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The 16th European Congress of
Clinical Neurophysiology
ECCN 2017
BUDAPEST, HUNGARY
30 August – 2 September, 2017



PROGRAM BOOK





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Dear Colleagues,

It is a great pleasure to welcome you to the 16th European Congress of Clinical Neurophysiology (ECCN2017), and to Budapest, one of the most beautiful cities in the world.

The Congress features highly respected speakers who will share and discuss significant new developments that will have impact on the future of Clinical Neurophysiology. With attendees and experts from more than 40 countries around the world, the Congress will provide an ideal forum not only for the presentation of new science, but also for unique networking opportunities. We encourage you to participate in the discussions and hope the Congress helps in the exchange of information and development of new collaborations.

The program of ECCN2017 with 9 plenary lectures, 27 symposia, 19 teaching courses and hands-on sessions addresses a broad range of topics including epilepsy, sleep, pain, cognition, memory, dementia, ageing, peripheral nervous system, experimental neuroscience, movement disorders, disorders of the cerebellum and brainstem, autonomic symptoms, headache, neuroplasticity, etc.

Budapest is seen as the most vibrant and most exciting city of the region at the crossroads of different cultures. Do not miss the beautiful panorama on the Danube, the historical churches and monuments, or bracing baths! Budapest, with its various cultural and entertaining programs, is an ideal place not only for great scientific events, but also for recreation at the end of the summer.

Finally, we would like to take this opportunity to thank all members of the International Organising Committee, and representatives of the national neurophysiological societies, as well as the staff of the congress office, for their help with the careful planning of ECCN2017 in Budapest. Although, the congress will be over in four short days, it has been more than three years in the making, and it could not have happened without their help.

We welcome you to an inspiring educational and stimulating professional program.

Prof. Dr. Anita Kamondi
Convenor
ECCN2017 Budapest

Prof. Dr. Walter Paulus
Chair
EC-IFCN

Prof. Dr. Jonathan Cole
Secretary/Treasurer
EC-IFCN

Patrons of ECCN2017

Zoltán Ónodi-Szűcs
Minister of State for Health
Ministry for Human Capacities



MINISTRY
OF HUMAN CAPACITIES

István Tarlós
Mayor of the City of Budapest



BUDAPEST
A VÁROS, AMELY EGYESÍT

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Director of the Institute of Experimental Medicine
President of the Hungarian Brain Research Program

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Congress Organiser

CongressLine Ltd.
H-1065 Budapest, Révay köz 2.
Phone: +36 1 429 0146
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www.congressline.hu

Registration:
Abstract handling:
Industry:

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IFCN European Chapter Board

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András Fogarasi
András Horváth
Andrea Kovács
Zoltán Nusser
Mihály Szabó
Imre Szirmai

Host

Hungarian Society of Clinical Neurophysiology
Professor Dr. Anita Kamondi
President of HSCN
National Institute of Clinical Neurosciences
H-1145 Budapest, Amerikai ut 57.
Email: eccn2017hungary@gmail.com

**Congress date**

Wednesday, 30 August – Saturday, 2 September, 2017

Congress venue**Budapest Marriott Hotel**

H-1052 Budapest, Apáczai Csere János str. 4.

www.marriott.com

Access by public transportation

Budapest Marriott Hotel is located in the heart of the city next to the Danube river (Pest side), about 5 minutes walk from Deák Ferenc tér.

The Budapest Marriott Hotel can be reached directly by Tram No. 2. From Deák Ferenc tér the venue can be reached by metros (underground) line M1, M2, M3, trams 47, 49, buses 9, 16, 100E, 105 and trolley bus 72. The closest metro station (line M1) is Vörösmarty tér (3 minutes walk).

Parking

The ECCN2017 Congress venue is situated in the very downtown (mostly pedestrian) area of Budapest. Parking is very limited and very expensive. The organisers exclude any responsibility for any penalty resulting from illegal parking. Guests arriving by car can use the V1 Garage (1051 Budapest, Vörösmarty tér 1.), drive in/out from Apáczai Csere János utca towards Deák Ferenc utca. <http://boe-parking.hu/vorosmarty-garazs/>

Rates: 500 HUF / hour, 5000 HUF / daily

Internet

Free Wi-Fi service is available at the congress venue.

Venues OUTSIDE of congress venue (Teaching Course 16 and 9)**TC16 – EXPERIMENTAL ELECTROPHYSIOLOGY, OPTOGENETICS AND CELLULAR IMAGING****Institute of Experimental Medicine, Hungarian Academy of Sciences**

Address: 1083 Budapest, Szigony street 43

30 August, Wednesday, 11:00-15:00

Meeting point: 10.50 at the TC venue (address above)

How to reach by public transportation: Take metro line M3 from Deák Ferenc tér to Klinikák metro station.

The Institute is right to the left as you leave the station building.

TC9 – INTRAOPERATIVE NEUROMONITORING IN THE NEUROSURGICAL PRACTICE II. – LIVE SURGERY BROADCAST FROM THE OPERATING ROOM**National Institute of Clinical Neurosciences**

Address: 1145 Budapest, Laky Adolf street 44-46.

1 September, Friday, 07:30 – 11:30

Meeting point: 07.20 at the TC venue (address above)

How to reach by public transportation: the Institute can be entered through the main entrance at 1145 Budapest, Laky Adolf street 44-46. Take metro line M1 from Vörösmarty tér to Mexikói út and here change to tram No 3 or 69 to Laky Adolf street (3 stops). The main entrance is about 100 m walk.

Language

The official language of the Congress is English. No translation will be provided.

CME

The 16th European Congress of Clinical Neurophysiology, (Budapest, Hungary, 30/08/2017-02/09/2017) has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 22 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Speakers technical information**Speakers' Lounge**

Presentations must be submitted to the technical support team in the Speakers' Lounge at least 2 hours prior to your scheduled presentation or the day before your presentation if the talk is scheduled for the morning sessions.

Please prepare your presentation in .ppt, .pptx (Microsoft Office PowerPoint 2003-2017 format). Please avoid using videos embedded in your show. If have a video, please test it in the Speakers' Lounge after submitting or contact the technician in the lecture hall latest in the break before your presentation (but preferably earlier) to test it in advance.

Please note, you will not be able to use your own laptop for your presentation.

Opening Hours:

08.00 – 19.00 Wednesday

07:00 – 19:00 Thursday, Friday

08.00 – 11.00 Saturday

Program

Every endeavour has been made to produce an accurate program. If you are presenting at the Congress, please confirm your presentation time as contained in this program at the Speakers' Lounge.

Abstract publication

Abstracts will be published on-line in the journal Clinical Neurophysiology Volume September 2017.

Program changes

Due to unforeseen circumstances, the organisers cannot assume liability for any changes in the scientific program. Organisers will do their best to keep the participants up to date, possible changes in the program will be immediately communicated.

Posters technical information**POSTER SESSION I.**

Thursday, 31 August 2017

Poster set-up 07:30 – 08:00 Thursday, 31 August

Poster viewing 11:45 – 12:45 Thursday, 31 August

Poster removal 18:45 – 19:00 Thursday, 31 August

Budapest Ballroom

Brain Stimulation I. (P215 – 226)

Peripheral nerve ultrasound examinations (P227 – 231)

CN in the diagnosis and treatment of paediatric disorders (P232 – 237)

Functional connectivity (P238 – 243)

Neurophysiology of sensory systems (P244 – 250)

**Erzsébet I. room**

Other	(P251 – 273)
Experimental neurophysiology	(P274 – 283)
CN methods in predicting the outcome and monitoring the course of a disease	(P284 – 292)
CN in the determination of personalised treatment	(P293 – 298)

POSTER SESSION II.

Friday, 1 September 2017

Poster set-up	07:30 – 08:00 Friday, 1 September
Poster viewing	11:45 – 12:45 Friday, 1 September
Poster removal	13:00 – 14:00 Saturday, 2 September

Budapest Ballroom

Brain stimulation II.	(P299 – 311)
CN and neuroimaging	(P312 – 317)
CN of the autonomic nervous system	(P318 – 322)
Intraoperative neurophysiologic methods	(P323 – 326)
Neurophysiology in the intensive care unit	(P327 – 332)
Cutting edge techniques in CN	(P365 – 372)

Erzsébet I. room

CN in the diagnosis and treatment of diseases II.	(P334 – 364)
Neurophysiology of brain/mind problem	(P373 – 377)
Neurophysiology of cognition	(P378 – 385)

All supplies needed to fix the posters will be available at the poster stands.

Awards**Kálmán Lissák Prize**

The Kálmán Lissák Prize recognizes unique and outstanding achievements in the field of neurophysiology. The Hungarian Society of Clinical Neurophysiology awards it every two years to an outstanding Hungarian neurophysiologist. The prize is officially granted during the national congress of the Society, at which the winner is invited to give a plenary lecture. The recognition is named in honour of Kálmán Lissák a distinguished Hungarian neuroscientist.

Aladár Nagy Prize

The Aladár Nagy Prize is awarded every two years to a Hungarian clinical neurophysiology assistant/technician nominated by the Hungarian Society of Clinical Neurophysiology, based upon his/her professional achievements, outstanding activity in the field of education and training and support of the work of the Hungarian Society.

Best Young Presenter

The “Best young presenter” prize will be awarded with a one year on-line subscription to journal Clinical Neurophysiology during the Closing Ceremony!

Practical tips for trainees - educational lecture series

ExCo EC-IFCN is keen to promote work towards an European Curriculum and an Exit Exam. It also has been keen for Congresses to consider training and practice as well as research and academic advances. Though many lectures in the ECCN do this, ExCo has also organised – for the first time – this series which concentrates on basic element of our practice for trainees. We hope this will develop in future Congresses, as the curriculum and exam evolve.

Registration Desk

The Registration Desk will be open at Budapest Marriott Hotel Lobby

Wednesday, 30 August 2017	07:30 – 20:00
Thursday, 31 August 2017	07:00 – 19:00
Friday, 1 September 2017	07:00 – 19:00
Saturday, 2 September 2017	08:00 – 11:00

Exhibition opening hours

Wednesday, 30 August, 2017	11:00 – 19:00
Thursday, 31 August, 2017	08:30 – 19:00
Friday, 1 September 2017	08:30 – 19:00
Saturday, 2 September 2017	08:30 – 13:00

Hotline to the registration desk and exhibition management

+36 70/608-6806

Registration fees

Registration types	Regular after 31 May, 2017	On-site
ECCN participants	490 Euro	550 Euro
Young participants (age under 35)	280 Euro	320 Euro
Assistants/technicians	280 Euro	280 Euro
Accompanying persons	150 Euro	150 Euro
Exhibitors	420 Euro	420 Euro
Educational course	60 Euro	60 Euro

Registration fees are indicated in EUR, per person and including 27% VAT and 71 EUR mediated catering service.

Registration fees include

- Admission to the Scientific sessions, Exhibition and Poster area • Congress bag, Final program • Coffee-breaks
- Admission to the Opening ceremony and Welcome reception

Accompanying Person's fee includes

- Sightseeing tour with lunch at Grand Market Hall • Admission to the Opening ceremony and Welcome reception • Tour bag

Coffee Breaks

Coffee, tea and refreshments will be available during coffee breaks.

Congress Bags

Congress bags are provided for all registered participants. Please do not put personal belongings (money, ID Cards, mobile phones) in the Congress Bags, since hundreds of similar bags will be around the congress venue, and they could be easily confused. Please mark your name and contact details clearly on your bag.



Badges

Identification badges are provided along with other congress materials upon registration.

