

SCIENTIFIC PROGRAM

Sunday, 8 October 2000

- 17:00-20:00 **Registration Desk Open (Festival Hall)**
 17:00-20:00 **Poster Mounting (Festival Hall)**
 20:00-21:00 **Get-together Party (Festival Hall)**

Monday, 9 October 2000

- 7:00-17:00 **Registration Desk Open**
 8:15-8:30 **Opening Remarks**
- 8:30-9:15 IL: Invited Lecture: Erwin Neher** **IL-1L**
 New perspectives on neurotransmitter release and synaptic short term plasticity (*E. Neher*) (p. 3)
 Chairs: *Eberhard Neumann & Damijan Miklavčič*
- 9:15-10:15 **Official Photography (in front of the Festival Hall) and Toast**
- Monday** **EP: Electroporation (platform presentations)**
10:15-12:15 Chairs: *Lluis M. Mir & Gregor Sersa*
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|-------|--|------------------|
| 10:15 | Electrooptical and conductometrical relaxation techniques and the crossmembrane transport of genetic polyelectrolytes (<i>Eberhard Neumann</i>) | EP-1L
(p. 7) |
| 10:30 | Evaluation of cell membrane electroporability by means of a nonpermeant cytotoxic agent (<i>Tadej Kotnik, Alenka Macek-Lebar, Damijan Miklavčič, Lluis M. Mir</i>) | EP-2L
(p. 9) |
| 10:45 | Tumor blood flow modifying and anti-vascular effect of electrochemotherapy (<i>Gregor Sersa, Maja Cemazar</i>) | EP-3L
(p. 11) |
| 11:00 | Impedance spectrometry for measurement and controlling tissue effects of electric pulse treatment (<i>Bertil R.R. Persson, Catrin Baureus Koch, Per Engstrom, Leif G. Salford</i>) | EP-4L
(p. 13) |
| 11:15 | Electric pulses induced changes in tumor blood flow: dynamic contrast-enhanced MRI study (<i>Teodora Ivanusa, Katarina Beravs, Franci Demsar, Vladimir Jevtic, Gregor Sersa</i>) | EP-5L
(p. 15) |
| 11:30 | Electroporation increases radiosensitizing effect of cisplatin on LPB fibrosarcoma (<i>Simona Kranjc, Maja Cemazar, Alenka Grosel, Gregor Sersa</i>) | EP-6L
(p. 17) |
| 11:45 | Therapeutic perspectives of in vivo cell electroporability: electrochemotherapy and DNA electrotransfer for nonviral gene therapy (<i>Lluis M. Mir</i>) | EP-7L
(p. 19) |
- 12:30-14:00 **Lunch**

