



September 29 – October 1, 2012 Taormina, Italy

2nd Workshop on Synaptic Plasticity:

From Bench to Bed Side



WELCOME

Dear Colleagues and Friends,

we welcome you to the “2nd Workshop on Synaptic Plasticity: from Bench to Bed Side”.

The success of the first “Workshop” held in Taormina, Italy on April 2010 and the numerous unresolved issues in our complex field were strong arguments in favor of organizing a second edition of the conference.

This meeting attempts to merge people from basic science with neurologists and psychiatrists to discuss on the relevance of plasticity in the pathophysiology of several neurological diseases and in particular on Movement Disorders.

This is a hot topic in translational clinical neurophysiology research with both basic physiology and therapeutic implications.

The Congress Chairpersons

Angelo Quartarone and Paolo Girlanda



Congress Chairpersons

Angelo Quartarone (Messina, Italy)

Paolo Girlanda (Messina, Italy)

International Scientific Committee

Mark Hallett (Bethesda, USA)

John Rothwell (London, UK)

Paolo Calabresi (Perugia, Italy)

Maria Felicia Ghilardi (New York, USA)

Faculty

Paolo Maria Rossini (Rome, Italy)

Marcello Massimini (Milan, Italy)

Hartwig Siebner (Copenhagen, Denmark)

Ridding Mike (Adelaide, Australia)

Walter Paulus (Gottingen, Germany)

Alfredo Berardelli (Rome, Italy)

Eilon Vaadia (Jerusalem, Israel)

Antonino Pisani (Rome, Italy)

Marco Molinari (Rome, Italy)

David Eidelberg (Manhasset, USA)

Amy Bastian (Baltimore, USA)

Franco Molteni (Lecco, Italy)

Diego Centonze (Rome, Italy)

Vincenzo Di Lazzaro (Rome, Italy)

Luca Santarelli (Roche)

Ulf Ziemann (Frankfurt, Germany)

Joseph Classen (Liepzig, Germany)

Giulio Tononi (Wisconsin, USA)

Antonello Suppa (Rome, Italy)

Mark George (Charleston, USA)

Eero Castren (Helsinki, Finland)

William Dickman (S. Francisco, USA)

Sarah H. Lisanby (Durham, USA)

Saturday - September 29th, 2012

15.00-15.30 **Introduction and Welcome**

Paolo Girlanda, Angelo Quartarone, Mark Hallett

Session 1 Basic Mechanisms of Synaptic Plasticity

Chairs: Paolo Rossini, Mark Hallett

15.30-16.30 Main Lecture:

Neuronal oscillations and cortical plasticity

Marcello Massimini

16.30-17.00 TMS after effects: Changing the Status quo

John Rothwell

17.00-17.30 Cortico-Cortical Connectivity and Plasticity

Hartwig Siebner

17.30-18.00 Factors Affecting Plasticity Induction

Mike Ridding

18.00-18.30 Genetics and Cortical Plasticity

Walter Paulus

18.30-19.00 General Discussion

19.00-20.00 Welcome Ceremony

Sunday - September 30th, 2012

Session 2. Mechanisms of motor learning

Chairs: Maria Felicia Ghilardi, Alfredo Berardelli

- 9.00-10.00 Main Lecture:
Basic Mechanisms of Motor Cortex Plasticity
Eilon Vaadia
- 10.00-10.30 The Contribution of Basal Ganglia to Motor Learning
Antonio Pisani
- 10.30-11.00 The Relationship Between Cerebellum and
Basal Ganglia: The Contribution To Learning
Marco Molinari
- 11.00-11.30 Coffee break
- 11.30-12.00 Cortico-Cortical Connectivity During Motor
Learning in Basal Ganglia Disorders
David Eidelberg
- 12.00-12.30 Cerebellum, Plasticity and Learning
Amy Bastian
- 12.30-13.00 Neural Interface Technology for Rehabilitation:
Exploiting and Promoting Neural Plasticity.
Franco Molteni
- 13.00-13.30 General discussion
- 13.30-15.30 Buffet Lunch + Poster session I

Sunday - September 30th, 2012

Session 3. Inflammation, Neurodegeneration and plasticity

Chairman: Paolo Calabresi, Diego Centonze

15.30-14.30 Main Lecture:

Inflammation, Immune System and Plasticity

Diego Centonze

16.30-17.00 Long Term rTMS Stimulation for ALS?

Vincenzo Di Lazzaro

17.00-17.30 New Frontier in Alzheimer's Disease:

Rescuing Synaptic Plasticity?

Luca Santarelli

17.30-18.00 Synaptic Plasticity and Restorative Strategies

Paolo Calabresi

18.00-18.30 General Discussion

Monday - October 1st, 2012

Session 4. Homeostasis and Plasticity

Chairs: Giulio Tononi, Angelo Quartarone

- 9.00-10.00 Main Lecture:
Basic Mechanisms of Homeostatic Plasticity
Fabio Benfenati
- 10.00-10.30 Assessing metaplasticity in humans
Ulf Ziemann
- 10.30-11.00 Manipulation of homeostatic plasticity in humans
Joseph Classen
- 11.00-11.30 Coffee break
- 11.30-12.30 Main Lecture:
Homeostasis, Plasticity and Sleep
Giulio Tononi
- 12.30-13.00 Neurological conditions characterized by homeostatic
plasticity problems
Antonello Suppa
- 13.00-13.30 General discussion
- 13.30-15.00 Buffet Lunch + Poster session II

Monday - October 1st, 2012

Session 5. Psychiatric disorders and plasticity

Chairs: Mark George, Sarah Lisanby

- 15.30-16.30 Main Lecture:
Is Depression a Plasticity-Related Disorder?
Mark George
- 16.30-17.00 Structural and Synaptic Plasticity in Stress-Related Disorders
Eero Castren
- 17.00-17.30 Schizophrenia Susceptibility Gene Dysbindin and the Control of Synaptic Homeostasis
Dickman
- 17.30-18.00 TMS and ECT in Plasticity and Depression
Sarah Lisanby
- 18.00-18.30 General Discussion
- 18.30-19.30 Highlights
- 20.30 Dinner