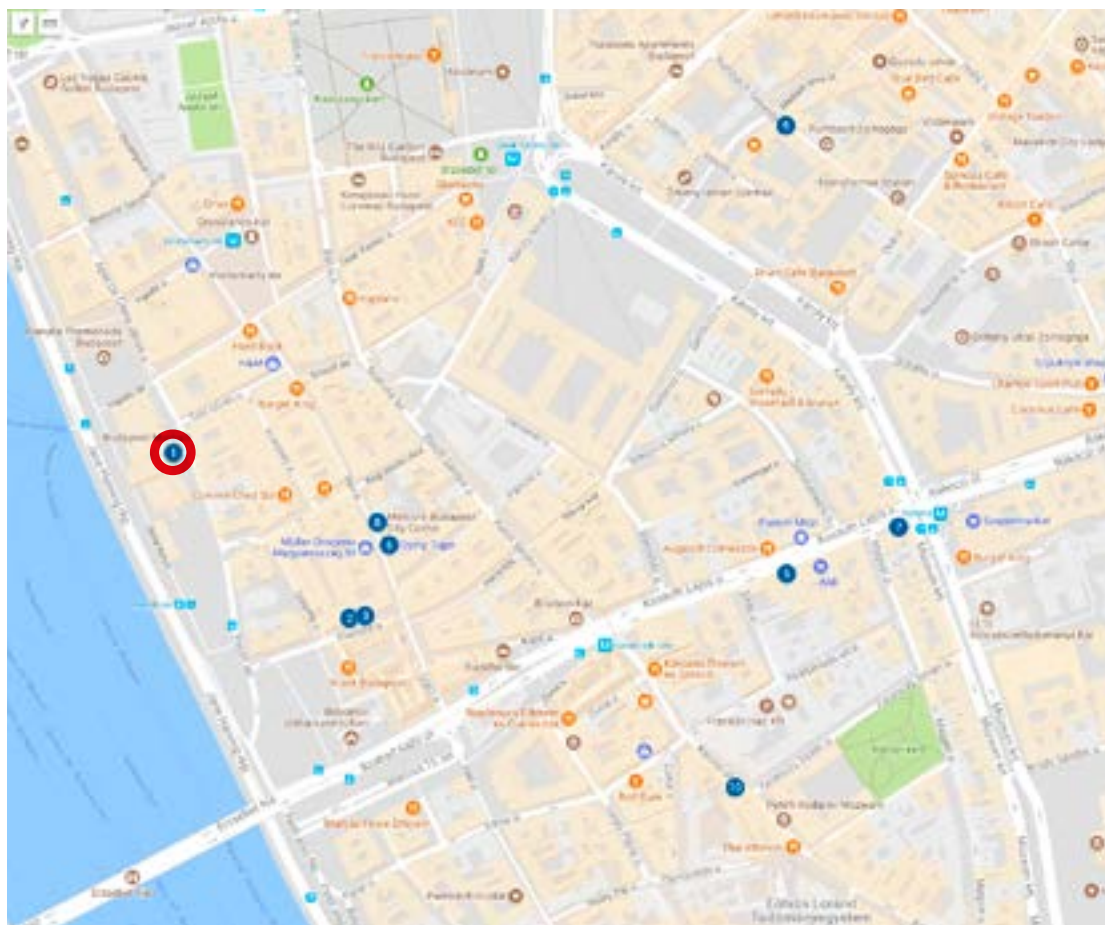
For security purposes, delegates, speakers, sponsors and exhibitors are **asked to wear their name badges all times during the congress**. Please also note that your congress badge assures your entrance to congress premises and catering.

Entrance into sessions is restricted for registered delegates only. The identification badges are also helpful when contacting the secretariat and other participants.

If you misplace your name badge, please go to the Registration Desk to arrange a replacement.

Official congress hotels

1. **Budapest Marriott Hotel** – Congress venue H-1052 Budapest, Apáczai Csere János utca 4.
2. **Millennium Court Budapest – Marriott Executive Apartments** H-1052 Budapest, Piarista u. 4.
3. **La Prima Fashion Hotel Budapest** H-1052 Budapest, Piarista u. 6.
4. **Hotel Moments Budapest** H-1061 Budapest, Andrásy út 8.
5. **Eurostars Hotel** H-1053 Budapest, Kossuth Lajos u. 7-9.
6. **Promenade City Hotel** H-1052 Budapest, Váci utca 22.
7. **Danubius Hotel Astoria City Center** H-1053 Budapest, Kossuth Lajos utca 19-21.
8. **Mercure Budapest City Center** H-1052 Budapest, Váci utca 20.
9. **Roombach Hotel Budapest Center** H-1075 Budapest, Rumbach Sebestyén utca 14.
10. **Hotel Erzsébet City Center** H-1053 Budapest, Károlyi Mihály u. 11-15.



Welcome reception

Wednesday, 30 August 2017, 19.00 – 21.00

Price: included in registration/accompanying person fee

Venue: on site, in Budapest Marriott Hotel

(H-1052 Budapest, Apáczai Csere János str. 4)

The organisers greet the attendees of ECCN2017 with a cocktail reception. Celebrate and network with your colleagues and the keynote speakers at the complimentary Welcome Reception.

ECCN farewell dinner & danube cruise (optional)

Friday, 1 September 2017, 20.00-23.00

Price: 75 EUR/person

Meeting point and departure: at 19.45 from Vigadó Port 8

Boat name: Ludwig

During this evening sightseeing tour on the River Danube, you will be welcomed with a drink and enjoy a light dinner served on the boat. During dinner a Hungarian jazz band plays the classics. The boat travels from Margaret Bridge, past the National Theatre and along the Palace of Arts, a truly unique way to enjoy the glittering sites of illuminated Budapest.

Tours

Sightseeing tour

Wednesday, 30 August 2017, 10.00 – 14.00

Price: 35 EUR/person (Minimum number of participants: 15)

This tour is included in accompanies' program!

Departure: at 10.00 from Budapest Marriott Hotel (Congress Venue)



Let us show you the main attractions on both sides of the River Danube. Walk around the Castle District, enjoy the view from the Citadel and see the top attractions of Pest. The Central Market is a must-see for anyone who love fresh goods, shopping, or just sightseeing in amazing places.

The Jewish Sights of Budapest

Thursday, 31 August 2017, 10.00 – 14.00

Price: 35 EUR/person (Minimum number of participants: 15)**Departure:** at 10.00 from Budapest Marriott Hotel (Congress Venue)

A four-hour long walking tour in the Synagogue and its surroundings including an inside visit of the Synagogue complex (Jewish Museum, ghetto and World War II area history). The tour will show the rich past of the historical Jewish quarter.

Pub Crawl

Thursday, 31 August 2017, 20.00 – 24.00

Price: 30 EUR/person (Minimum number of participants: 15)**Departure:** at 20.00 from Budapest Marriott Hotel (Congress Venue)

Join us for one of the most unique Budapest experiences, a visit to the famous 'ruin pubs' full of retro decor, strange furniture, and looping art house cinema.

Budapest Bath Tour – Széchenyi Bath

Friday, 1 September 2017, 10.00 – 14.00

Price: 35 EUR/person (Minimum number of participants: 15)**Departure:** at 10.00 from Budapest Marriott Hotel (Congress Venue)

Széchenyi Spa Baths is one of the best and largest spa baths in Europe with its 15 indoor baths and 3 grand outdoor pools. The bath was built in 1913 in Neo-baroque style and is named after István Széchenyi, a 19th century Hungarian politician, theorist and writer.

Danube Bend Tour (Szentendre – Artists' Village, Visegrád)

Saturday, 2 September 2017, 13.30 – 20.00

Price: 65 Euro / person (minimum number of participants: 15)**Departure:** at 13.30 from Budapest Marriott Hotel (Congress Venue)

The half-day program includes visiting the picturesque Visegrád in the Danube Bend, which was the seat of the Hungarian King since medieval times, exploring the ruins of the 750 years old Royal Palace and the medieval fortress. On the way back to Budapest, we stop at Szentendre, which is a small charming art village on the Danube bank, 10 km from the North of Budapest.

Recommended taxi company

To reach the hotels or the congress venue and to avoid any inconvenience, please use the official ECCN2017 taxi company:

City Taxi

Phone: +36 1 211 1111

www.citytaxi.hu

Credit card payment is available in every car of City Taxi.

Please note, that all licensed Budapest taxi companies have yellow cars and has the same rates, placed clearly visible on the screens. Airport – Marriott route fares should be around 7000-9000 HUF.

Currency

The Forint (HUF), the official national currency, is convertible. The exchange rates applied in Budapest banks, official exchange offices and hotels may vary. All major credit cards are accepted in Hungary in places displaying the emblem at the entrance.

Exchange rate: 1 Euro = 309 HUF in August 2017.

Lunch offer

The registration fee does not include lunch for the participants.

Special daily ECCN2017 buffet menu on site from Budapest Marriott Hotel: 22 EUR/lunch

Please visit Peppers Restaurant!

Within walking distance from the congress venue, many restaurants are available offering wide range of dishes from fast food through traditional cuisine to fine dining.

Recommended restaurant: Kiosk Budapest (1056 Budapest, Március 15. tér 4.), <http://kiosk-budapest.com/>
Daily menu is available 12.00 – 15.00.

Smoking

Smoking is not permitted in the congress venue. Smoking areas are appointed outside the Budapest Marriott Hotel.

Tipping

Service charges are not added to accounts by hotels and restaurants. You may tip taxi drivers, hotel porters and restaurant waitstaff (up to about 10% of the bill) if you wish to acknowledge exceptional service. At any time, tipping is your choice.

Emergency Details

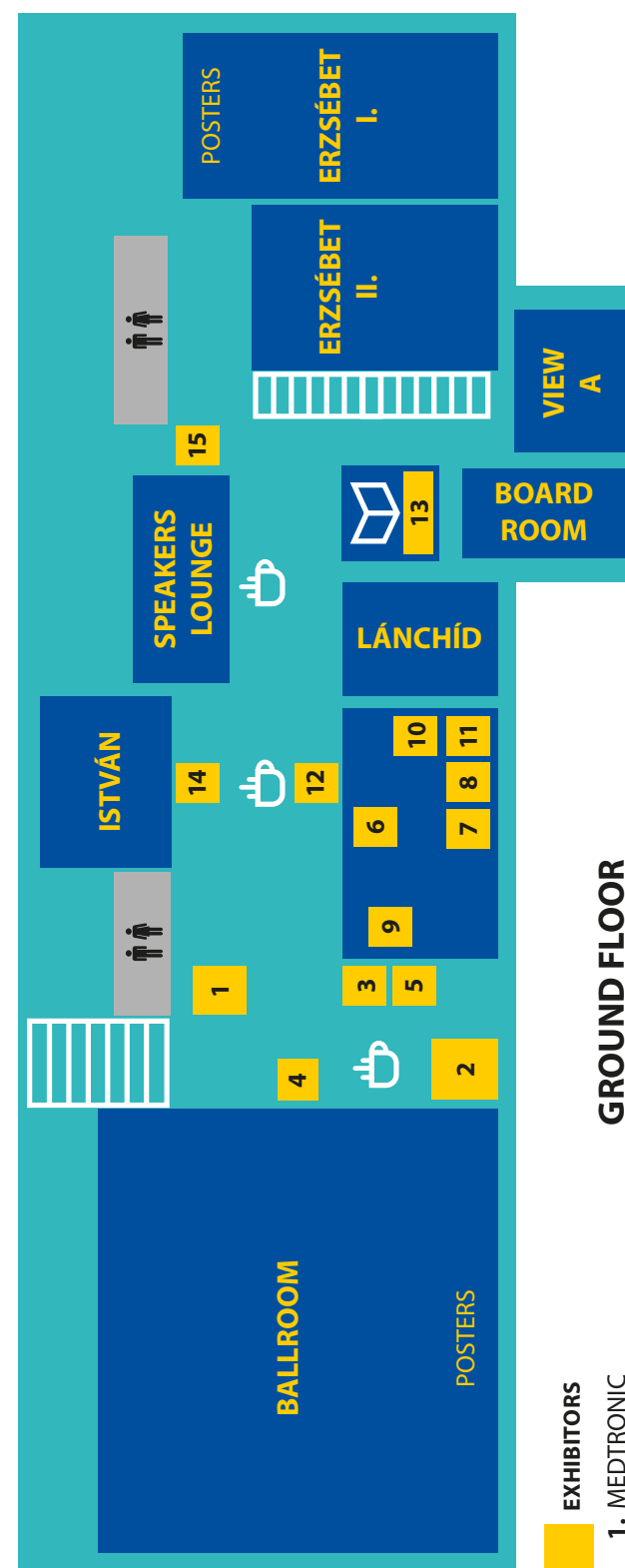
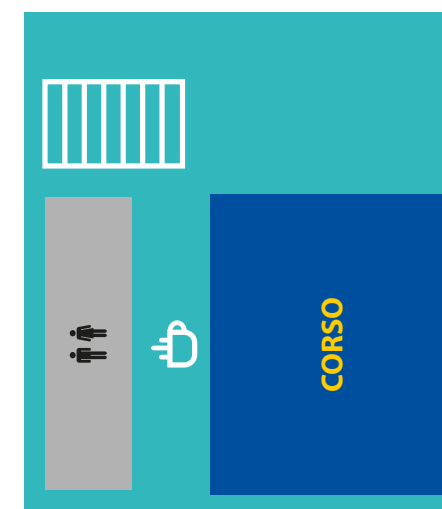
In an emergency call 112 for Ambulance, Fire Service or Police.