Monday	TM: Theory and Models (platform presentations)	
14:00-16:00	Chairs: <i>Selma Supek & Tomaž Slivnik</i>	
14:00	Numerical simulation studies on neuromagnetic source discrimination: when, where, and how many (<i>Selma Supek</i>)	TM-1L (p. 39)
14:15	Modelling the electric field and ionic charge distribution in biological tissue through the equivalent electric circuit method (<i>Airton Ramos, Adroaldo Raizer, Jefferson L.B. Marques</i>)	TM-2L (p. 41)
14:30	Thickness of electric double layer. Effect of ion size. (<i>Klemen Bohinc, Veronika Kralj-Iglic, Ales Iglic, Tomaz Slivnik</i>)	TM-3L (p. 43)
14:45	Effective conductivity of cell suspensions (<i>Mojca Pavlin, Tomaz Slivnik, Damijan Miklavcic</i>)	TM-4L (p. 45)
15:00	Usefulness of double plane method for 3D reconstruction (<i>Tomislav Pribanic, Mario Cifrek, Stanko Tonkovic</i>)	TM-5L (p. 47)
15:15	Chaotic response of integral pulse frequency modulation and consideration on the auditory system (<i>Takahide Matsuoka, Tokihiro Sano</i>)	TM-6L (p. 49)
15:30	Modeling of skeletal muscle belly twitch response (<i>Natasa Knez, Vojko Valencic, Ales Belic, Rihard Karba</i>)	TM-7L (p. 51)
15:45	Time-varying and static magnetic field therapeutics: from mechanisms to clinical applications (<i>Arthur A. Pilla, David J. Muehsam</i>)	TM-8L (p. 53)
16:00-17:00	Coffee Break	
Monday	POSTER VIEWING (part I) for Scientific Sessions:	
16:00-17:00	EP: Electroporation TM: Theory and Models TD: Technology and Devices	
Monday	EP: Electroporation (posters)	
16:00-17:00		
poster	Effect of polyoxyethylene surfactant C12E8 on electroporation of cell line DC3F (<i>Masa Kanduser, Damijan Miklavcic</i>)	EP-8P (p. 21)
poster	Radiation and electro-pulse treatment of N32 tumors of flank of rats (<i>Bertil R.R. Persson, Per E. Engstrom, Arne Brun, Leif G. Salford</i>)	EP-9P (p. 23)
poster	Electrochemotherapy with cisplatin of breast cancer tumour nodules in male patient (<i>Martina Rebersek, Tanja Cufer, Zvonimir Rudolf, Gregor Sersa</i>)	EP-10P (p. 25)
poster	Electrochemotherapy: first treatment of mast cell tumour in a dog (<i>Natasa Tozon, Maja Cemazar, Gregor Sersa</i>)	EP-11P (p. 27)
poster	Influence of vinblastine on electroporation of B16F1 cell line (<i>Katja Trontelj, Masa Kanduser, Damijan Miklavcic</i>)	EP-12P (p. 29)
poster	The influence of conductivity of extracellular media on permeabilization and survival of the cells after electroporation (<i>Gorazd Pucihar, Damijan Miklavcic</i>)	EP-13P (p. 31)
poster	Numerical modelling of electric field in tissue with two needle electrodes: influence of needle modelling (<i>Davorka Sel, Damijan Miklavcic</i>)	EP-14P (p. 33)
poster	Experimental study on low-intensity transient electromagnetic pulses induced pores on animal erythrocyte membrane (<i>Changjun Liu, Baoyi Wang, Hong Zhang, Zishu Wang, Yong Peng</i>)	EP-15P (p. 35)

Monday 16:00-17:00 **TM: Theory and Models (posters)**

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|--------|---|--------------------------|
| poster | Do realistic head models need to include brain lesions for EEG inverse problem solution?
(Paolo Bruno, Ricardo Zangrando, Federica Vatta, Paolo Inchingolo) | TM-9P
(p. 55) |
| poster | Low resolution surface Laplacian computation for brain computer interface classifiers
(Febo Cincotti, Josep Mourino, Giada Pirri, Jose Millan, Luigi Bianchi, Serenella Salinari, Maria Grazia Marciani, Fabio Babiloni) | TM-10P
(p. 57) |
| poster | Cell models and RF electric field absorption distribution (Jose L. Sebastian, S. Munoz, M. Sancho, J.M. Miranda, B. Ribas Ozonas) | TM-11P
(p. 59) |
| poster | Pharmacokinetic model of transmembrane transport caused by electroporation
(Marko Puc, Tadej Kotnik, Lluís M. Mir, Damijan Miklavcic) | TM-12P
(p. 61) |
| poster | Conductivity model of human stomach for electrogastrographic studies (Ilmari Konkka, Hannu Eskola, Jari Punkkinen, Vaino Turjanmaa, Pekka Pikkarainen) | TM-13P
(p. 63) |
| poster | Dependency of the inverse ECG solutions on the number of electrodes - Effects of modelling error and measurement noise (Hanna-Greta Puurtinen, Jari Hyttinen, Paivi Laarne, Juha Nousiainen, Jaakko Malmivuo) | TM-14P
(p. 65) |
| poster | Localization errors due to noise versus localization errors due to the 3-shell spherical head model (Bart Vanrumste, Gert Van Hoey, Rik Van de Walle, Michael D'Have, Paul Boon) | TM-15P
(p. 67) |
| poster | Influences of the peripheral resistance and graft diameter on the wall shear stress near arterial anastomoses (Stoyan Stoytchev) | TM-16P
(p. 69) |

