

Present State of Peripheral Nerve Surgery and How to Achieve further Improvement



**March 14-16, 2008 · General Hospital Vienna, Lecture Halls
Organiser: Millesi Center**

**Austrian Cluster for Tissue and Ludwig Boltzmann Institute
for Clinical and Experimental Traumatology**

General Information

CONFERENCE VENUE

General Hospital Lecture Halls, Level 7
Währinger Gürtel 18-20
1090 Vienna, Austria

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CME CREDITS

Participation in the scientific sessions of the Symposium is recognized within the Postgraduate Education Programme of the Austrian Medical Association of Plastic, Aesthetic and Reconstructive Surgery.



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Exhibitors

Carl Zeiss GmbH., Wien

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Welcome

Peripheral nerve surgery is in a permanent evolution. It is worthwhile from time to time to sit down in a lovely atmosphere and to pass in review recent clinical work and new informations provided by basic research. It is our aim to provide such an environment. We welcome you. We are looking forward to your personal contributions and we hope that you will get yourself some useful impact.

Join us and enjoy three days in Vienna in a relaxed cultural atmosphere.

Hanno Millesi

UNDER THE PATRONAGE OF

Andrea Kdolsky

Austrian Minister for Health, Family and Youth

Michael Häupl

Mayor of the City of Vienna

Wolfgang Schütz

Rector of the Medical University of Vienna

General plan

Friday, March 14, 2008 18.30-20.00 hrs: Registration, Poster Set-Up, Welcome Reception

Saturday, March 15, 2008 Scientific Programme

8.30 - 9.00 hrs (I) Welcome and Introduction
9.00 - 11.00 hrs (II) Progress in Research - PART I
11.00 - 11.30 hrs Coffee break
11.30 - 13.30 hrs (II) Progress in Research - PART II
13.30 - 14.30 hrs Lunch
14.30 - 16.30 hrs (III) Bridging defects

Sunday, March 16, 2008 Scientific Programme

9.00 - 10.00 hrs (IV) End to Side Coaptation
10.00 - 11.00 hrs (V) Brain Plasticity
11.00 - 11.30 hrs Coffee break
11.30 - 12.20 hrs (VI) Diagnostic
12.20 - 13.00 hrs (VII) Round Table TIMING
13.00 - 14.00 hrs Lunch
14.00 - 15.30 hrs (VIII) Clinic and lumbo-sacral plexus
15.30 hrs Summaries of the Symposium and Closing

Poster Session 11.00 - 11.30 hrs

Social programme

Friday, March 14, 2008 18.30 hrs Welcome reception at the congress venue (no fee)
General Hospital Lecture Halls, Level 7
Währinger Gürtel 18-20, 1090 Vienna

Saturday, March 15, 2008 20.15 hrs Classical Concert at Palais Auersperg & Cocktail
Vienna Residence Orchestra
Auerspergstrasse 1, 1080 Vienna

Vienna Residence Orchestra

The Vienna Residence Orchestra, a chamber orchestra with a long tradition, was established by pianist and conductor Paul Moser in order to present the Viennese classics in full. The numerous ranges of events in recent decades were presented in Vienna's most beautiful palace. The orchestra plays pieces from Mozart to Johann Strauss with between 10 and 40 musicians. In 1991 the orchestra was the official Austrian representative at Mozart's anniversary celebrations and played numerous concerts at the "Wiener Klangbogen" festival.

Programme

Friday, March 14, 2008

18.30 - 20.00 hrs Registration, Poster Set-Up, Welcome Reception at the Conference Venue
General Hospital Vienna, Lecture Halls, Level 7

Saturday, March 15, 2008

8.30 - 9.00 hrs **I) Welcome & Introduction**
H. Millesi (20min.)

What are the over all results of peripheral nerve repair today?
H. Millesi (Vienna, Austria) and J.B. Jaquet (Rotterdam, Netherlands)

9.00 - 11.00 hrs **II) Progress in Research - PART I**
Chair: T. Brushart (Baltimore, Maryland, USA), T. Gordon (Edmonton, Canada)

01 Schwann Phenotype is Regulated by Modality and Location (8min.+2)
T. Brushart, M. Aspalter, R. Redett, R. Jari, A. Vyas, A. Hoke (Baltimore, Maryland, USA)

02 Electroporation of peripheral nerve to alter schwann cell gene expression in vivo (8min.+2)
M. Aspalter, A. Vyas, J. Feiner, T. Brushart, R. Redett (Baltimore, USA)

03 Expression of ATF3 in motor neurons, sensory neurons and schwann cells and axonal outgrowth after delayed nerve repair (8min.+2)
H. Saito, L. B. Dahlin (Tokyo, Japan)

