THURSDAY FEBRUARY 19th 2009

07.30 – 08.30 Registration

08.30 – 10.00 MORNING SESSION
Chaired by Prof. C. Perino and Prof. Geoffrey Raisman

08.30 – 08.40 Presentation of the Symposium
G. Brunelli (Brescia, Italy)

08.40 – 09.00 Making Paraplegics Walk Again
Klaus Von Wild (Munster, Germany)

09.00 – 09.20 Report on the research of the
“Foundation for spinal cord lesions”
Giorgio Brunelli (Brescia, Italy)

09.20 – 09.40 Experimental strategies to promote spinal cord regeneration
an integrative perspective
Jan Schwab (Berlin, Germany)

09.40 – 10.00 Utilization of CD34+, CD133+, pluripotent stem cells
in autologous transplantation for repair of spinal cord injuries
Ziad AlZoubi, Adeeb AlZoubi (Amman, Jordan)

10.00 – 12.40 Opening Ceremony
Introduced by Luisa Monini
The interdisciplinary character of science and institutions
in research, prevention and treatment of diseases
of the nervous system
Prof.ssa Rita Levi Montalcini Nobel Laureate for Medicine
Welcoming address: Research at Brescia School of Medicine
Sergio Pecorelli
Prevention of spinal cord injuries due to car accidents
Alberto Cavalli
Problems of spinal cord injuries during sport activities
Massimo Bianchini
The role of University in the promotion of prevention
Lorenzo Alessio
Prevention of spinal cord occupational injuries
Carmelo Scarcella

The importance of the Media in the culture of prevention
Claudio Baroni, vice-editor of “Il Giornale di Brescia”

11.40 – 12.40  Magnistral Lecture
Total face transplantation:
Medical, Ethical and Social considerations
Maria Siemionow (Cleveland, Ohio, USA)

12.40  Cocktail
7th International Symposium on Experimental Spinal Cord Repair and Regeneration

14.00 – 17.40 AFTERNOON SESSION
Chaired by Prof. M. Pizzi, Prof. Clementi

– Symposium in the Symposium –
NEUROBIOLOGY OF SPINAL CORD INJURY
and
INNOVATIVE EXPERIMENTAL APPROACHES
co-chaired by Prof. P.F. Spano

14.00 – 14.45 Plenary Lecture
Axonal regeneration – A retrospective
Albert J. Aguayo (Montreal, Canada)

14.45 – 15.15 Making the match: electrical activity regulates
neurotransmitter specification and receptor selection
N. C. Spitzer (San Diego, California, USA)

15.15 – 15.45 Neurobiology of spinal cord injury
and innovative experimental approaches
A. Privat (Montpellier, France)

15.45 – 16.00 coffee break

16.00 – 16.30 Imaging axonal regeneration and reorganization
F. M. Bareyre (Munich, Germany)

16.30 – 17.00 Motoneurons function as intraneurons in a bridge
around spinal cord injury
J. H. Martin (New York, USA)

17.00 – 17.30 Reconnecting skeletal muscle to healthy spinal cord
M. Pizzi (Brescia, Italy)

17.30 – 17.40 Closing remarks
PierFranco Spano (Brescia, Italy)
SOCIAL PROGRAM (RESERVATION REQUIRED):
18.00  Departure of coach to Busseto, near Parma
19.30  Organ concert in the Roncole Church, where Giuseppe Verdi learned to play the organ
20.30  Typical dinner with “gnocco fritto”, “culatello” and “Fortana”
23.00  Back to Brescia
FRIDAY FEBRUARY 20th 2009

08.00 -10.00 1st MORNING SESSION

– Symposium in the Symposium –

PATHOPHYSIOLOGY OF SPINAL CORD INJURY AND THE ORIGIN OF NEUROLOGICAL PAIN AND OTHER COMPLICATIONS
Organized by R. Deumens and G. Taccola
Chaired by E.A. Joosten