Lost and Found

Any found item may be turned into the Registration Desk. Enquiries about lost items can be directed to the Registration Desk also.

Mobile phones

Please respect the speakers and presenters by ensuring that your mobile phone is switched off during the scientific sessions.

MEZZANINE FLOOR**GROUND FLOOR****EXHIBITORS**

1. MEDTRONIC
2. DEYMED DIAGNOSTIC
3. HOLBERG EEG
4. NATUS NEUROLOGY
5. LIFELINES LIMITED
6. CADWELL
7. COMPUMEDICS
8. MICROMED
9. NEUROSOFT
10. G.TEC MEDICAL ENGINEERING
11. GVB-GELIMED KG
12. NEUROELECTRICS
13. WISEPRESS
14. INOMED
15. ELSEVIER

GARDEROBE**BÉLA
B****RECEPTION****MAIN ENTRANCE
REGISTRATION**

Wednesday, 30 August	Ballroom	Erzsébet I.	Corso	Lánchíd		Erzsébet II.	István	View A	Béla B	Institute of Experimental Medicine
09:00 – 10:00				08:30–10:30				09:00–11:30	09:00–12:00	
10:00 – 10:45	Practical Tips for Trainees I. Which test, when? J. Cole		Practical Tips for Trainees II. NCS and near nerve E. Varga	TC 5. Basics of EMG R. Dengler			TC 24. Normal neonatal EEG and identification of artifacts F. Wallois	TC 17. Low intensity Transcranial Electric Stimulation (TES) in the therapy of neurological and psychiatric disorders W. Paulus - A. Antal	TC 3. Hands-on interactive session on standardized comput- er-based organized reporting of EEG: score S. Beniczky	
10:45 – 11:00	Coffee Break					Coffe Break				
11:00 – 13:00	Free Communication I. Neurophysiology of the peripheral nervous system 1.		Free Communication II. Brain stimulation 1.	Free Communication III. Quantitative neurophysiolgy						11:00–15:00 TC 16. Experimental electrophysiology, optogenetics and cellular imaging Z. Nusser
13:00 – 14:00	Lunch break					Lunch break				
14:00 – 15:30	Plenary Lecture Update on transcranial stimulation W. Paulus Prevalence and risk factors of epileptic seizures in Alzheimer's disease A. Kamondi Future Imperfect? Clinical Neurophysiology and the European Chapter J. Cole									
15:30 – 16:00	Coffee Break					Coffee Break				
16:00 – 17:30	Symposium I. F. Vecchio Updates on human brain connectome: from physiology to disease		Section of Assistants/ Technicians	Symposium II Y. Parman Familial Amyloid Polyneuropathy (FAP): All aspects of the disease from diagnosis to treatment					TC 25. Classification of neonatal seizures R. Pressler	
18:00 – 19:00	Opening Ceremony									
19:00 – 21:00	Welcome Reception					Welcome Reception				

Thursday, 31 August	Ballroom	Erzsébet I.	Corso	Láncid		Erzsébet II.	István	View A	Béla B	View B Board Room	
07:30 – 08:00	How to get published?					TC 4. Clinical neurophysiology in intensive care M. de Carvalho	07:30–09:30 TC 6. Electrodiagnostic criteria of ALS including ultrasound R. Dengler	TC 10. How and when to test autonomic nervous system? M. Habek	TC 8. Intraoperative neuromonitoring I. L. Eröss		
08:00 – 08:45	Practical Tips for Trainees III. NCS V. Yayla	Practical Tips for Trainees IV. Paed.EEG non Epilepsy M. Eisermann	Practical Tips for Trainees V. Sleep H. Bastuji	Elsevier’s Publishing Connect workshop program							
08:45 – 09:00	Break										
09:00 – 10:30	Symposium III. J. Isnard Insular cortex epilepsy	Symposium IV. D.Burke, D. Czesnik Recent insights into axonal excitability and ion channel redistri- bution in neurological diseases	Symposium V. G. Boylan Neonatal EEG	Symposium VI. T. Lupescu Advanced EEG signal analysis in clinical practice				09:15–10:45 Practical Tips for Trainees VI-VII. Quantitative EMG E. Stalberg EEG and TMS; TMS and EEG U. Ziemann			
10:30 – 10:45	Coffee Break						Coffee Break				
10:45 – 11:45	Plenary Lecture Closed-loop interaction with the brain Gy. Buzsáki										
11:45 – 12:45	Poster I.	Poster I.								Elsevier Board Meeting	
12:45 – 13:45	Lunch Break						Lunch Break				
13:45 – 15:15	Symposium VII. I. Regidor	Symposium VIII. S. Jääskeläinen New insight into the pathophysiology and treatment of trigemi- nal neuralgia “	13:00–15:30 Symposium IX. E. Öge/ B. Baslo Motor unit with an electrophysiological microscope: from in- side and from outside	Symposium X. R. Bódizs Sleep spindles and cortical upstates		Free Communication IV. Neurophysiology in intensive care	13:45–15:45 TC 7. Epileptic spasms in neonates, infants and young children M. Eisermann	TC 21. Carpal tunnel syndrome P. Proot			
15:15 – 15:30	Coffee Break						Coffee Break				
15:30 – 17:00	Plenary Lecture Catathrenia E. Urrestarazu Brain connectome P. M. Rossini										
17:00 – 17:10	Break						Break				
17:10 – 18:40	Symposium XI. I. Rektor Subcortical modulation of cortical functions	Symposium XII. A. Uncini New insights into pathophysiology and electrodiagnosis of dysimmune neuropathies	Symposium XIII. Y. Péreón Paediatric ENMG	Symposium XIV. N. Kovács The role of intraoperative electrophysiology in the clinical practice		Free Communication V. Neurophysiology in the diagnosis and treatment of diseases 1.	Symposium XV. M. Billiard, A. Szűcs Registering sleep objectively	Practical Tips for Trainees VIII-IX. Jitter E. Stalberg SEPs H. Buchner	Practical Tips for Trainees X. Adult EEG S. Connolly		

Friday, 1 September	Ballroom	Erzsébet I.	Corso	Lánchíd		Erzsébet II.	István	View A	Béla B	View B Board Room	National Institute of Clinical Neurosciences
07:30 – 08:00											
08:00 – 08:45	Practical Tips for Trainees XI. Neuromodulation A. Antal	Practical Tips for Trainees XII. VEPs L. Leocani	Practical Tips for Trainees XIII. BAEP M. Kofler	Practical Tips for Trainees XIV. MEP T. Illic		TC 1. Ultrasonography of peripheral nerves: a complementary tool to electrophysiology Zs. Arányi	07:15–08:45 TC 23. Seizure semiology changes during childhood A. Fogarasi	TC 11. VEMPS – current perspectives M. Habek	TC 14. Intraoperative microelectrode recording and deep brain stimulation A. Mokeem		7:30–11:30 TC 9. Intraoperative neuromonitoring II. L. Eröss
08:45 – 09:00	Break						Break				
09:00 – 10:30	Symposium XVI. G. Granata Robotic hand prosthesis and phantom limb pain	Symposium XVII. P. Halász, A. Lüthi The neurophysiology of sleep EEG constituents 1.	Symposium XVIII. H. Tankisi/H. Uysal Axonal excitability and diabetic polyneuropathy	Free Communication VI. Neurophysiology of nervous system 2.			Free Communication VII. Neurophysiology in pediatrics				
10:30 – 10:45	Coffee Break					Coffee Break					
10:45 – 11:45	ECCN General Assembly			10:45–12:15 TC 18. “Neuropathic” or “myopathic”: pitfalls of needle EMG testing Y. Pereon					10:45–12:15 TC 22. Video-EEG course: hypermotor seizures Gy. Rásonyi, A. Kelemen		
11:45 – 12:45	Poster II.	Poster II.	Clinical aspect of intraoperative neuromonitoring							CN-UEMS board meeting	
12:45 – 13:45	Lunch Break					Lunch Break					
13:45 – 15:15	Symposium XIX. M. Hallett Pathophysiology of blepharospasm revisited	Symposium XX. M. Molnár Electrophysiology of aging	Symposium XXI. J. Tajti/L. Vécsei Primary headaches and clinical neurophysiology	Symposium XXII. D. Taussig Presurgical evaluation of children with pharmaco-resistant epilepsy		Free Communication VIII. Functional connectivity					
15:15 – 15:30	Coffee Break					Coffee Break					
15:30 – 17:00	Plenary Lecture Human neurophysiology of pain L. García-Larrea rTMS as a routine treatment in neurology L. Leocani										
17:00 – 17:10	Break					Break					
17:10 – 18:45	Free Communication IX. Neurophysiology of the autonomic nervous system	Symposium XXIII. P. Halász The neurophysiology of sleep 2.	Free Communication X. Neurophysiology of cognition	Free Communication XI. Intraoperative neurophysiology		Symposium XXIV. A. A. Abdel Kader Neuroplasticity in physical therapy					



Saturday, 2 September	Ballroom	Erzsébet I.		Láncid	Erzsébet II.	István	View A
09:00 – 10:30	Plenary Lecture Neurography Did you think of this? E. Stålberg The emergence of a circuit model for addiction Ch. Lüscher						
10:30 – 11:00	Coffee Break			Coffee Break			
11:00 – 12:30	Symposium XXV. M. Bares, M. Manto The mystery of cerebellum	Symposium XXVI. L. Eröss Presurgical evaluation in epilepsy surgery		Symposium XXVII. D. Fabó The interictal and ictal behaviour of epileptic neurons	Free Communication XII. Brain stimulation 2.	Free Communication XIII. Neurophysiology in the diagnosis and treatment of diseases 2.	Practical Tips for Trainees XV-XVI. Small Fibre testing D. Czesnik NCS/EMG A. Uncini
12:30 – 13:00	Closing ceremony						


10:00 – 10:45 PRACTICAL TIPS FOR TRAINEES I. BALLROOM

WHICH TEST, WHEN?
Jonathan Cole

10:00 – 10:45 PRACTICAL TIPS FOR TRAINEES II. CORSO ROOM

NCS AND NEAR NERVE
Edina Varga

08:30 – 10:30 TEACHING COURSE 5 LÁNCÍD ROOM
BASICS OF EMG

Reinhard Dengler
Department of Neurology, Hannover Medical School, Germany

09:00 – 10:30 TEACHING COURSE 24 ISTVÁN ROOM
NORMAL NEONATAL EEG AND IDENTIFICATION OF ARTIFACTS

Fabrice Wallois
Amiens University Hospital, University of Picardy, France

09:00 – 11:30 TEACHING COURSE 17 VIEW A ROOM
LOW INTENSITY TRANSCRANIAL ELECTRIC STIMULATION (tES) IN THE THERAPY OF NEUROLOGICAL AND PSYCHIATRIC DISORDERS

BASICS OF TES
Walter Paulus
Department of Clinical Neurophysiology, University Medical Center, Göttingen, Germany

TDCS AND STROKE TREATMENT
Michael A. Nitsche
Department of Psychology and Neurosciences, Leibniz Research Centre for Working Environment and Human Factors, Dortmund, Germany

CLINICAL APPLICATIONS IN CHRONIC PAIN AND MIGRAINE
Andrea Antal
Department of Clinical Neurophysiology, University Medical Center, Göttingen, Germany

TES IN PSYCHIATRY
Ulrich Palm
Department of Psychiatry, Ludwig-Maximilians University, Munich, Germany

09:00 – 12:00 TEACHING COURSE 3 BÉLA B ROOM
HANDS-ON INTERACTIVE SESSION ON STANDARDIZED COMPUTER-BASED ORGANIZED REPORTING OF EEG: SCORE

Sándor Beniczky
Clinical Neurophysiology Department, Danish Epilepsy Centre and Aarhus University, Denmark

Harald Aurlen
Haukeland University Hospital, Bergen, Norway

Jan Brøgger
Haukeland University Hospital, Bergen, Norway

Ronit Pressler
Great Ormond Street Hospital for Children, NHS Foundation Trust, London, United Kingdom

11:00 – 15:00 TEACHING COURSE 16 IEM
EXPERIMENTAL ELECTROPHYSIOLOGY, OPTOGENETICS AND CELLULAR IMAGING

Venue: Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest
Address: 1083 Budapest, Szigony utca 43.