Monday 16:00-17:00 **TD: Technology and Devices (posters)**

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| poster | VI-EMA2: a device for the simultaneous recordings of eye movements and extraocular muscles electromyography (Agostino Accardo, Pensiero Stefano) | TD-10P
(p. 91) |
| poster | An object oriented approach to biofeedback applications for disabled people (Luigi Bianchi, Fabio Babiloni, Febo Cincotti, Serenella Salinari, Maria Grazia Marciani) | TD-11P
(p. 93) |
| poster | A computer-based acupuncture medical instrument (Xiao Wei Sun, Q.M. Zhu) | TD-12P
(p. 95) |
| poster | On the method and the device for mechanical impedance measuring of human cervix uteri (Sergei Mazitov, Nickolay Minchenya, Sergei Voskresensky, Andrew Savchenko, Andrew Dudinsky) | TD-13P
(p. 97) |
| poster | The utilization of clustering methods to identify the diagnosis in medical practice (Cristina G. Dascalu, Lucian Boiculese, Gabriela Georgescu) | TD-14P
(p. 99) |
| poster | Preliminary results of a new method for non-invasive glucose measurement (S. M. Alavi, A. Rouane, M. Nadi) | TD-15P
(p. 101) |
| poster | Microwave applicators for "BPH" treatment (Jan Vrba, Miroslav Lapes, J. Domes, Ladislav Oppl, G. Saliba) | TD-16P
(p. 103) |
| poster | Microwave applicators compatible "NMR" (Jan Vrba, I. Zuna, P. Peschke, L. Schad, L. Pousek, Miroslav Lapes, Ladislav Oppl, G. Saliba, P. Novak) | TD-17P
(p. 105) |
| poster | Technical and clinical activities of microwave thermotherapy in Czech Republic (Jan Vrba, Miroslav Lapes, Ladislav Oppl) | TD-18P
(p. 107) |
| poster | Development of building materials for protection of human house from electromagnetic smoke (Alexey N. Goltsov, Oleg I. Fisun, Yuriy K. Alexandrov) | TD-19P
(p. 109) |
| poster | Computerized analysis of erythrocyte concentration in complex microvascular network (Mahadevappa Manjunatha) | TD-20P
(p. 111) |

- poster Installation for compensation of geomagnetic storms in apartments for prophylaxis and rehabilitation of magnetolabile patients (*Otar Khomeriki, Nikolai Invia, David Tvildjani, Tamar Chlaidze, Levan Tvildjani, Dshavara Ugrehelidze, Lev Gheonjian, Tamar Paatashvili, Galina Jimneleshvili*) **TD-21P**
(p. 113)

Monday **TD: Technology and Devices (part I)** (platform presentations)

17:00-18:00 Chairs: *Arthur Pilla & Franjo Pernuš*

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|-------|--|-------------------------|
| 17:00 | Testing of medical electrical equipment - ultrasonic therapy equipment (case study)
(<i>Dubravko Kovacic, Bozidar Curkovic, Ratko Magjarevic, Branko Breyer</i>) | TD-1L
(p. 73) |
| 17:15 | Immunity of pacemakers at low frequency signals (<i>A. Hedjiedj, C. Goeury, M. Nadi</i>) | TD-2L
(p. 75) |
| 17:30 | Analysis of fundamental limitations of electric-type hyperthermia applicators based on the TLM method (<i>Hugo Dominguez, Adroaldo Raizer</i>) | TD-3L
(p. 77) |
| 17:45 | Effects of microwaves exposure (GSM-900; CW 915 MHz) on ODC-activity and polyamine levels in mice nad rats (<i>Bertil R.R. Persson, Lo Persson, Leif G. Salford</i>) | TD-4L
(p. 79) |