08.00 – 08.20 Pathophysiology of spinal cord injury: hints for therapeutic interventions
E.A. Joosten (Maastricht, The Netherlands)

08.20 – 08.40 Early functional damage in a new in vitro model of spinal cord injury
Giuliano Taccola (Udine, Italy)

08.40 – 09.00 The role of haemorrhage after spinal cord injury
Patrick Losey (Oxford, UK)

09.00 – 09.15 Toll-like receptors regulate intraspinal inflammation following spinal cord injury
Kristina A. Kigerl (Ohio, USA)

09.15 – 09.30 Advanced diffusion MRI methods for characterizing spinal cord lesions
Julien Cohen-Adad (Paris, France)

09.30 – 09.45 Central pain as a limitation to novel SCI therapeutics?
Ronald Deumens (Maastricht, The Netherlands)

09.45 – 10.00 Plasticity of the inhibitory synaptic transmission after spinal cord injury
Celine Jean-Xavier (Marseille, France)

10.00 – 10.15 coffee break
10.15 – 13.25  2nd MORNING SESSION
Chaired by Prof. Anne-Lise Christensen and Prof. Milan Dimitrijevich

10.15 – 10.30  Diffusion sensor imaging of traumatic injury of spinal cord
Roberto Gasparotti, Francesco Carletti (Brescia, Italy)

10.30 – 10.50  Macrophages play an indispensable role in spinal cord repair
Ravid Shechter, Michal Schwartz (Rehovot, Israel)

10.50 – 11.20  Neural Stem Cells for Spinal Cord Repair
Charles H. Tator (Toronto, Canada)

11.20 – 11.40  Eph receptors function as novel pro-apoptotic receptors following CNS injury
Daniel J. Liebl (Miami, Florida, USA)

11.40 – 11.55  Respiratory recovery after high cervical spinal cord contusion and post-traumatic olfactory glia transplantation
Valery Matarazzo, Patrick Gauthier (Marseille, France)

11.55 – 12.25  Repair of spinal cord injury by olfactory ensheathing cells: the pathway hypothesis
Geoffrey Raisman (London, UK)

12.25 – 12.45  Ischemic conditions result in minimal GFAP expression in satellite cells of the dorsal root ganglion
Krzysztof Siemonow et al. (Cleveland, Ohio, USA)

12.45 – 13.05  Astroglial NF-kB: an important regulator of pathological responses in the CNS
Roberta Brambilla, John Bethea (Miami, Florida USA)

Nurit Kalderon (New York, USA)

13.25 – 14.25  lunch break
14.25 – 16.35  **1st AFTERNOON SESSION**
Chaired by **Dr Bruno Battiston**

14.25 – 14.35  **Mechanisms of blood pressure and heart rate variability: an insight from low-level paraplegia**
*Giampiero Merati, Arsenio Veicsteinas, (Milan, Italy)*

14.35 – 14.45  **Methodological issues in quantitative morphology of the nervous system**
*Stefano Geuna, Pierluigi Tos, Bruno Battiston (Turin, Italy)*

14.45 – 14.55  **Lack of evidence of a positive effect of systemically administered methyprednisolone sodium succinate after acute spinal cord contusion injury in rats**
*Stefano Geuna, J.E. Pereira, A.S. Varejão (Turin, Italy)*

– Symposium in the Symposium –
Chaired by **Dr Matteo Bertelli**

14.55 – 15.05  **Establishment of research consortia in Italy, opportunity to build a critical mass of brains and funds?**
The experience of the International Association of Medical Genetics MAGI non profit association
*Matteo Bertelli (Rovereto, Italy)*

15.05 – 15.35  **Overview of current stem cell research in amyotrophic lateral sclerosis**
*Letizia Mazzini (Novara, Italy)*

15.35 – 16.05  **Molecular pathogenesis of Friedreich ataxia and possible therapeutic approaches**
*Massimo Pandolfo (Bruxelles, Belgium)*