Zoltán Nusser, Laszló Acsády, Norbert Hájos, Balázs Rózsa
Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary

11:00 – 13:00 FREE COMMUNICATION I. BALLROOM
NEUROPHYSIOLOGY OF THE PERIPHERAL NERVOUS SYSTEM I.
Chair: Hessel Franssen

01
COMPARISON BETWEEN INTRA-EPIDERMAL ELECTRICAL AND LASER STIMULATIONS: AN INTRACRANIAL EVOKED POTENTIAL STUDY

Koichi Hagiwara, Caroline Perchet, Maud Frot, Hélène Bastuji, Luis Garcia-Larrea
Lyon Center for Neuroscience, Central Integration of Pain, Lyon, France

02
THERMAL SENSATION THRESHOLD (TST) WHEN EXPOSED TO MILLIMETER WAVES (MMWS) IN JAPANESE
 Setsu Nakatani-Enomoto¹, Atsuhiko Nishikata², Kensuke Sasaki³, Kanako Wake³, Keisuke Nishiura¹, Soichi Watanabe³, Hiroyuki Enomoto¹, Yoshikazu Ugawa⁴

¹ Fukushima Medical University, Department of Neurology, Fukushima, Japan

² Tokyo Institute of Technology, Engineering, Tokyo, Japan

³ National Institute of Information and Communications Technology, Electromagnetic Compatibility Laboratory, Tokyo, Japan

⁴ Fukushima Medical University, Department of Neurology, Fukushima, Japan

03
NERVE CONDUCTION STUDIES IN SMALL FIBRE NEUROPATHIES. A SERVICE EVALUATION STUDY

Roberto Sans-Boza¹, Eva Villamil¹, Aditya Shivane²
¹ Plymouth Hospitals NHS Trust, Department of Clinical Neurophysiology, Plymouth, United Kingdom
² Plymouth Hospitals NHS Trust, Department of Neuropathology, Plymouth, United Kingdom

04
PRESYNAPTIC AND POSTSYNAPTIC INHIBITION IN THE HUMAN DORSAL COLUMN NUCLEI
 Massimiliano Valeriani¹, Paolo Mazzone², Angelo Insola³

¹ Ospedale Bambino Gesù, Neurology, Rome, Italy

² CTO, Neurosurgery, Rome, Italy

³ CTO, Clinical Neurophysiology, Rome, Italy



05

CUTANEOUS SILENT PERIOD RECORDINGS AND SILENT PERIOD RATIO COULD BE USED TO ASSESS PERIPHERAL Aδ FUNCTIONS

Baris Isak¹, Hatice Tankisi², Lise Ventzel³, Kirsten Pugdahl², Nanna Brix-Finnerup³, Anders Fuglsang-Frederiksen²¹ Marmara University Hospital, Department of Neurology, Istanbul, Turkey² Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark³ Aarhus University, Danish Pain Research Center, Aarhus, Denmark

06

THE UTILITY OF DISTAL NERVE CONDUCTION STUDIES AND SURAL NEAR-NERVE NEEDLE RECORDING IN ELECTRODIAGNOSIS OF POLYNEUROPATHY

Mustafa Aykut Kural¹, Pall Karlsson², Kirsten Pugdahl¹, Baris Isak¹, Anders -Fuglsang Frederiksen¹, Hatice Tankisi¹¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark² Danish Pain Research Centre, Department of Medicine, Aarhus, Denmark

07

BRAINSTEM EVOKED POTENTIALS (BEP) Z SCORE IS A PREDICTOR OF DISABILITY PROGRESSION IN PATIENTS WITH CLINICALLY ISOLATED SYNDROME

Ivan Pavlovic¹, Luka Crnosija¹, Magdalena Krbot Skoric², Tereza Gabelic², Ivan Adamec², Mario Habek¹¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia

08

CONTACT HEAT EVOKED POTENTIALS OF LOWER EXTREMITIES – A FEASIBILITY STUDY

Michèle Hubli¹, Jan Rosner¹, Pascal Hostettler¹, Armin Curt¹, Catherine Jutzeler²¹ Balgrist University Hospital, Spinal Cord Injury Center, Zurich, Switzerland² University of British Columbia, ICORD (International Collaboration on Repair Discoveries), Vancouver, Canada

09

EARLY MACULAR ATROPHY AT OPTICAL COHERENCE TOMOGRAPHY IS PREDICTED BY VISUAL EVOKED POTENTIALS AND PRECEDES PERIPAPILLARY NEURODEGENERATION AFTER ACUTE OPTIC NEURITIS

Su-Chun Huang, Simone Guerrieri, Marco Pisa, Vittorio Martinelli, Lucia Moiola, Giancarlo Comi, Letizia Leocani

Department of Neurology and INSPE-Institute of Experimental Neurology, Scientific Institute and University Hospital San Raffaele, Milan, Italy

010

THE USAGE OF BONE CONDUCTION (BC) WITH TIME-VARYING FREQUENCY CHIRP STIMULATION TO EVALUATE AUDITORY BRAINSTEM RESPONSE (ABR)

Shaden Bsoul, Joseph Attias, Doron Urbach

University of Haifa, Department of Communication Sciences & Disorders, Haifa, Israel

11:00 – 13:00

FREE COMMUNICATION II. – BRAIN STIMULATION I.

CORSO ROOM

Chair: Walter Paulus

011

MOTOR CORTEX VERSUS SACRAL MAGNETIC STIMULATION IN LOWER URINARY TRACT DYSFUNCTION IN MULTIPLE SCLEROSIS

Hala Elhabashy¹, Mona Nada¹, Eman Maher¹, Reham Shamloul², Mohamed Abdelazim³, Mai Maged¹¹ Cairo University, Clinical Neurophysiology, Cairo, Egypt² Cairo University, Neurology, Cairo, Egypt³ Cairo University, Urology, Cairo, Egypt

012

RTMS THERAPY ON M1 MODIFIES THE FACIAL MOTOR MAP IN CHRONIC NEUROPATHIC PAIN

Laura Säisänen¹, Jelena Hyppönen², Elisa Kallioniemi³, Esa Mervaala², Eeva Hallikainen-Pirskanen⁴, Jukka Huttunen⁵, Mikael Fraunberg⁵¹ University of Eastern Finland, Department of Clinical Neurophysiology, Kuopio, Finland² Kuopio University Hospital, Department of Clinical Neurophysiology, Kuopio, Finland³ Kuopio University Hospital, Department of Clinical Radiology, Kuopio, Finland⁴ Kuopio University Hospital, Pain Clinic, Kuopio, Finland⁵ Kuopio University Hospital, Department of Neurosurgery, Kuopio, Finland

013

EXPLORING THE MODULATORS OF CORTICAL EXCITABILITY

Annika De Goede¹, Michel Van Putten²¹ University of Twente, Clinical Neurophysiology, Enschede, The Netherlands² University of Twente and Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands

014

ALTERED RECOVERY FROM INHIBITORY REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) IN SUBJECTS WITH PHOTOSENSITIVE EPILEPSY

Tommaso Bocci¹, Matteo Caleo², Laura Restani², Davide Barloscio¹, Laura Parenti¹, Simone Rossi³, Ferdinando Sartucci¹¹ University of Pisa, Department of Clinical and Experimental Medicine, Pisa, Italy² University of Pisa, National Research Council, Pisa, Italy³ University of Siena, Department of Neurological and Neurosensory Sciences, Siena, Italy

015

LONG-TERM FOLLOW-UP STUDY WITH NON-INVASIVE BRAIN STIMULATION (NBS) (RTMS AND TDCS) IN PARKINSON'S DISEASE. STRONG AGE DEPENDENCY IN THE EFFECT OF NBS

Judit Mály¹, Noémi Geisz¹, Elek Dinya²¹ Institute of Neurorehabilitation, Sopron, Hungary² Digital Health Department of Semmelweis University, Budapest, Hungary

016

SHIFTS IN MEAN PEAK OSCILLATORY FREQUENCY DURING REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) TREATMENT OF MAJOR DEPRESSIVE DISORDER

Andrew Leuchter, Juliane Corlier, Ian Cook

University of California Los Angeles, Semel Institute for Neuroscience and Human Behavior, Los Angeles, USA

017

CONTROLLED STIMULATION OF DEEP BRAIN AREAS USING NAVIGATED TMS WITH A STANDARD COIL

Magnus Thordstein

University Hospital Linköping, Clinical Neurophysiology, Linköping, Sweden

018

CATHODAL TRANSCRANIAL DIRECT CURRENT STIMULATION REDUCES SEIZURE FREQUENCY AND MODULATES BRAIN FUNCTIONAL CONNECTIVITY WITH DRUG-RESISTANT TEMPORAL LOBE EPILEPSY: A SHAM CONTROLLED STUDY

Giovanni Assenza¹, Carlo Cottone², Franca Tecchio², Vincenzo Di Lazzaro¹¹ Università Campus Bio-Medico di Roma, Neurology, Rome, Italy² CNR, LET'S laboratory, Rome, Italy



019

ABNORMAL INTERACTION BETWEEN SOMATOSENSORY AND THE MOTOR CORTEX IN DYSTONIA NOT RESPONDING TO PALLIDAL STIMULATION

Anna Fecikova¹, Vaclav Cejka², Vaclav Capek¹, Dusan Urgosik³, Robert Jech⁴

¹ Charles University, First Faculty of Medicine and General University Hospital, Department of Neurology and Center of Clinical Neuroscience, Prague, Czech Republic

² Czech Technical University, Faculty of Biomedical Engineering, Prague, Czech Republic

³ Na Homolce Hospital, Department of Stereotactic and Radiation Neurosurgery, Prague, Czech Republic

⁴ Charles University, First Faculty of Medicine and General University Hospital, Clinical Neurophysiology and Department of Neurology, Prague, Czech Republic

11:00 – 13:00

FREE COMMUNICATION III.