18:00-19:00 **ISBEM General Meeting (Festival Hall)**

19:00-20:00 **ISBEM Council Meeting (Grand Hotel Toplice, White Lounge)**

Tuesday, 10 October 2000

8:00-16:30 **Registration Desk Open**

8:15-8:30 **Opening Remarks**

Tuesday **BM: Bioelectromagnetic Measurements (part I)** (platform presentations)

8:30-10:00 Chairs: *Jaakko Malmivuo & Marko Munih*

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|------|--|--------------------------|
| 8:30 | Invited lecture: Roberto Merletti
Surface EMG detected with linear electrode arrays: a window on muscle features and force control strategies (<i>Roberto Merletti, Dario Farina, Marco Gazzoni</i>) | BM-1L
(p. 117) |
| 9:00 | The new analysing method for the surface EMG data (<i>Viiu Tuulik, Rain Ferenets, Jaanus Lass, Mai Vaht</i>) | BM-2L
(p. 119) |
| 9:15 | Corelation of results of coronarographic examination and high-resolution vectorcardiography (<i>Ryszard Krzyminiewski, Grazyna Panek, Roman Stepien, Urszula Schmidt</i>) | BM-3L
(p. 121) |
| 9:30 | Application of lead field theory and volume conductor modeling in the development of 12-lead impedance cardiography (<i>Pasi Kaupinnen, Tiit Koobi, Jari Hyttinen, Seppo Kaukinen, Jaakko Malmivuo</i>) | BM-4L
(p. 123) |
| 9:45 | Analysis of AC current conduction through the human tooth (<i>Dejan Krizaj, J. Svajger, J. Jan, V. Valencic</i>) | BM-5L
(p. 125) |

10:00-11:00 **Coffee Break**

Tuesday **POSTER VIEWING (part II) for Scientific Sessions:**

10:00-11:00 BM: Bioelectromagnetic Measurements
FM: Fundamental Mechanisms of EMF Interactions
ST: Soft Tissue and Bone Healing

Tuesday **BM: Bioelectromagnetic Measurements (posters)**

10:00-11:00

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|--------|--|---------------------------|
| poster | Recognition of imagined hand movements by signal space projection and Fisher discriminant linear classifiers (<i>Fabio Babiloni, Febo Cincotti, Luigi Bianchi, Giada Pirri, Jose Millan, Josep Mourino, Serenella Salinari, Maria Grazia Marciani</i>) | BM-11P
(p. 137) |
| poster | Localization of dual preexcitation sites using electrocardiographic inverse solution (<i>Vojko Jazbinsek, Rok Hren</i>) | BM-12P
(p. 139) |
| poster | Difference in single dipole localization of visual evoked potentials using two skull resistivity models (<i>Paivi Laarne, Mirja Tenhunen-Eskelinen, Jari Hyttinen, Hannu Eskola</i>) | BM-13P
(p. 141) |
| poster | An effective method to measure evoked potential (<i>Bor-Shyh Lin, Bor-Shing Lin, Jiann-Ling Liu, Fok-Ching Chong</i>) | BM-14P
(p. 143) |
| poster | Impedance characteristics of the vocal tract soft tissues (<i>Vojtech Misun, Anna Ryndova</i>) | BM-15P
(p. 145) |
| poster | Sensitivity of EEG source localisation to brain lesion conductivity as a method to improve source estimate position (<i>Federica Vatta, Paolo Bruno, Paolo Inchingolo</i>) | BM-16P
(p. 147) |
| poster | The measure of dimensional complexity in the EEG of schizophrenic patients (<i>Ying-Jie Lee, Yi-Sheng Zhu, Min-Fen Shen, Jia-Yi Chen, Hong-Xuan Zhang</i>) | BM-17P
(p. 149) |