16.05 – 16.35  **coffee break**
16.35 – 19.25 2nd AFTERNOON SESSION  
Chaired by Prof. Vincent Hentz

16.35 – 16.55 Biomechanics of spinal cord lesions 
Fafa Ben-Hatira, Kaouthar Saidane, Abdelfatteh Mrabet (Tunis, Tunisia)

16.55 – 17.15 Trekking the Translational Trail: challenges to the conduct of human spinal cord injury clinical trials 
John Steeves (Vancouver, Canada)

17.15 – 17.30 Innovations in spinal trunk control utilizing FES 
Harry Hoyen (Cleveland, Ohio, USA)

17.30 – 17.45 Innervation of a paralyzed nerve into denervated motor units, rodent model 
Harry Hoyen (Cleveland, Ohio, USA)

17.45 – 18.05 Biomechanical research on tendon transfers in tetraplegia: why progress depends upon collaboration between surgeons and scientists 
Vincent Hentz (Stanford, California, USA)

18.05 – 18.25 Evaluation of spasticity in the tetraplegic upper limb: combined video and dynamic EMG recordings 
Caroline Leclercq (Paris, France)

18.25 – 18.50 Spinal cord Injury induced immune depression syndrome (SCI-IDS) 
Jan Schwab (Berlin, Germany)

SOCIAL PROGRAM (RESERVATION REQUIRED):

19.30 Guided tour of the 1000 Miglia Vintage Car Museum  
Dinner on the premises
1st MORNING SESSION
Chaired by Prof. Sergio Cosciani and Dr Michele Spinelli

08.30 – 08.45 Neurogenic bladder: from treatment of complications to early approach
A. Tagliabue (Magenta, Italy)

08.45 – 09.00 Possibilities, limits and future perspectives in electrical stimulation of sacral and pudendal nerves
M. Spinelli (Milano, Italy)

09.00 – 09.20 Surgical treatment of urinary sequelae in neurogenic patients
C. Simeone (Brescia, Italy)

09.20 – 09.40 Early approach for erectile dysfunction and ejaculation in spinal cord injured patients
F. Scroppo (Milan, Italy)

09.40 – 10.00 coffee break

2nd MORNING SESSION
Chaired by Prof. Gelu Onose and Dr Justin Brown

10.00 – 10.20 Intra-operative neurophysiology of the injured spinal cord
Paolo Costa (Torino, Italy)

10.20 – 10.40 The role of repeated rota rod treadmill training on spontaneous coordinate activity of spinal cord injured rats
Maher Benjadid (Riyadh, Saudi Arabia)

10.40 – 11.00 Effect of extracorporeal shock wave therapy on spastic hypertonia
Ernesto Amelio (Verona, Italy)

11.00 – 11.20 Our experience on interferential medium frequency electrostimulation in the treatment of post SCI neurogenic bladder
Gelu Onose (Bucharest, Romania)

11.20 – 11.40 Diagnosis and addressing lower motor neuron injuries in the SCI patient
Justin M. Brown (St. Louis, Missouri, USA)
11.40 – 12.10 Long term follow-up results of OEC transplant for patients with chronic spinal cord injury
Hongyun Huang (Beijing, China)

13.00 - 13.30 lunch break

AFTERNOON SESSION
Chaired by Dr Wise Young and Dr Shaocheng Zang

13.30 – 13.50 Restoration of sensory and reflex function after SCI by nerve side-to-side anastomosis
Shaocheng Zhang (Shanghai, China)

13.50 – 14.15 Emergency treatment of SCI by means of EPO
Alfredo Gorio (Milano, Italy)

14.15 – 14.45 A new pharmacological treatment for neuropathic pain in spinal cord injury
G. Ferrara, G. Sanguinetti, R. Capirossi, L. Landi, M. Menarini (Montecatone, Italy)

14.45 – 15.15 Beyond brain/spinal cord cell therapies: the neuroplasticity issue
Carlos Lima (Lisbon, Portugal)

15.15 – 15.45 China spinal cord injury network: update
Wise Young (U.S.A)