LÁNCHÍD ROOM

QUANTITATIVE NEUROPHYSIOLOGY

Chair: Mika Kallio, Alfons Schnitzler

020

DEEP LEARNING WITH CONVOLUTIONAL NEURAL NETWORKS FOR DETECTION OF INTERICTAL EPILEPTIFORM DISCHARGES

Vesna Miljanović¹, Marleen Tjepkema-Cloostermans², Michel Van Putten³

¹ University of Twente, Clinical Neurophysiology, Enschede, The Netherlands

² Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands

³ University of Twente and Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands

021

PEAK RATIO AND MOTOR UNIT POTENTIAL ANALYSES IN DETECTION OF CHRONIC NEUROGENIC CHANGES IN AMYOTROPHIC LATERAL SCLEROSIS

Hatice Tankisi¹, Kirsten Pugdahl¹, Birger Johnsen¹, Bulent Cengiz², Jean-Philippe Camdessanché³,

Mamede De Carvalho⁴, Anders Fuglsang-Frederiksen¹

¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark

² Gazi University Faculty of Medicine, Department of Neurology, Ankara, Turkey

³ Saint-Etienne University Hospital, Department of Neurology, Saint-Etienne, France

⁴ Hospital de Santa Maria-CHLN, Department of Neuroscience, Lisbon, Portugal

023

CHARACTERISTIC SLOW GAMMA AND DELTA FREQUENCY CHANGES IN THE PREICTAL EEG OF PARTIAL EPILEPTIC PATIENTS

Attila Balogh

St. Stephen Hospital, Regional and Capital Center of Epilepsy, Budapest, Hungary

024

A NOVEL METHOD TO FOLLOW DISEASE PROGRESSION IN ALS: MSCANFIT MUNE

Anna Bystrup Jacobsen¹, Hugh Bostock², Hatice Tankisi¹

¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark

² University College London, Institute of Neurology, London, United Kingdom

025

MOTOR UNIT NUMBER ESTIMATION METHODS COMPARED TO QUANTITATIVE MOTOR UNIT POTENTIAL ANALYSIS IN AMYOTROPHIC LATERAL SCLEROSIS

Rikke Soegaard Kristensen, Anna Bystrup Jacobsen, Anders Fuglsang-Frederiksen, Hatice Tankisi

Aarhus University Hospital, Clinical Neurophysiology, Aarhus, Denmark

026

MSCANFIT MUNE IN EXAMINING MOTOR UNIT LOSS IN GBS

Christina Shen-Zhuang Nielsen¹, Michael Vaeggemose², Anna Bystrup Jacobsen¹, Anders Fuglsang-Frederiksen¹,

Henning Andersen², Hatice Tankisi¹

¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark

² Aarhus University Hospital, Department of Neurology, Aarhus, Denmark

28

027

WAVELET ANALYSIS OF EEG RECORDED DURING UNCONSCIOUS EXPECTATION OF ANGRY VS. NEUTRAL FACES IN PATIENTS WITH MAJOR DEPRESSION AND HEALTHY CONTROLS

Elena Mnatsakanian¹, Maxim Sharaev², Vadim Krjukov³, Olga Antipova³, Valery Krasnov³

¹ Institute of Higher Nervous Activity & neurophysiology RAS, Human Higher Nervous Activity Lab, Moscow, Russia

² National Research Centre "Kurchatov Institute", Neurobiology, Moscow, Russia

³ Moscow Research Institute of Psychiatry, Department of Affective Disorders, Moscow, Russia

028

ADVANCED DYNAMIC STATISTICAL PARAMETRIC MAPPING (ADSPM) FOR FOCAL CORTICAL DYSPLASIA AT BOTTOM OF SULCUS

Midori Nakajima, Hiroshi Otsubo

The Hospital for Sick Children, Department of Neurology, Toronto, Canada

029

EEG CRITERIA OF NON-CONVULSIVE STATUS EPILEPTICUS

Sándor Beniczky

Danish Epilepsy Centre, Aarhus University, Aarhus, Denmark

13:00 – 14:00

Lunch Break

14:00 – 15:30

PLENARY LECTURES

BALLROOM

Chair: Anita Kamondi, Walter Paulus, Jonathan Cole

UPDATE ON TRANSCRANIAL ELECTRIC STIMULATION

Walter Paulus

Department of Clinical Neurophysiology, University Medical Center Göttingen, Germany

PREVALENCE AND RISK FACTORS OF EPILEPTIC SEIZURES IN ALZHEIMER'S DISEASE

Anita Kamondi, András Horváth, Gábor Barcs, Anna Szűcs

National Institute of Clinical Neurosciences, Budapest, Hungary

FUTURE IMPERFECT? CLINICAL NEUROPHYSIOLOGY AND THE EUROPEAN CHAPTER

Jonathan Cole

Clinical Neurophysiology, Poole Hospital, Poole, United Kingdom

15:30 – 16:00

Coffee Break

16:00 – 17:30

SYMPOSIUM I.

CORSO ROOM

UPDATES ON HUMAN BRAIN CONNECTOME: FROM PHYSIOLOGY TO DISEASE

Chair: Fabrizio Vecchio

S30

BEHAVIOUR PERFORMANCE IN A COGNITIVE–MOTOR TASK DURING LEARNING PROCESSES: EVIDENCE FROM EEG NETWORK ANALYSIS

Fabrizio Vecchio

IRCCS San Raffaele Pisana, Brain Connectivity Laboratory, Rome, Italy

S31

STRUCTURALLY INFORMED ANALYSES OF FUNCTIONAL CONNECTIVITY IN STROKE

Christian Gerloff

University Medical Center Hamburg-Eppendorf, Department of Neurology, Hamburg, Germany

29

**S32****INVESTIGATION METHOD OF NEURODEGENERATION THROUGH BRAIN CONNECTIVITY MODULATION**

Paolo Maria Rossini

*Università Cattolica del Sacro Cuore, Institute of Neurology, Rome, Italy***S33****NETWORK INTERVENTION MODELLING IN ALZHEIMER'S DISEASE**

Willem De Haan

*VU University Medical Center, Department of Neurology, Amsterdam, The Netherlands***16:00 – 17:30****ASSISTANT/TECHNICIANS SESSION****CORSO ROOM****Chair:** Zoltán Balogh, Walter Paulus, Anita Kamondi**TASKS AND ROLES OF THE PROFESSIONAL REGULATORY BODY IN THE EDUCATION AND IN THE CONTINUOUS PROFESSIONAL DEVELOPMENT**

Zoltán Balogh

*President of the Chamber of Hungarian Health Care Professionals, Head of Department, College Professor, Semmelweis University, Faculty of Health Sciences, Budapest, Hungary***A34****„INCHING” METHOD IN LOCALIZING COMPRESSION IN CASE OF ULNAR NERVE – THE ALADÁR NAGY LECTURE**Tünde Peterman¹, Péter Diószeghy², Ferenc Mechler¹¹ *University of Debrecen, Department of Neurology, Debrecen, Hungary*² *Andras Josa Teaching Hospital, Department of Neurology, Nyíregyháza, Hungary***A35****TRNS EFFECTS ON MULTIPLE SCLEROSIS SYMPTOMS: A RANDOMIZED DOUBLE-BLIND SHAM-CONTROLLED TRIAL**Moussa A. Chalah¹, Ulrich Palm², Jean-Pascal Lefaucheur¹, Samar S. Ayache¹¹ *Hôpital Henri Mondor, Assistance Publique - Hôpitaux de Paris, EA 4391, Faculty of Medicine, Paris Est University-Physiology department, Henri Mondor Hospital, Creteil, France*² *Klinikum der Universität München, Institut für klinische Neuroimmunologie, Munich, Germany***A37****THE ROLE OF TECHNICIANS IN ULTRASOUND EXAMINATIONS OF PERIPHERAL NERVES AND MUSCLES**

Gregor Omejec

*University Medical Center Ljubljana, Institute of Clinical Neurophysiology, Ljubljana, Slovenia***A38****PHYSIOTHERAPY OF CARPAL TUNNEL SYNDROME**

Eva Fricz

*Centre Hospitalier de Denain, Department of Physiotherapy, Denain, France***16:00 – 17:30****SYMPOSIUM II.****LÁNCÍD ROOM****FAMILIAL AMYLOID POLYNEUROPATHY (FAP): ALL ASPECTS OF THE DISEASE FROM DIAGNOSIS TO TREATMENT****Chair:** Yeşim Parman**S39****FAMILIAL AMYLOID POLYNEUROPATHY (FAP): ALL ASPECTS OF THE DISEASE FROM DIAGNOSIS TO TREATMENT: DISEASE DESCRIPTION: WHAT IS FAP?**

Sevim Erdem Özdamar

*Hacettepe University, Neurology, Ankara, Turkey***S40****DIAGNOSIS AND FOLLOW-UP OF TTR-FAP: COMMON MISDIAGNOSES**

Yeşim Parman

*Istanbul University, Department of Neurology, Istanbul, Turkey***S41****WHAT ARE THE ELECTROPHYSIOLOGICAL PITFALLS IN FAP?**

Gorkem Sirin

*Bakirkoy Prof. Dr. Mazhar Osman Training and Research Hospital for Psychiatric, Neurologic and Neurosurgical Diseases, Department of Neurology, Istanbul, Turkey***S42****FAMILIAL AMYLOID POLYNEUROPATHY (FAP): ALL ASPECTS OF THE DISEASE FROM DIAGNOSIS TO TREATMET: DISEASE MANAGEMENT**

Hacer Durmus-Tekce

*Istanbul University Istanbul Medical Faculty, Department of Neurology, Istanbul, Turkey***16:00 – 17:30****TEACHING COURSE 25****BÉLA B ROOM****CLASSIFICATION OF NEONATAL SEIZURES**

Ronit Pressler

*University College London, United Kingdom***18:00 – 19:00****Opening Ceremony****BALLROOM**

**07:30 – 08:45 HOW TO GET PUBLISHED?**

LÁNCÍD ROOM

ELSEVIER'S PUBLISHING CONNECT WORKSHOP

Elsevier's Publishing Connect workshop program trains early career researchers on various aspects of the scholarly publishing process, i.e. how to publish a paper and what to expect from the editorial process with Clinical Neurophysiology as an example. Together with Prof Ziemann, we intend to deliver a tailor-made workshop to the specific needs and interests of your audience.

07:30 – 10:30 TEACHING COURSE 4

ERZSÉBET II. ROOM

CLINICAL NEUROPHYSIOLOGY IN INTENSIVE CARE**INTRODUCTION**

Mamede De Carvalho

Faculty Medicine, University of Lisbon and Department of Neurosciences, Centro Hospitalar Lisboa Norte, Lisbon, Portugal

INTENSIVE CARE UNIT MYOPATHY

Hatice Tankisi, Kirsten Pughdhal

Department of Clinical Medicine - Department of Clinical Neurophysiology, Department of Clinical Medicine, Health, Aarhus University, Aarhus, Denmark

INTENSIVE CARE UNIT NEUROPATHY

Birger Johnsen

Department of Clinical Medicine - Department of Clinical Neurophysiology, Department of Clinical Medicine, Health, Aarhus University, Aarhus, Denmark

RESPIRATORY EVALUATION

Mamede De Carvalho

Faculty Medicine, University of Lisbon and Department of Neurosciences, Centro Hospitalar Lisboa Norte, Lisbon, Portugal

OPEN DISCUSSION**07:30 – 09:30 TEACHING COURSE 6**

ISTVÁN ROOM

ELECTRODIAGNOSTIC CRITERIA OF MOTOR NEURON DISEASE/ ALS INCLUDING ULTRASOUND

Reinhard Dengler, Susanne Petri

Department of Neurology, Hannover Medical School, Hannover, Germany

07:30 – 09:00 TEACHING COURSE 10

VIEW A ROOM

HOW AND WHEN TO TEST AUTONOMIC NERVOUS SYSTEM?

Mario Habek

Referral Center for Autonomic Nervous System, Department of Neurology, University Hospital Center Zagreb, Zagreb, Croatia

Walter Struhal

General Hospital of the City of Linz, Linz, Austria

Ellen Merete Hagen

Autonomic Unit National Hospital for Neurology and Neurosurgery, London, United Kingdom

Topics: How to test autonomic nervous system?
Functional disorders of the ANS
Structural disorders of the ANS

07:30 – 11:30 TEACHING COURSE 8

BÉLA B ROOM

INTRAOPERATIVE NEUROMONITORING IN THE NEUROSURGICAL PRACTICE I.**AN OVERVIEW OF INTRAOPERATIVE NEUROMONITORING FROM THE NEUROSURGEONS PERSPECTIVE**

Loránd Erőss

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

BASIC SKILLS AND EQUIPMENT NECESSARY TO START A COMPREHENSIVE NEUROMONITORING SERVICE

Dániel Fabó

National Institute of Clinical Neurosciences, Epilepsy Unit, Budapest, Hungary

NEUROMONITORING OF EPILEPSY SURGICAL CASES

Dániel Fabó

National Institute of Clinical Neurosciences, Epilepsy Unit, Budapest, Hungary

INTRAOPERATIVE AND EXTRAOPERATIVE MAPPING WITH DIRECT CORTICAL STIMULATION IN EPILEPSY SURGICAL CANDIDATES, POSSIBLE NEW WAYS TO PREDICT RESULTS USING IMAGING TECHNIQUES

László Entz

National Institute of Clinical Neurosciences, Department of Functional Neurosurgery and Center of Neuromodulation, Budapest, Hungary

NEUROMONITORING OF INTRAMEDULLARY TUMORS

Boglárka Hajnal

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

ELECTROPHYSIOLOGY AND SURGICAL TECHNIQUE DURING SDR OPERATIONS IN BUDAPEST

Balázs Markia

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

MONITORING OF THE CRANIAL NERVES DURING CEREBELLO-PONTINE ANGLE TUMOR REMOVALS

Gábor Fekete

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

COMPLEMENTARY USE OF INTRAOPERATIVE NEUROMONITORING WITH THE AID OF DIFFUSION TENSOR IMAGING DURING REMOVAL OF BRAIN TUMORS