04 Shock wave Therapy in peripheral nerve repair: Investigation in a rat sciatic nerve repair model (8min.+2)
G. Halat, H. Redl, T. Hausner, S. Zandieh, R. Hopf, W. Schaden, R. Schmidhammer (Vienna, Austria)

05 Electrical stimulation of injured sensory neurons promotes axon outgrowth both in the peripheral as well as the central nervous systems (8min.+2)
T. Gordon (Edmonton, Canada)

06 Laser Phototherapy as a Supportive Factor for Accelerating and Enhancing Axonal Growth and Regeneration for Treatment of Peripheral Nerve Injury (from basic science to clinical study) (8min.+2)
S. Rochkind, M. Alon, A. Shahar, Z. Nevo (Tel Aviv, Israel)

07 Mechanism of neuronal apoptosis, and non-invasive monitoring of neuroprotection (8min.+2)
G. Terenghi, M. Wiberg (Manchester, United Kingdom)

08 Expression of P75NGFR and VEGF in human nerve grafts (8min.+2)
T. Ylä-Kotola, S. Kauhanen, I. Leivo, E. Tukiainen, S. Asko-Seljavaara (Helsinki, Finland)

09 Treadmill exercise enhances axon regeneration by enhancing autocrine/paracrine neuronal neurotrophin signaling (8min.+2)
A. English, M. Sabatier, A. Mulligan, J. Rodriguez, D. Cucoranu (Atlanta, USA)

Discussion

Programme

11.00 - 11.30 hrs

Coffee break

11.30 - 13.30 hrs

II) Progress in Research - PART II

Chair: D. Chiu (New York, USA), R. Schmidhammer (Vienna, Austria)

10 Rat vs mouse median nerve repair: experimental model for peripheral nerve regeneration research (8min.+2)

P. Tos, S. Geuna, S. Raimondo, S. Nicolino, C. Audisio, G. Ronchi, M. Fornaro, B. Battiston (Torino, Italy)

11 Iron chelation at the nerve coaptation site to improve nerve regeneration (8min.+2)

N. Sinis, T. Lanaras, F. Werdin, A. Kraus, M. Haerle, N. Papagiannoulis, T. Danker, E. Guenther, F. Di Scipio, S. Geuna, H.W. Mueller, C. Masannek, S. Hermanns and H.E. Schaller (Tübingen, Germany)

12 Reinnervation of the denervated forelimb muscles following brachial plexus injury: technical approaches (8min.+2)

A. Nógrádi, A. Szabó, S. Pintér (Szeged, Hungary)

13 Re-Entry Spinal Cord Reinnervation: conceptualization and experimentation (8min.+2)

D. Chiu (New York, USA)

14 Manganese enhanced magnetic resonance imaging in a contusion model of rat spinal cord injury - correlation with motorfunction (8min.+2)

N. Walder, M. Brejnikow, A.H. Petter-Puchner, B. Stieltjes, M. Essig, R. Schmidhammer, H. Redl (Vienna, Austria)

15 A modified erythropoietin affects secondary injury and improves neurological recovery after spinal cord injury (8min.+2)

M. Brejnikow, S. Strohbach, K. Vorauer-Uhl, H. Katinger, R. Schmidhammer, H. Redl (Vienna, Austria)

16 Experimental neurotization of totally avulsed brachial plexus by grafting from cortico-spinal tract (below T3): a suggestion for bilateral brachial plexus avulsions or unilateral avulsion with paraplegia (8min.+2)

G. Brunelli (Brescia, Italy)

17 Research on Traumatic Paraplegia: Microsurgical Connection of the Above the Lesion Cord with Peripheral Nerves (C.N.S.-P.N.S. Connection) (8min.+2)

G. Brunelli (Brescia, Italy)

18 Satellite cell proliferation, reinnervation, and revascularization in human non-innervated free microvascular muscle flaps (8min.+2)

S. Kauhanen, I. Leivo, S. Asko-Seljavaara (Helsinki, Finland)

19 Adaptation of human microneurovascular muscle flaps to the paralyzed face (8min.+2)

S. Kauhanen, T. Ylä-Kotola, I. Leivo, E. Tukiainen, S. Asko-Seljavaara (Helsinki, Finland)

Discussion

13.30 - 14.30 hrs

Lunch break

Programme

14.30 - 16.30 hrs

III) Bridging defects

Chair: M. Wiberg (Umeå, Sweden), L. Dahlin (Malmö, Sweden)

20 Radial nerve defect after neuroma excision bridged by an epineural conduit technique, case report (8min.+2)

I. Ignatiadis, S. Vasilas, A. Avram, P. Mavromati, N. Gerostathopoulos (Athens, Greece)

21 How will we repair nerves and bridge nerve gaps in the future? (8min.+2)

M. Wiberg, M. Åberg, P. Kingham and G. Terenghi (Umeå, Sweden)

22 Negative results in bridging nerve defects using grafts constructed by tissue engineering (8min.+2)

S. Geuna, P. Tos, B. Battiston, F. Di Scipio, S. Raimondo, I. Papalia, S. Amado, P.A. Armada-da-Silva, A.P. Veloso, A.S. Varejão, A.C. Maurício (Orbassano (TO), Italy)