Tuesday **FM: Fundamental Mechanisms of EMF Interactions (posters)**

10:00-11:00

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|--------|--|---------------------------|
| poster | Effect of 50 Hz magnetic fields on lipid peroxidation of the rat kidney (<i>Henri M. Brugere, Francoise Pupin, Jacques Lambrozo</i>) | FM-7P
(p. 165) |
| poster | The studies on the influence of intestinal myoelectrical activity-related electromagnetic field (EMF) on bacterial growth and protein profiles in Escherichia coli cells (<i>Daniel Laubitz, Anna Wojcik, Elzbieta Grzesiuk, Stefan G. Pierzynowski</i>) | FM-8P
(p. 167) |
| poster | The intestinal myoelectrical activity-related electromagnetic field exposure of bacteria induces protection against subsequent UV254nm (UVC) irradiation (<i>Anna Wojcik, Daniel Laubitz, Stefan G. Pierzynowski, Elzbieta Grzesiuk</i>) | FM-9P
(p. 169) |
| poster | Influence of modulated uncharged-particle beams on the spontaneous brain activity (<i>Kiril G. Markov, A. I. Enikova, D. Chavdarov, P. Zubov</i>) | FM-10P
(p. 171) |
| poster | MMW pretreatment initiate protective effect in thylakoid membranes after adding of electron flow inhibitors (<i>Lubomir Traikov, V. Goltsev, V. Dolchinkova, Marko S. Markov</i>) | FM-11P
(p. 173) |

Tuesday **ST: Soft Tissue and Bone Healing (posters)**

10:00-11:00

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|--------|---|--------------------------|
| poster | A new type of very low-power modulated laser device: soft-tissues changes induced in osteoarthritic patients revealed by sonographic examination (<i>L. Baratto, R. Capra, M. Farinelli, P. Monteforte, Pietro Morasso, G. Rovetta</i>) | ST-6P
(p. 187) |
| poster | Accelerated healing of electrically stimulated chronic wounds (<i>David Cukjati, Rajmond Savrin, Helika Benko, Stanislav Rebersek, Damijan Miklavcic</i>) | ST-7P
(p. 189) |
| poster | Therapeutic electromagnetic field effects on angiogenesis during tumor growth (<i>C. D. Williams, Marko S. Markov</i>) | ST-8P
(p. 191) |

- poster Electrically conductive and ferromagnetic nerve guide hinders regeneration of rat's sensory axons. Preliminary report. (*Martin Tomsic, Fajko Bajrovic*) **ST-9P** (p. 193)
- poster Treatment of in-stent restenosis by RF heating (*Igor Sersa, Matjaz Sinkovec*) **ST-10P** (p. 195)
- poster Frequency-depended alteration of skin wound healing pulsed extremely low frequency electromagnetic fields (*Fathollah Bouzarjomehri, Sohrab Hajizadeh, Ali Akbar Sharafi, Siid Mohammad Firoozabadi*) **ST-11P** (p. 197)
- poster Possible implication of reactive oxygen species, immune system and pH in electrochemical treatment (*Luis Bergues, Hector Camue, Rodolfo Perez, Magalys Suarez, Richard Hinojosa, Liban Montes de Oca, Miriam Farina, Odalis de la Guardia*) **ST-12P** (p. 199)
- poster Effects of direct electric current in tumors treatment (*Luis Bergues, Hector Camue, Rodolfo Perez, Magalys Suarez, Richard Hinojosa, Liban Montes de Oca, Miriam Farina, Odalis de la Guardia*) **ST-13P** (p. 201)

Tuesday **BM: Bioelectromagnetic Measurements (part II)** (platform presentations)