Dávid Kis

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

ELECTROPHYSIOLOGICAL GUIDANCE DURING DBS SURGERY, OUR OWN EXPERIENCE, PROS AND CONS

Gertrúd Tamás

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

PROBABILISTIC TRACTOGRAPHY MAY SUBSTITUTE INTRAOPERATIVE ELECTROPHYSIOLOGY IN DBS ELECTRODE PLACEMENTS, ACCURACY AND RESULTS

László Halász

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

EVIDENCES BEHIND THE REGULAR USE OF NEUROMONITORING WITH SPECIAL EMPHASIS ON THE ADDED BENEFIT

Virág Bokodi

National Institute of Clinical Neurosciences, Department of Neurosurgery, Budapest, Hungary

**08:00 – 08:45 PRACTICAL TIPS FOR TRAINEES III.****BALLROOM****NCS**

Vildan Yayla

08:00 – 08:45 PRACTICAL TIPS FOR TRAINEES IV.**ERZSÉBET I. ROOM****PAEDIATRIC EEG NON EPILEPSY**

Monika Eisermann

08:00 – 08:45 PRACTICAL TIPS FOR TRAINEES V.**CORSO ROOM****DIFFERENTIAL DIAGNOSIS OF PARASOMNIA, MOVEMENT DISORDER AND EPILEPSY DURING SLEEP**

Helene Bastuji

09:00 – 10:30 SYMPOSIUM III.**BALLROOM****CLINICAL INVESTIGATION OF INSULAR CORTEX EPILEPSY****Chair:** Jean Isnard**S43****INSULAR SEMIOLOGY: FROM OBSERVATION OF CASES TO CORTICAL STIMULATION**

Jean Isnard

*Hospices Civils de Lyon, Functional Neurology and Epileptology, Lyon, France***S44****NON-INVASIVE PRESURGICAL EVALUATION OF INSULAR CORTEX EPILEPSY**

Dang Khoa Nguyen

*Centre Hospitalier de l'Université de Montréal (CHUM), Division of Neurology, Montréal, Canada***S45****INVASIVE EEG INVESTIGATION OF INSULAR CORTEX EPILEPSY**Pierre Bourdillon¹, Marc Guénot¹, Jean Isnard^{1,2,3,4}¹ Hospices Civils de Lyon, Hospital for Neurology and Neurosurgery Pierre Wertheimer, Department of Neurosurgery, Lyon, France² Brain and Spine Institute, INSERM U1127, CNRS 7225, Paris, France³ Université de Lyon, Université Claude Bernard, Lyon, France⁴ Sorbonne Universités, Université Pierre et Marie Curie, Paris, France**09:00 – 10:30 SYMPOSIUM IV.****ERZSÉBET I. ROOM****RECENT INSIGHTS INTO AXONAL EXCITABILITY AND ION CHANNEL REDISTRIBUTION IN NEUROLOGICAL DISEASES****Chair:** David Burke**S46****RECENT INSIGHTS INTO THE BIOPHYSICAL DIFFERENCES BETWEEN HUMAN SENSORY AND MOTOR AXONS**

David Burke

*Royal Prince Alfred Hospital and University of Sydney, Department of Neurology, Sydney, Australia***S47****CHANGES IN VOLTAGE-GATED CHANNELS IN REGENERATED AXONS DISTAL AND PROXIMAL TO A NERVE LESION**Christian Krarup¹, Susana Alvarez², Dragos Muraru³, Mihai Moldovan¹¹ Rigshospitalet, Department of Clinical Neurophysiology, Copenhagen, Denmark² University of Copenhagen, Center for Neuroscience, Copenhagen, Denmark³ "Carol Davila" University of Medicine and Pharmacy, Plastic Surgery, Bucharest, Romania**S48****AXONAL EXCITABILITY, SCHWANN CELLS AND THE 'BARRETT-BARRETT CONDUCTANCE'**

Hugh Bostock

*Institute of Neurology, University College London, Sobell department, London, United Kingdom***S49****CHANGES IN THE FINAL COMMON PATH IN CMT1A AND RLS**

Dirk Czesnik

*Medical School Göttingen, Department of Clinical Neurophysiology, Göttingen, Germany***09:00 – 10:30 SYMPOSIUM V.****CORSO ROOM****NEONATAL EEG****Chair:** Geraldine Boylan**S50****DEVELOPMENT OF A NEONATAL SEIZURE DETECTION ALGORITHM; THE ANSeR STUDY**

Geraldine Boylan

*University College Cork, Department of Paediatrics & Child Health, Cork, Ireland***S51****ONTOGENESIS OF EEG: FROM PRETERM BABIES TO THE FIRST YEAR OF LIFE**

Fabrice Wallois

*Inserm U 1105, University of Picardy, Amiens University Hospital, Amiens, France***S52****CEEG AND AEEG IN HYPOTHERMIA IN TERM NEONATES WITH HIE**Marie-Dominique Lamblin¹, Florence Flamein²¹ Roger Salengro hospital, CHRU, Clinical Neurophysiology, Lille, France² Jeanne de Flandre Hospital, CHRU, Department of Neonatology, Lille, France**S53****AED DEVELOPMENT IN NEONATES**

Ronit Pressler

*Great Ormond Street Hospital for Children, London, Clinical Neurophysiology, London, United Kingdom***09:00 – 10:30 SYMPOSIUM VI.****LÁNCÍD ROOM****ADVANCED EEG SIGNAL ANALYSIS IN CLINICAL PRACTICE****Chair:** Tudor Lupescu

**S54****MOTOR AXON EXCITABILITY CHANGES DURING ANTI-EPILEPTIC VOLTAGE-GATED NA+ CHANNEL BLOCKER THERAPY**Tudor Lupescu¹, Ana Maria Cobzaru², Ionela Codita³, Izabela Popa⁴, Mihai Moldovan⁵¹ Agrippa Ionescu Clinical Hospital, Department of Neurology, Bucharest, Romania² Emergency University Hospital Bucharest, Department of Neurology, Bucharest, Romania³ Elias Emergency Clinical Hospital, Department of Neurology, Bucharest, Romania⁴ Sanitas Medical Center, Neurology, Timisoara, Romania⁵ "Carol Davila" University of Medicine and Pharmacy, Division of Physiology and Fundamental Neuroscience, Bucharest, Romania**S55****EPILEPTOGENICITY BIOMARKERS AND EFFECTIVE CONNECTIVITY IN STEREO-EEG**Andrei Barborica¹, Ioana Mindruta², Cristian Donos³, Mihai Dragos Maliia², Irina Popa², Anca Arbune²¹ University of Bucharest, Physics Department, Bucharest, Romania² University Emergency Hospital, Epilepsy Unit, Bucharest, Romania³ University of Texas Health Science Center at Houston, Department of Neurosurgery, Houston, USA**S56****ADDED VALUE OF EEG SIGNAL ANALYSIS IN PRESURGICAL EVALUATION FOR DRUG-RESISTANT EPILEPSY**Ioana Mîndruță¹, Andrei Barborică², Cristian Donos³, Mihai Măliia¹, Irina Popa¹, Anca Arbune¹¹ University Emergency Hospital of Bucharest, Neurology, Bucharest, Romania² University of Bucharest, Physics Department, Bucharest, Romania³ University of Texas, Health Science Center, Houston, USA**S57****NOVEL MEASURES FOR EEG MONITORING IN COMA**Cosmin Șerban¹, Andrei Barborică¹, Adina Roceanu², Ioana Mîndruță², Jean Ciurea³, Ana-Maria Zăgrean⁴, Leon Zăgrean⁴, Mihai Moldovan⁵¹ University of Bucharest, Physics Department, Bucharest, Romania² University Emergency Hospital, Neurology Department, Bucharest, Romania³ Bagdasar-Arseni Emergency Hospital, Department of Neurosurgery, Bucharest, Romania⁴ "Carol Davila" University of Medicine and Pharmacy, Division of Physiology and Neuroscience, Bucharest, Romania⁵ University of Copenhagen, Center for Neuroscience, Copenhagen, Denmark**09:15 – 10:45****PRACTICAL TIPS FOR TRAINEES VI-VII.****VIEW A ROOM****QUANTITATIVE EMG**

Erik Stalberg

EEG AND TMS; TMS AND EEG

Ulf Ziemann

10:30 – 10:45**Coffee Break****10:45 – 11:45****PLENARY LECTURE****BALLROOM****THE LISSÁK LECTURE****Chair:** Anita Kamondi, Paolo Maria Rossini**CLOSED-LOOP INTERACTION WITH THE BRAIN**

György Buzsáki

Biggs Professor of Neural Sciences, NYU Neuroscience Institute, New York University, Langone Medical Center, USA

11:45 – 12:45**POSTER SESSION I. (detailed program please see page 64 - 74)****BALLROOM**

Brain Stimulation I.

(P215 – 226)

Peripheral nerve ultrasound examinations

(P227 – 231)

CN in the diagnosis and treatment of paediatric disorders

(P232 – 237)

Functional connectivity

(P238 – 243)

Neurophysiology of sensory systems

(P244 – 250)

Other

ERZSÉBET ROOM

(P251 – 273)

Experimental neurophysiology

(P274 – 283)

CN methods in predicting the outcome and monitoring the course of a disease

(P284 – 292)

CN in the determination of personalised treatment

(P293 – 298)

12:45 – 13:45**Lunch Break****13:45 – 15:15****SYMPOSIUM VII.****BALLROOM****CLINICAL NEUROPHYSIOLOGY IN MOVEMENT DISORDERS****Chair:** Ignacio Regidor**S58****SURFACE POLYMYOGRAPHY (EMG)**

Lidia Cabañes-Martinez

Hospital Ramón y Cajal, Clinical Neurophysiology, Madrid, Spain

S59**CLINICAL NEUROPHYSIOLOGY IN MOVEMENT DISORDERS**

Ignacio Regidor

Hospital Universitario Ramon y Cajal, Department of Clinical Neurophysiology, Madrid, Spain

S60**CLINICAL NEUROPHYSIOLOGY IN MOVEMENT DISORDERS: MYOCLONUS**

Manuel Alegre, Julio Artieda

Clínica Universidad de Navarra, Clinical Neurophysiology, Pamplona, Spain

S61**TMS IN MOVEMENT DISORDERS: DYSTONIA**

John Rothwell

University College London, Sobell Department, London, United Kingdom

S62**CAN WE IMPROVE DEEP BRAIN STIMULATION TARGETING WITH NEUROPHYSIOLOGICAL RECORDING?**

José Luis Relova

Hospital Clínico Universitario de Santiago de Compostela, Department of Clinical Neurophysiology, Santiago de Compostela, Spain

**13:45 – 15:15 SYMPOSIUM VIII.**

ERZSÉBET I. ROOM

NEW INSIGHT INTO THE PATHOPHYSIOLOGY AND TREATMENT OF TRIGEMINAL NEURALGIA**Chair:** Satu Jääskeläinen**S63****ETIOLOGY OF CLINICALLY ESTABLISHED TRIGEMINAL NEURALGIA: ROLE OF MRI**

Turo Nurmikko

*The Walton Centre NHS Foundation Trust Liverpool, Neuroscience Research Centre, Liverpool, United Kingdom***S64****NEUROPHYSIOLOGICAL DATA SUPPORTING A PERIPHERAL MECHANISM FOR TRIGEMINAL NEURALGIA**

Giorgio Cruccu

*Sapienza University of Rome, Department of Neurology and Psychiatry, Rome, Italy***S65****NEUROPHYSIOLOGICAL DATA FAVORING A CENTRAL MECHANISM OF TRIGEMINAL NEURALGIA**

Mark Obermann

*Asklepios Hospitals Schildautal, Center for Neurology, Seesen, Germany***S66****PATHOPHYSIOLOGICAL IMPLICATIONS AND CURRENT EVIDENCE FOR THE TREATMENT OF TRIGEMINAL NEURALGIA**