23 Long-term effects of costimulation blockade in nerve allograft transplantation (8min.+2)

M. Kvist, M. Kanje, H. Ekberg, M. Corbascio, L.B. Dahlin (Malmö, Sweden)

24 Chondroitinase-treated decellularized nerve allograft supports axonal regeneration (8min.+2)

G. Borschel (St. Louis, USA)

25 Fibrin matrix for suspension of regenerative cells in an artificial nerve conduit (8min.+2)

D.F. Kalbermatten, P.J. Kingham, W. Raffoul, D.V. Egloff, G. Pierer, M. Wiberg, G. Terenghi (Lausanne, Switzerland)

26 Patterned porosity in tubular collagen-based scaffold for peripheral nerve regeneration (8min.+2)

A. Sannino (Lecce, Italy)

27 Peripheral nerve regeneration: nerve tissue engineering using an optimized collagen scaffold (8min.+2)

A. Bozkurt, G.A. Brook, F. Lassner, S. Möllers, B. Sellhaus, J. Weis, L. Olde Damink, F. Schügner, I. Heschel, N. Pallua (Aachen, Germany)

Discussion

20.15 hrs

Classical Concert at Palais Auersperg

Sunday, March 16, 2008

9.00 - 10.00 hrs

IV) End to Side Coaptation

Chair: H. Milesi (Vienna, Austria), G. Terenghi (Manchester, United Kingdom)

28 Experimental and clinical employment of end-to-side coaptation: our experience (8min.+2)

P. Tos, S. Geuna, I. Papalia, L.G. Conforti, S. Artiaco, B. Battiston (Torino, Italy)

Programme

29 Aging and end-to-side nerve repair in the rat (8min.+2)
U. Kovacic, T. Mars, T. Zele, J. Sketelj, F. F. Bajrovic (Ljubljana, Slovenia)

30 Synergistic nerve fiber transfer by end-to-side coaptation: A new application (8min.+2)
R. Schmidhammer (Vienna, Austria)

31 Restoration of Elbow Function Using Reverse End-to-Side Anastomosis between Ulnar Fascicles and Musculocutaneous Nerve in Late Incomplete Obstetrical Erb's Palsy (8min.+2)
S. Rochkind, M. Shafi, M. Alon, H. Patish (Tel Aviv, Israel)

32 Reinnervation of the thenar muscles in irreparable high median nerve lesions by nerve fiber transfer from terminal motor branches of the ulnar nerve via end-to-side coaptation (8min.+2)
H. Millesi (Vienna, Austria)

Discussion

10.00 - 11.00 hrs

V) Brain Plasticity
Chair: G. Brunelli (Brescia, Italy), A. English (Atlanta, USA)

33 Brain plasticity after facial reanimation imaged by fMRI (8min.+2)
T. Ylä-Kotola, S. Kauhanen, S. Suominen, E. Tukiainen, A. Korvenoja, S. Asko-Seljavaara (Helsinki, Finland)

34 10 years experience with the use of botulinum toxin type A in the treatment of obstetrical brachial plexus lesions (8min.+2)
A. Berger, R. Hierner (Isernhagen, Germany)

35 Adaptation of the cortical motor network following heterotopic hand replantation probed by FMRI and effective connectivity analysis (8min.+2)
S.B. Eickhoff, M. Dafotakis, C. Grefkes, N.J. Shah, K. Zilles, H. Piza-Katzer (Jülich, Germany)

36 A gradient for neuroplastic capacity within the primary motor cortex: Indications from a case report post hemispherectomy (8min.+2)
J. Rath, R. Schmidhammer, T. Steinkellner, N. Klinger, A. Geißler, R. Beisteiner (Vienna, Austria)

Discussion

11.00 - 11.30 hrs

Coffee break

11.30 - 12.20 hrs

VI) Diagnostic
Chair: S. Kauhanen (Helsinki, Finland), S. Strafun (Kyiv, Ukraine)

37 Pre-, Intra- and Postoperative Electrophysiological Analysis of Recovery of Peripheral Nerves in Ballistic Injuries (8min.+2)
M. Alon, S. Rochkind (Tel Aviv, Israel)

38 Biopsy of the posterior interosseous nerve, an alternative method for evaluation of peripheral nerve disorders (8min.+2)
N.O.B. Thomsen, M. Mojaddidi, R.A.Malik, L.B. Dahlin (Malmö, Sweden)