11:00-12:15 Chairs: *Hannu Eskola & Vojko Valenčič*

- 11:00 Method for measuring resistivities for intracranial tissues in vivo (*Juha Latikka, Timo Kuurne, Jaakko Malmivuo, Hannu Eskola*) **BM-6L** (p. 127)
- 11:15 An evaluation of the reciprocal approach for computing scalp EEG potentials (*Stefan Finke, Ramesh M. Gulrajani*) **BM-7L** (p. 129)
- 11:30 Multimodal integration of high resolution EEG and functional magnetic resonance (*Fabio Babiloni, Febo Cincotti, Filippo Carducci, Leonardo Angelone, Cosimo Del Gratta, Gian Luca Romani, Paolo Rossini, Claudio Babiloni*) **BM-8L** (p. 131)
- 11:45 Waveform of EOG is dependent on the direction of movement (*Hannu Eskola, H. Aalto, I. Rimpilainen, V. Jantti, V. Hakkinen*) **BM-9L** (p. 133)
- 12:00 Retrieval of brain temperatures from radiometric brightness temperature measurements using 3-D EM and thermal modelling (*Gerard M.J. Van Leeuwen, Jeff W. Hand, Shizuo Mizushina, Jeroen B. Van de Kamer, David A. Edwards*) **BM-10L** (p. 135)

12:30-14:00 **Lunch**

Tuesday **FM: Fundamental Mechanisms of EMF Interactions** (platform presentations)

14:00-15:30 Chairs: *Marko S. Markov & Igor Jerman*

- 14:00 Combined magnetic fields reverse osteopenia and restore strength in a rodent model of osteoporosis (*James T. Ryaby, Ellen Jurischk, David L. Haupt, John H. Kinney*) **FM-1L** (p. 153)
- 14:15 New evidence for existence of biological windows (*Marko S. Markov*) **FM-2L** (p. 155)
- 14:30 Effects of 50-Hz magnetic fields on Ca²⁺ oscillations in mouse pancreatic islets (*F. Madec, B. Billaudel, P. Sartor, Bernard Veyret*) **FM-3L** (p. 157)
- 14:45 Non-thermal effects of microwave fields on cell proliferation and heat-shock proteins (*Sianette Kwee, Svetlozar Velizarov*) **FM-4L** (p. 159)
- 15:00 Electromagnetic fields accelerate electron transfer reactions (*Martin Blank, Lily Soo*) **FM-5L** (p. 161)
- 15:15 Biologically based safety standards for cell phones: discriminating between heat and magnetic fields (*Reba M. Goodman, Martin Blank*) **FM-6L** (p. 163)

15:30-16:30 **Coffee Break**

Tuesday **POSTER VIEWING (part III) for Scientific Sessions:**

15:30-16:30

EM: Electric and Magnetic Stimulation

HR: EMF Health Risk Effects and Dosimetry

Tuesday

EM: Electric and Magnetic Stimulation (posters)

15:30-16:30

poster The comparison of the H-reflex parameters in electrical stimulations of vertebral column and peripheral (*F. Ebrahimi, Siid Mohammad Firoozabadi, G. Torkaman*) **EM-8P**
(p. 219)

poster The effects of tripolar precutaneous lumbar stimulation on the H-reflex recruitment curve (*N. Saeedi, S. M.P. Firoozabadi, G. Torkaman, A. Kazemnejad*) **EM-9P**
(p. 221)

Tuesday

HR: EMF Health Risk Effects and Dosimetry (posters)

15:30-16:30

poster Effects of 50 Hz, 14 mTrms circularly polarized magnetic field exposures on cytokine production of mouse macrophage (*Hiromi Kubota, Izumi Nishimura*) **HR-7P**
(p. 237)

poster Development of spontaneous leukemia in AKR mice exposed to 50 Hz, 350 microTrms, circularly polarized magnetic field for 6 to 30 weeks (*Izumi Nishimura, Hiromi Kubota*) **HR-8P**
(p. 239)

poster GSM phones and nervous system in rats: quantification and localisation of neurotransmitters with immunohistochemistry and image analysis (*A. L. Mausset, Rene de Seze, L. Miro, A. Privat*) **HR-9P**
(p. 241)

poster Studies of pulsed 900/1800 MHz RF-fields on the permeability of the blood-brain barrier in rats (*Bertil R.R. Persson, Lars Malmgren, Arne Brun, Leif G Salford*) **HR-10P**
(p. 243)

poster Is the macrophage multinucleation consequence of microwave irradiation (*Ivancica Trosic, Mirjana Matausic-Pisl, Zeljko Radalj, Ivana Busljeta*) **HR-11P**
(p. 245)