Joanna Zakrzewska

*University College London, Pain Clinic, London, United Kingdom***13:45 – 15:15 SYMPOSIUM IX.**

CORSO ROOM

MOTOR UNIT WITH AN ELECTROPHYSIOLOGICAL MICROSCOPE: FROM INSIDE AND FROM OUTSIDE**Chair:** Emre Öge, Baris Baslo**S67****SPECIAL PHENOMENA IN THE MOTOR UNIT DURING VOLUNTARY AND ELECTRICAL ACTIVATION**

Erik Stålberg

*Uppsala Neuroscience, Clinical Neurophysiology, *Uppsala, Sweden***S68****SFAP TO MUAP: TEMPORAL AND SPATIAL CHARACTERISTICS OF MU**

Mehmet Baris Baslo

*Istanbul University Istanbul Medical Faculty, Neurology, Istanbul, Turkey***S69****FROM OUTSIDE: MU CHARACTERISTICS BY STIMULATION METHODS DURING ACUTE AND CHRONIC DENERVATION**

Emre Öge

*Istanbul University Istanbul Medical Faculty, Clinical Neurophysiology and Department of Neurology, Istanbul, Turkey***S70****ESTIMATING MOTOR UNIT NUMBER FROM CMAP SCANS- MSCANFIT MUNE**

Hatice Tankisi

*Aarhus University Hospital, Clinical Neurophysiology, Aarhus, Denmark***S71****MOTOR UNIT NUMBER INDEX (MUNIX)**

Sanjeev Nandedkar

*Natus Neurology, Engineering, Hopewell Junction, USA***38****13:45 – 15:15 SYMPOSIUM X.**

LÁNCÍD ROOM

SLEEP SPINDLES AND CORTICAL UPSTATES**Chair:** Róbert Bódizs**S72****CORTICAL FEEDBACK AND THALAMOCORTICAL ACTIVITY**

Péter Barthó

*Research Center for Natural Sciences, Hungarian Academy of Sciences, Institute for Cognitive Neuroscience and Psychology, Budapest, Hungary***S73****STATE DEPENDENT ACTIVITY IN THE VISUAL THALAMUS**

Magor Lőrincz

*University of Szeged, Department of Physiology, Anatomy and Neuroscience, Szeged, Hungary***S74****THE CORTICAL PROFILE AND FUNCTIONAL SIGNIFICANCE OF SLEEP SPINDLES**

Péter Ujma

*Semmelweis University, Institute of Behavioural Sciences, Budapest, Hungary***S75****SLEEP SPINDLES IN HUMANS: FROM INVASIVE RECORDINGS TO SEXUAL DIMORPHISM**

Róbert Bódizs

*Semmelweis University, Institute of Behavioural Sciences, Budapest, Hungary***13:45 – 15:15 FREE COMMUNICATION IV.**

ERZSÉBET II. ROOM

NEUROPHYSIOLOGY IN INTENSIVE CARE**Chair:** Conchita Maeztu, Mamede De Carvalho**076****EEG CONTINUITY FEATURES PREDICT OUTCOME IN POSTANOXIC ENCEPHALOPATHY**Barry Ruijter¹, Jeannette Hofmeijer², Marleen Tjepkema-Cloostermans³, Michel Van Putten⁴¹ University of Twente, Clinical Neurophysiology, Enschede, The Netherlands² University of Twente and Rijnstate Hospital, Department of Clinical Neurophysiology and Neurology, Enschede and Arnhem, The Netherlands³ Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands⁴ University of Twente and Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands**077****DEEP LEARNING FOR EEG CLASSIFICATION FOR OUTCOME PREDICTION OF POSTANOXIC COMA**Marleen Tjepkema-Cloostermans¹, Jeannette Hofmeijer², Barry Ruijter³, Albertus Beishuizen⁴, Frank Bosch⁵, Michel Van Putten⁶¹ Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands² University of Twente and Rijnstate hospital, Department of Clinical Neurophysiology and Neurology, Enschede and Arnhem, The Netherlands³ University of Twente, Department of Clinical Neurophysiology, Enschede, The Netherlands⁴ Medisch Spectrum Twente, Intensive Care Center, Enschede, The Netherlands⁵ Rijnstate Hospital, Department of Intensive Care, Arnhem, The Netherlands⁶ University of Twente and Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands**078****MEMBRANE DEPOLARIZATION IN MOTOR NERVES OF CRITICAL ILL PATIENTS IS RELATED TO INSULIN RESISTANCE**Susanne Koch¹, Tobias Wollersheim¹, Kurt Mai², Kurt Haas¹, Claudia Spies¹, Steffen Weber-Carstens¹¹ Charité Humboldt University, Anesthesiology and Intensive Care Medicine, Berlin, Germany² Charité Humboldt University, Department of Endocrinology, Berlin, Germany



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VIBRO-TACTILE EVOKED POTENTIALS (EPS) FOR ASSESSMENT OF CONSCIOUSNESS AND COMMUNICATION FOR PEOPLE WITH DISORDERS OF CONSCIOUSNESS

Rupert Ortner¹, Francisco Fernandes¹, Christoph Guger¹, [Alexander Heilinger](#)¹, Martin Walchshofer¹, Johannes Gruenwald²

¹ G.tec medical engineering GmbH, Research & Development, Schiedlberg, Austria

² Guger Technologies OG, Research & Development, Schiedlberg, Austria

080

NEUROPHYSIOLOGICAL PROGNOSIS IN COMATOSE PATIENTS AFTER CARDIAC ARREST: THE ITALIAN MULTICENTRIC STUDY (PRONECA) -PRELIMINARY DATA-

Riccardo Carrai¹, Antonello Grippo¹, Franco Valzania², Maria Lombardi³, Eugenio Vitelli⁴, Oriano Mecarelli⁵, Lucia Politini⁶, Chiara Minardi⁷, Paolo Costa⁸, Aldo Amantini¹

¹ SODc Neurofisiopatologia, Neuromuscolo-Scheletrico e degli Organi di Senso, AOU Careggi, Florence, Italy

² UO Neurologia, Neurofisiopatologia,, Osp Nocsae Baggiovara, , Modena, Italy

³ UO Neurologia, Medico, Empoli, Italy

⁴ UO Neurologia, Neurofisiopatologia, Pres Osp Lodi, Lodi, Italy

⁵ Dipartimento di Neurologia e Psichiatria, Università La Sapienza, Rome, Italy

⁶ UO Neurologia, Neuroscienze, Legnano, Italy

⁷ UO Neurologia, Osp Bufalini, Cesena, Italy

⁸ Neurofisiopatologia, Dipartimento Neuroscienze e Salute mentale, Osp CTO, Torino, Italy

081

HIGH FREQUENCY EEG ACTIVITY IS ASSOCIATED WITH PRESERVED CEREBRAL FUNCTION IN CRITICAL ILLNESS

Rikke Malte Nielsen¹, Olalla Urdanibia-Centelles², Esben Vedel-Larsen², Kirsten Joan Thomsen³, Kirsten Møller⁴, Martin Lauritzen², Krisztina Benedek²

¹ Rigshospitalet Glostrup, Anesthesiology and Critical Care Medicine, Copenhagen, Denmark

² Rigshospitalet Glostrup, Department of Clinical Neurophysiology, Copenhagen, Denmark

³ University of Copenhagen, Center for Healthy Aging and Department of Neuroscience and Pharmacology, Copenhagen, Denmark

⁴ Rigshospitalet, Anesthesiology and Critical Care Medicine, Copenhagen, Denmark

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THE DEVELOPMENT OF NCUS IN CHINA: A 2ND NATIONWIDE SURVEY

Yingying Su¹, Suyue Pan², Wen Jiang³, Furong Wang⁴, Le Zhang⁵, Zhenhai Wang⁶, Bin Peng⁷, Xusheng Huang⁸

¹ Xuanwu Hospital, Capital Medical University, Neurology, Beijing, China

² Nanfang Hospital, Southern Medical University, Neurology, Guangdong, China

³ Xijing Hospital, Fourth Military Medical University, Neurology, Xian, China

⁴ Tongji Hospital of Tongji Medical College, Huazhong University of Science and Technology, Neurology, Wuhan, China

⁵ Xiangya Hospital Central South University, Neurology, Changsha, China

⁶ General Hospital of Ningxia Medical University, Neurology, Ningxia, China

⁷ Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Neurology, Beijing, China

⁸ Chinese People's Liberation Army General Hospital, Neurology, Beijing, China

13:45 – 15:45

TEACHING COURSE 7

ISTVÁN ROOM

EPILEPTIC SPASMS IN NEONATES, INFANTS AND YOUNG CHILDREN

Monika Eisermann

Necker Enfants Malades Hospital Paris Descartes University, Department of Clinical Neurophysiology, Paris, France

13:45 – 15:15

TEACHING COURSE 21

VIEW A ROOM

CARPAL TUNNEL SYNDROME: TECHNIQUES FOR DIAGNOSIS

Pascal Proot

MD University of Ghent, Belgium

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15:15 – 15:30

Coffee Break

15:30 – 17:00

PLENARY LECTURES

BALLROOM

Chair: Walter Paulus

CATATHRENIA: PARASOMNIA, RESPIRATORY DISORDER OR SOMETHING ELSE?

Elena Urrestarazu

Clinica Universidad de Navarra, Sleep Unit, Clinical Neurophysiology, Pamplona, Navarra, Spain

BRAIN CONNECTOME: THE BOUNDARIES BETWEEN PHYSIOLOGY AND PATHOLOGY

Paolo Maria Rossini

Director of the Institute of Neurology, Catholic University of the Sacred Heart, Rome, Italy

17:00 – 17:10

Break

17:10 – 18:40

SYMPOSIUM XI.

BALLROOM

SUBCORTICAL MODULATION OF CORTICAL FUNCTIONS

Chair: Ivan Rektor

S84

SUBTHALAMIC AND GPI STIMULATION AND CORTICAL PLASTICITY

Robert Chen

University of Toronto, Department of Medicine, Toronto, Canada

S85

THE MODULATORY ROLE OF SUBCORTICAL STRUCTURES ON CORTICAL COGNITIVE FUNCTIONS

Ivan Rektor

CEITEC, Masaryk University, 1st Department of Neurology St. Anne's Hospital, Medical School, Brno, Czech Republic

INTEGRATIVE ROLE OF THE BASAL GANGLIA IN SENSORY INFORMATION PROCESSING: EVIDENCE FROM DEEP BRAIN RECORDINGS AND STIMULATION

Lars Wojtecki

Institute of Clinical Neuroscience and Medical Psychology, Heinrich-Heine-University Duesseldorf, Germany

17:10 – 18:40

SYMPOSIUM XII.