Programme

39 The Breathing muscle (8min.+2)

A. Vass, W. Grisold, R. Schmidhammer (Vienna, Austria)

40 Diagnosis and dynamics of restoration of the traumatic radial nerve injury (8min.+2)

S. Strafun, O. Gayko, V. Gayovich (Kyiv, Ukraine)

Discussion

12.20 - 13.00 hrs

VII) Round Table TIMING

Chair: H. Millesi (Vienna, Austria)

H. Millesi, G. Brunelli, M. Wiberg, D. Chiu, G. Terenghi, T. Brushart

13.00 - 14.00 hrs

Lunch Break

14.00 - 15.30 hrs

VIII) Clinic and lumbo-sacral plexus

Chair: H. Giocoli (Buenos Aires, Argentina), S. Rochkind (Tel Aviv, Israel)

41 Ballistic Injuries of Peripheral Nerves:

Clinical Aspects (8min.+2)

S. Rochkind, M. Alon, M. Graif (Tel Aviv, Israel)

42 Restoration of elbow flexion by bifascicular nerve transfer in adult traumatic upper brachial plexus injury (8min.+2)

M. Spies, C. Radtke, A. Gohritz, P. Vogt (Hannover, Germany)

43 Selective Microsurgical Reconstruction of external rotation in C5-C6 and C5-C7 obstetric brachial paralysis (8min.+2)

A. Muset Lara (Barcelona, Spain)

44 Secondary hand 3 reconstruction needs a primary microsurgical strategy (8min.+2)

A. Muset Lara, A. Moratona (Barcelona, Spain)

45 Is phrenic nerve transfer a safe procedure for children with brachial plexus injury?

A clinical matched study of 34 cases (8min.+2)

L. Chen (Shanghai, China)

46 Results of ulno-dorsal perforator flap after intrafascicular neurolysis for recurrent carpal tunnel syndrome (8min.+2)

R. Hierner, A. Berger (Leuven, Belgium)

47 Microsurgical Treatment of Lumbo-sacral Plexus Injuries (8min.+2)

H. Giocoli (Buenos Aires, Argentina)

48 Lumbo-sacral plexus lesion (8min.+2)

A. Alexandre (Treviso, Italy)

49 Surgical treatment of lesion of the lumbo-sacral plexus with special reference to the lumbo-sacral trunk (8min.+2)

H. Millesi (Vienna, Austria)

15.30 hrs

Summaries of the Symposium and Closing

Programme

11.00 - 11.30 hrs

Postersession - Sunday, March 16, 2008

P01 Median nerve laceration in palm of both sensory and motor branches managed by nerve grafts assisted by electric stimulator, case report

I. Ignatiadis, A. Barbitsioti, A. Avram, K. Liodakis, N. Gerostathopoulos (Athens, Greece)

P02 Results of the median and ulnar nerve regeneration after distal nerve injury treated with microsurgical technique in a 20 year period (1984-2003)

I. Humhej, M. Sames, K. Saur, R. Bartos, P. Vachata, A. Hej (Ústí nad Labem, Czech Republic)

P03 The Assessment of functional outcome of median and ulnar nerves neurography. retrospective analysis

G. Yaghjian, B. Grigoryan (Yerevan, Armenia)

P04 NGF-S7 Neurotrophic Factor combined by an epineural conduit technique for bridging short nerve defect in rabbit

A. Barmpitsioti, I. Ignatiadis, A. Patralexis, S. Defteraios, A. Papalois, K. Soultanis, A. Zoubos, P.N. Soucacos (Athens, Greece)

P05 Musician´s thumb tip neuroma in a drummer. Treatment with excision and neurovascular kite flap

I. Ignatiadis, S. Galanakis, S. Vasilas, A. Mavrogenis, N. Gerostathopoulos (Athens, Greece)

P06 Otfried Foerster - a self-taught founder of modern reconstructive nerve surgery

L.A. Dellon, M. Guggenheim, M. Spies, P. M. Vogt (Hannover, Germany)

P07 Fluorescent dyes for retrograde labeling of primary sensory neurons: a comparison of fluoro-ruby, fluoro-emerald, true blue, fluoro-gold and diamidino yellow

T. Zele, U. Kovacic, J. Sketelj, F.F. Bajrovic (Ljubljana, Slovenia)

P08 Brachial plexus surgery in Hungary

S. Pintér (Szeged, Hungary)

P09 Schwann cells and muscle fibers share a common autotrophic loop based on NRG1/ErbB signalling pathway: perspectives for improving postsurgical peripheral nerve regeneration

S. Nicolino, A. Panetto, S. Raimondo, G. Gambarotta, M. Guzzini, B. Battiston, P. Tos, S. Geuna, I. Perroteau (Orbassano (TO), Italy)

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