poster The effect of extremely-high-frequency electromagnetic radiation on immunological indices in healthy mice under different exposure regimens (*Konstantin V. Lushnikov, Andrew B. Gapeyev, Vladimir B. Sadovnikov, Nikolay K Chemeris*) **HR-12P**
(p. 247)

poster Late ventricular potentials in workers exposed to VHF electromagnetic fields (EMF) (*Alicja Bortkiewicz, Elzbieta Gadzicka, Marek Zmyslony, Wieslaw Szymczak*) **HR-13P**
(p. 249)

poster Late ventricular potentials in workers exposed to electromagnetic fields at frequencies 0.738 to 1.503 MHz (*Elzbieta Gadzicka, Alicja Bortkiewicz, Marek Zmyslony, Wieslaw Szymczak*) **HR-14P**
(p. 251)

poster Comparison between SAR values induced in the head by cellular phones and hands-free kits (*Rosanna Pinto, S. Mancini, D. Asta, G. A. Lovisolo*) **HR-15P**
(p. 253)

Tuesday

ST: Soft Tissue and Bone Healing (platform presentations)

16:30-17:45

Chairs: *Ruggero Cadossi & Martin Štefančič*

16:30 Physiological DC electric fields in developing embryos and healing wounds (*Richard Nuccitelli, Rivkah R. Iseroff, Erik V. Mukerjee, Scott D. Collins, Rosemary L. Smith*) **ST-1L**
(p. 177)

16:45 Spinal cord explants in vitro: effects of static magnetic fields (SMF) and ara-C on neurite growth. (*Betty F. Sissen, Roy Trumbo, Andrew Twehues*) **ST-2L**
(p. 179)

17:00 Effects of various EMF on nerve regeneration in vitro (*Ewa Herbst, Philip Resig, Scott Ranney, Betty F. Sissen*) **ST-3L**
(p. 181)

17:15 Combined magnetic fields accelerate primary spine fusion: a prospective, double blind, randomized, placebo controlled clinical study. (*James T. Ryaby, Raymond J. Linovitz, Frank P. Magee, Joel S. Faden, Regina Ponder, Larry R. Muenz*) **ST-4L**
(p. 183)

17:30 Clinical experience with capacitively-coupled electric fields (*Myron K. MacDonald, M. J.H. Bonneau*)

ST-5L
(p. 185)

17:45-18:30 **Poster Dismounting**

19:30-22:00 **Cocktail & Conference Banquet (Grand Hotel Toplice)**

Wednesday, 11 October 2000

9:00 Departure of buses from in front of Grand Hotel Toplice

10:30-... **Excursion to the Institute of Republic of Slovenia for Rehabilitation in Ljubljana**
Lunch

16:00-... **Visit to Postojna Caves**

19:30 Return to Bled

Thursday, 12 October 2000

8:00-16:00 **Registration Desk Open**

8:15-8:30 **Opening Remarks**

Thursday **EM: Electric and Magnetic Stimulation** (platform presentations)
8:30-10:15 Chairs: *Shoogo Ueno & Milan Gregorič*

8:30 Recent advances in brain magnetics and tissue engineering (*Shoogo Ueno*) **EM-1L**
(p. 205)

8:45 Influence of hip extensors and ankle plantar flexors stimulation on paraplegic person's standing-up (*Jernej Kuzelicki, Tadej Bajd, Roman Kamnik, Pavla Obreza, Helika Benko, Martin Stefancic*) **EM-2L**
(p. 207)

9:00 Proprioceptive neuromuscular facilitation with electrical stimulation (*Pavla Obreza, Marko Munih, Helika Benko*) **EM-3L**
(p. 209)

9:15 Long-term effects of electrical stimulation on parameters of postocclusive reactive hyperemia in patients with peripheral vascular disease (*Rudi Kragelj, Tatjana Erjavec, Tomaz Jarm, Marjeta Presern-Strukelj, Damijan Miklavcic*) **EM-4L**
(p. 211)

