Arkansas for Medical Sciences, Little Rock, USA): The role of the PPN in neurological and psychiatric disorders
- 14.45: T. Coyne (University of Queensland, Brisbane, Australia): Advances in understanding function of the human PPN/PPTg
- 15.05: P. Mazzone (CTO Hospital, ASL Roma C, Italy): What we have learned from the Deep Brain Stimulation of the PPTg area
- 15.30 General Discussion
- 15.45 Closing of the 4th International Symposium on the Deep Brain Stimulation of the PPTg area: state of the art

Session IV
Innovative Topics on Deep Brain Stimulation
Chairmen: V. Visser-Vandewalle (University of Cologne, Germany), J. Krauss (University of Hannover, Germany), V. Di Lazzaro (University Campus-Biomedico, Rome, Italy)

- 16.00: J. Krauss (University of Hannover, Germany): Deep Brain Stimulation in dystonia: what’s new?
- 16.25: N.D. Schiff (Weill Cornell Medical College, New York, USA): Central thalamic deep brain stimulation, from proof of concept toward generalizability
- 17.15: P. Arena (DIEEI, University of Catania, Italy): Locomotion-oriented perception in insects and insectoids
- 17.40: S. Ferraina (University of Rome La Sapienza, Italy): Innovative methods for writing and reading the brain
- 18.05: A. Priori (University of Milan, Milan, Italy): Adaptive methods in deep brain stimulation
- 18.30: A. Franzini (IRCSS Besta, Milan, Italy): Discussant Lecture

- 18.55 End of Session IV -

Saturday, December 20th

Magliana Castle - St. John the Baptist Hospital - Hall Julius II

Session V
Deep Brain Stimulation in Alzheimer’s disease
Chairmen: V. Di Lazzaro (University Campus-Biomedico, Rome, Italy), C. Caltagirone (IRCSS Santa Lucia, Rome, Italy), A. Lozano (University of Toronto, Canada)

- 8.30: L. Domenici (University of L’Aquila, Italy): Synaptic dysfunction in Alzheimer’s disease
- 8.55: G. Koch (IRCSS Santa Lucia, Rome, Italy): Neuronal networks involved in dementia
- 9.20: A. Lozano (University of Toronto, Canada): The Deep Brain Stimulation of Fornix in Alzheimer’s disease
- 9.45: J. Kuhn (University of Cologne, Germany): The Deep Brain Stimulation of Nucleus Basalis of Meynert in Alzheimer’s disease
- 10.10: G. Broggi (IRCSS Galeazzi, Milan, Italy): Discussant Lecture
- 10.35: Questions from audience
- 10.50-11.05: Break

Session VI
Deep Brain Stimulation in Tourette syndrome
Chairmen: M. Porta (IRCSS Galeazzi, Milan, Italy), P. Mazzone (CTO Hospital, ASL Roma C, Italy)

- 11.05: V. Visser-Vandewalle (University of Cologne, Germany): DBS in Tourette syndrome: where are we standing now?
- 11.30: A.E. Cavanna (University of Birmingham, UK): The selection of patients for Deep Brain Stimulation in Tourette Syndrome
- 11.55: O. Vilela-Filho (Medical School, Federal University of Goiás, Brazil): Globus pallidus externus deep brain stimulation for Tourette Syndrome.
- 12.20: D. Servello (IRCSS Galeazzi, Milan, Italy): Deep Brain Stimulation in Tourette Syndrome
- 12.45: A. Priori (University of Milan, Milan, Italy): The Physiology of Deep Brain Stimulation in Tourette Syndrome
- 13.10: M. Porta (IRCSS Galeazzi, Milan, Italy): Remarks in Tourette Syndrome: clinical and therapeutical aspects
- 13.35: A. Lozano (Canada): Discussant Lecture

Closing Remarks
We hope to see you again in Rome in 2018!

14.00: P. Mazzone (CTO Hospital, ASL Roma C, Italy), E. Scarnati (Dept. DISCAB, University of L’Aquila, Italy), F. Viselli (St. John the Baptist Hospital, Italy)
Under the auspices of

Sponsors

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