15.45 – 15.55 Closing remarks
Giorgio Brunelli (Brescia, Italy)
MORNING SESSION

08.30 – 13.05
– Symposium in the Symposium –
REHABILITATION IN SPINAL CORD LESIONS
Chaired by Prof. Alessandro Fiaschi, Prof. Marco Franceschini and Dr Humberto Cerrel Bazo

08.30 – 08.40 Introductory remarks on advanced interfaces for sensing and controlling paralyzed limbs
Humberto Cerrel Bazo (Milano-Piacenza, Italy)

08.40 – 09.10 Basic cortical mechanism subserving arm, trunk and leg movement: ontogenetic and neurophysiological basis of function-dysfunction
Cesare Cerri (Milano, Italy)

09.10 – 09.50 Plenary lecture: Brain-Machine interface
G. Pfurtscheller (Graz, Austria)

09.50 – 10.25 Decoding when and where to move from parietal reach region
Eun Jung Hwang, Richard Anderson (Pasadena, California, USA)

10.25 – 10.55 Robot and control of artificial afferent input in order to elicit movement in paralyzed people
Milan Dimitrijevich, Ilse Percy (Ljubljana, Slovenia and Houston, Texas, USA, Vienna, Austria)

10.55 – 11.10 General discussion

11.10 – 11.30 coffee break

Chaired by Prof. Marco Franceschini, Prof. Cesare Cerri and Prof. Milan Dimitrijevich

11.30 – 12.00 Robotic training and recovery of function: status of art
Molteni Franco (Costamasnaga, Italy)

12.00 – 12.25 Improving walking function following neurological injury. Efficacy of robotics locomotor devices
George Hornby (Chicago, Illinois, USA)

12.25 – 12.50 ReWalk: a new approach to restore gait function in SCI
Gabi Zeilig (Tel Aviv, Israel)

12.50 – 13.05 General discussion and closing remarks
Milan Dimitrijevich Ilse Percy (Ljubljana, Slovenia and Houston, Texas, USA, Vienna, Austria)

13.05 – 14.00 lunch break
**AFTERNOON SESSION**

Chaired by Prof. Alessandro Giustini, Prof. Marco Molinari and Dr Humberto Cerrel Bazo

14.05 – 14.45 **Cortical prosthetic control of arm and hand movement**  
*Andrew B. Schwartz (Pittsburgh, Pennsylvania, USA)*

14.45 – 15.15 **User interfaces for control neuroprosthesis of the upper limbs**  
*Ruediger Rupp (Heidelberg, Germany)*

15.15 – 15.50 **How does the spinal circuitry for locomotion reorganize after SCI?**  
*Reggie Edgerton (Los Angeles, California, USA)*

15.50 – 16.25 **Regaining access to the spinal circuitry for locomotion after SCI**  
*Gregoire Courtine (Zurich, Switzerland)*

16.25 – 16.45 **Features of neurocontrol in human recovered functional movements after spinal cord injury**  
*Milan Dimitrijevich (Ljubljana, Slovenia and Houston, Texas, USA)*

16.45 – 17.00 **coffee break**

Chaired by Prof. Milan Dimitrijevich, Prof. Winfried Mayr and Prof. Ruediger Rupp

17.00 – 17.30 **New strategies in arm Robotics**  
*Giulio Rosati (Padova, Italy)*

17.30 - 18.00 **Marrow significance in neuromotor control with respect to intelligent biorobotics**  
*Alberto Rovetta (Milano, Italy)*

18.00 – 18.30 **Robotics vs FES: competition or synergy?**  
*Winfried Mayr (Vienna, Austria)*

18.30 – 18.45 **FES neuroprosthesis and FES based therapy: a review of devices and applications**  
*Ing. Davide Lenzi (Bologna, Italy)*

18.45 – 19.00 **General discussion and closing remarks**  
*Milan Dimitrijevich (Ljubljana, Slovenia and Houston, Texas, USA)*