9:30 Functional electrical stimulation (FES) as a countermeasure against muscular atrophy in long-term space flights (*Dietmar Rafolt, W. Mayr, G. Freilinger, Manfred Bijak, C. Hofer, H. Lanmueller, M. Reichel, S. Sauermann, C. Schmutterer, E. Unger, I. Kozlovskaya*) **EM-5L**
(p. 213)

9:45 Adaptive modeling of electrically stimulated muscle using reference models (*Matija Ponikvar, Marko Munih*) **EM-6L**
(p. 215)

10:00 Tricycle for paraplegic's: stimulation equipment (*Manfred Bijak, M. Reichel, C. Hofer, M. Gfohler, W. Mayr, T. Eberharter, T. Angeli, P. Lugner, L. Rinder, H. Kern*) **EM-7L**
(p. 217)

10:15-10:45 **Coffee Break**

Thursday TD: Technology and Devices (part II) (platform presentations)**10:45-12:00** Chairs: *Ratko Magjarević & Marjan Mihelin*

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|-------|---|-------------------------|
| 10:45 | Correlation between results of different methods for measurement of blood perfusion and oxygenation changes in tumors after electrochemotherapy (<i>Tomaz Jarm, Fritz Steinberg, Maja Cemazar, Christian Streffer, Gregor Sersa, Damijan Miklavcic</i>) | TD-5L
(p. 81) |
| 11:00 | Impact of different anisotropic conductivity conditions on cardiac magnetic fields and electric potentials (<i>Olaf Kosch, P. Meindl, U. Steinhoff, V. Jazbinsek, Z. Trontelj, L. Trahms</i>) | TD-6L
(p. 83) |
| 11:15 | Evaluation of an automated system for cell colony counting (<i>Rok Bernard, Masa Kanduser, Franjo Pernus</i>) | TD-7L
(p. 85) |
| 11:30 | Acoustical evaluation of ultrasonic horns for an endoscopic contact ultrasonic probe (<i>Alan Stimac, Bojan Ivancevic, Kristian Jambrosic</i>) | TD-8L
(p. 87) |
| 11:45 | Novel macromolecular contrast agents for dynamic contrast enhanced MRI (<i>Katarina Beravs, Teodora Ivanusa, Franci Demsar, Vladimir Jevtic, Igor Sersa, Gregor Sersa</i>) | TD-9L
(p. 89) |

12:30-14:00 **Lunch****Thursday HR: EMF Health Risk Effects and Dosimetry (platform presentations)****14:00-15:30** Chairs: *John de Lorge & Peter Gajšek*

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| 14:00 | Project NEMESIS: double-blind study on effects of 50Hz EMF on physiological parameters during sleep in people suffering from electrical hypersensitivity (<i>Christopher H. Mueller, Helmut Krueger, Christoph Schierz</i>) | HR-1L
(p. 225) |
| 14:15 | Parametric dependence of Specific Absorption Rate (SAR) on permittivity of different biological tissues (<i>Peter Gajšek, Patrick A. Mason, J. M. Ziriak, W. D. Hurt, T. J. Walters</i>) | HR-2L
(p. 227) |
| 14:30 | An inverse scattering approach for the electric field prediction in biological bodies (<i>Emanuela Bermani, Salvatore Caorsi, Andrea Massa</i>) | HR-3L
(p. 229) |
| 14:45 | Temporal skin warming during exposure to cellular telephones (<i>G. Pina, P. Malzac, Rene de Seze</i>) | HR-4L
(p. 231) |
| 15:00 | An attempt to replicate microwave effects on calcium efflux from chick brain (<i>James H. Meritt, Patrick A. Mason</i>) | HR-5L
(p. 233) |
| 15:15 | Modulated 900 MHz exposure condition characterization for the study on immune system of mice and preliminary results (<i>D. Asta, L. Ardoino, Paolo Galloni, Rosanna Pinto, C. Pioli, C. Marino</i>) | HR-6L
(p. 235) |

15:30-16:30 **Results of Student Competition****Conference Closing**