ERZSÉBET I. ROOM

NEW INSIGHTS INTO PATHOPHYSIOLOGY AND ELECTRODIAGNOSIS OF DYSIMMUNE NEUROPATHIES

Chair: Antonino Uncini

S86

PATHOPHYSIOLOGY OF MYELIN AND AXON IN DYSIMMUNE NEUROPATHIES

Hessel Franssen

Rudolf Magnus Institute of Neuroscience, Department of Neurology, Neuromuscular Disease Group University Medical Center Utrecht, Utrecht, The Netherlands

S87

ISSUES IN THE ELECTRODIAGNOSIS OF GUILLAIN-BARRÉ SYNDROME SUBTYPES

Antonino Uncini

University "G. d'Annunzio" Chieti-Pescara, Italy, Department of Neuroscience, Imaging and Clinical Sciences, Chieti, Italy

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**17:10 – 18:40 SYMPOSIUM XIII.**

CORSO ROOM

PAEDIATRIC ENMG**Chair:** Yann Péréon**S89****NEUROMUSCULAR JUNCTION ASSESSMENT IN CHILDREN**

Matthew Pitt

*Great Ormond Street Hospital for Children, London, Clinical Neurophysiology, London, United Kingdom***S90****QUANTIFIED ELECTROMYOGRAPHY IN CHILDREN**

Karin Edebol Eeg-Olofsson

*Uppsala Neuroscience, Clinical Neurophysiology, Uppsala, Sweden***S91****DEMYELINATING NEUROPATHIES IN CHILDREN**

Yann Pereon

*Service d'explorations Fonctionnelles, CHU Hôtel Dieu, Nantes, France***17:10 – 18:40 SYMPOSIUM XIV.**

LÁNCÍD ROOM

THE ROLE OF INTRAOPERATIVE ELECTROPHYSIOLOGY IN THE CLINICAL PRACTICE**Chair:** Norbert Kovács**S92****INTRAOPERATIVE ELECTROPHYSIOLOGICAL EXAMINATIONS DURING DEEP BRAIN STIMULATION: ITS ROLE AND CONTROVERSIES**

Norbert Kovács, István Balás

*University of Pécs, Department of Neurology, Pécs, Hungary***S93****REVIEW AND UPDATE ON INTRAOPERATIVE CLINICAL NEUROPHYSIOLOGY**

Zoltán Mari

*Lou Ruvo Center for Brain Health, Parkinson's Disease and Movement Disorders Program, Las Vegas, USA***S94****UPDATE ON TECHNOLOGICAL ADVANCEMENTS IN INVASIVE NEUROPHYSIOLOGICAL ACTIVITY MONITORING AND DEEP BRAIN STIMULATION**Laszlo Grand¹, Zoltán Mari²¹ *Imperial College London, Electrical and Electronic Engineering, London, United Kingdom*² *Lou Ruvo Center for Brain Health, Parkinson's Disease and Movement Disorders Program, Las Vegas, USA***17:10 – 18:40 FREE COMMUNICATION V.**

ERZSÉBET II. ROOM

NEUROPHYSIOLOGY IN THE DIAGNOSIS AND TREATMENT OF DISEASES 1.**Chair:** Mark Hallett**095****COMPREHENSIVE EVALUATION OF EMG AND BIOPSY FINDINGS SUPPORTED BY COMPUTER SIMULATIONS – PRELIMINARY STUDY**Ewa Zalewska¹, Biruta Kierdaszuk², Elzbieta Szmidt-Salkowska², Anna Kaminska², Malgorzata Gawel²¹ *Nalecz Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw, Poland*² *Medical University of Warsaw, Department of Neurology, Warsaw, Poland***096****LARGE INTER- AND INTRA-RATER VARIATION ON DIAGNOSTIC CRITERIA FOR AMYOTROPHIC LATERAL SCLEROSIS**Birger Johnsen¹, Kirsten Pughahl¹, Anders Fuglsang-Frederiksen¹, Katja Kollewe², Lejla Paracka², Reinhard Dengler², Jean-Philippe Camdessanché³, Wilfred Nix⁴, Rocco Liguori⁵, Ian Schofield⁶, Luca Maderna⁷, David Czell⁸, Christoph Neuwirth⁹, Markus Weber⁹, Vivian Drory¹⁰, Alon Abraham¹⁰, Mamede De Carvalho¹¹¹ *Aarhus University Hospital, Clinical Neurophysiology, Aarhus, Denmark*² *Hannover Medical School, Department of Neurology, Hannover, Germany*³ *Saint-Etienne University Hospital, Department of Neurology, Saint-Etienne, France*⁴ *University Clinics Mainz, Department of Neurology, Mainz, Germany*⁵ *University of Bologna, IRCCS Institute of Neurological Sciences of Bologna and Department of Biomedical and Neuromotor Sciences, Bologna, Italy*⁶ *Newcastle General Hospital, Department of Clinical Neurophysiology, Newcastle, United Kingdom*⁷ *IRCCS Istituto Auxologico Italiano, Department of Neurology and Laboratory of Neuroscience, Milan, Italy*⁸ *Spital Linth, Neurology, Uznach, Switzerland*⁹ *Cantonal Hospital St. Gallen, Neuromuscular Diseases Unit /ALS Clinic, St. Gallen, Switzerland*¹⁰ *Tel Aviv University, Neuromuscular Service of the Department of Neurology, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel*¹¹ *University of Lisbon, Department of Neurosciences, Hospital de Santa Maria-CHLN, Lisbon, Portugal***NEUROPHYSIOLOGY OF VERTIGO**

Ferenc Nagy

*Moritz Kaposi County Hospital, Kaposvár, Hungary***097****VIDEO HEAD IMPULSE TEST IN EVALUATION OF BRAINSTEM DYSFUNCTION IN MULTIPLE SCLEROSIS**Tin Pavicic¹, Berislav Ruska¹, Ivan Pavlovic¹, Magdalena Krbot Skoric², Luka Crnosija¹, Tereza Gabelic²,Ivan Adamec², Mario Habek¹¹ *University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia*² *University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia***098****A PROSPECTIVE, RANDOMIZED, DOUBLE-BLIND, PARALLEL-GROUP, SHAM-CONTROLLED STUDY OF THE EFFECT OF ANODAL TDCS ON ACUTE POST-THORACOTOMY PAIN**Tihomir V. Ilic¹, Dusica Stamenkovic², Katarina Mladenovic², Nemanja Rancic³, Nemanja Vasiljkovic⁴, Esmer Fejzić⁴¹ *Medical Faculty of Military Medical Academy, Belgrade, Department of Neurology, Belgrade, Serbia*² *Medical Faculty of Military Medical Academy, Belgrade, Department of Anesthesiology, Belgrade, Serbia*³ *Medical Faculty of Military Medical Academy, Belgrade, Centre for Clinical Pharmacology, Belgrade, Serbia*⁴ *Medical Faculty of Military Medical Academy, Belgrade, Serbia***099****MUSCLE VELOCITY RECOVERY CYCLES IN NEUROGENIC MUSCLES**

Agnes Witt, Anders Fuglsang-Frederiksen, Hatice Tankisi

*Aarhus University Hospital, Clinical Neurophysiology, Aarhus, Denmark***0100****CMAP SCAN IN DIAGNOSIS AND FOLLOW-UP OF PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS**

Emel Oguz Akarsu, Nermin Gökem Sirin, Hava Özlem Dede, Lala Mehdikhanova, Elif Kocasoy Orhan, Mehmet Barış Baslo, Hali Atilla Idrisoglu, Ali Emre Oge

*Istanbul University Istanbul Medical Faculty, Clinical Neurophysiology and Department of Neurology, Istanbul, Turkey***0101****EVOKED POTENTIALS IN MULTIPLE SCLEROSIS - STILL A USEFUL TOOL?**

Anna Pokryszko-Dragan

Wroclaw Medical University, Department of Neurology, Wroclaw, Poland

**0102****THE ABILITY OF MAGNETOENCEPHALOGRAPHY AND SIMULTANEOUS ELECTROENCEPHALOGRAPHY TO DETECT FOCAL EPILEPTIFORM DISCHARGES**

Lene Duez¹, Hatice Tankisi¹, Per Sidenius², The Danish Epilepsy Surgery Team³, Anders Fuglsang-Frederiksen¹, Sándor Beniczky¹

¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark

² Aarhus University Hospital, Department of Neurology, Aarhus, Denmark

³ Rigshospitalet, Epilepsy Surgery Unit, Copenhagen, Denmark

0386**PREVALENCE AND IMPACT OF SUBCLINICAL EPILEPTIFORM ACTIVITY IN ALZHEIMER'S DISEASE**

András Horváth, Anna Szűcs, Gábor Barcs, Anita Kamondi

National Institute of Clinical Neurosciences, Budapest, Hungary

17:10 – 18:40**SYMPOSIUM XV.****ISTVÁN ROOM****REGISTERING SLEEP OBJECTIVELY**

Chair: Michel Billiard, Anna Szűcs

S103**POLYSOMNOGRAPHIC FEATURES OF NARCOLEPSY TYPES 1 AND 2, AND OF IDIOPATHIC HYPERSOMNIA: STRENGTHS AND LIMITATIONS**

Michel Billiard

Gui de Chauliac Hospital, Department of Neurology, Montpellier, France

S104**POLYSOMNOGRAPHY: FROM THE BASIS TO THE INFORMATION CONTENT**

Béla Faludi

University of Pécs, Neurology Department, Pécs, Hungary

S105**CHANGES IN SLEEP-RELATED ABNORMAL EEG OSCILLATIONS MAY PREDICT THE THERAPEUTIC EFFICACY OF DRUGS IN MOUSE MODELS OF HUNTINGTON'S DISEASE**

Sándor Kántor, János Varga, Jennifer Morton

University of Cambridge, Department of Physiology, Anatomy and Neuroscience, Cambridge, United Kingdom

S106**POLYSOMNOGRAPHIC ASCERTAINMENT OF SLEEP-RELATED ALTERATIONS OF BREATHING CONTROL AND PATTERN**

János Juhász

SRH Zentralklinikum Suhl, Innere Medizin III, Pneumologie, Beatmungs- und Schlafmedizin, Suhl, Germany

S107**POLYSOMNOGRAPHY IN PARASOMNIAS**

Anna Szűcs

National Institute of Clinical Neurosciences, Department of Neurology, Budapest, Hungary

17:10 – 18:45**PRACTICAL TIPS FOR TRAINEES VIII-IX.****VIEW A ROOM****JITTER**

Erik Stalberg

SEPS

Helmut Buchner

17:10 – 17:55**PRACTICAL TIPS FOR TRAINEES X.****BÉLA B. ROOM****ADULT EEG**

Sean Connolly

**07:30 – 10:30 TEACHING COURSE 1**

ERZSÉBET II. ROOM

ULTRASONOGRAPHY OF PERIPHERAL NERVES: A COMPLEMENTARY TOOL TO ELECTROPHYSIOLOGY**INTRODUCTION TO NEUROMUSCULAR ULTRASOUND**

Nens van Alfen

*Medical Director of Clinical Neurophysiology Laboratory, Radboud University Medical Center, Nijmegen, The Netherlands***THE COMPLEMENTARY ROLE OF ULTRASOUND IN ENTRAPMENT NEUROPATHIES**

Josef Böhm

*Neurologische Privatpraxis, Berlin, Germany***THE COMPLEMENTARY ROLE OF ULTRASOUND IN DYSIMMUNE NEUROPATHIES**

Zsuzsanna Arányi

*Head of Clinical Neurophysiology Laboratory, Department of Neurology, Semmelweis University, Budapest, Hungary***THE COMPLEMENTARY ROLE OF ULTRASOUND IN NERVE TRAUMA**

Nens van Alfen

*Medical Director of Clinical Neurophysiology Laboratory, Radboud University Medical Center, Nijmegen, The Netherlands***ULTRASOUND OF NERVE TUMORS**

Zsuzsanna Arányi

*Head of Clinical Neurophysiology Laboratory, Department of Neurology, Semmelweis University, Budapest, Hungary***07:15 – 08:45 TEACHING COURSE 23**

ISTVÁN ROOM

SEIZURE SEMIOLOGY CHANGES DURING CHILDHOOD

András Fogarasi

*Department of Neurology, Epilepsy Center, Bethesda Children's Hospital, Budapest, Hungary***07:30 – 09:00 TEACHING COURSE 11**

VIEW A ROOM

VEMPS – CURRENT PERSPECTIVES

Mario Habek

Department of Neurology, University Hospital Center Zagreb, University of Zagreb, School of Medicine Zagreb, Croatia

Eleftherios S. Papathanasiou

The Cyprus Institute of Neurology & Genetics Nicosia, Cyprus

Leonel Luis

*Translational Clinical Physiology Unit Institute of Molecular Medicine, Faculty of Medicine, University of Lisbon, Lisbon, Portugal***Topics:**

VEMPs methodology

VEMPs in peripheral vestibular disorders

VEMPs in central vestibular disorders

07:30 – 09:00 TEACHING COURSE 14

BÉLA B ROOM

INTRAOPERATIVE MICROELECTRODE RECORDING AND DEEP BRAIN STIMULATION (DBS)

Amal Mokeem

*Neuroscience Department, King Faisal Specialties Hospital & Research Center/ Riyadh***07:30 – 11:30 TEACHING COURSE 9**

NICN

**INTRAOPERATIVE NEUROMONITORING IN THE NEUROSURGICAL PRACTICE II.
– LIVE SURGERY BROADCAST FROM THE OPERATING ROOM****Venue:** National Institute of Clinical Neurosciences

1145 Budapest, Amerikai út 57.

LIVE SURGERY BROADCAST FROM THE OPERATING ROOM DEMONSTRATING INTRAOPERATIVE NEUROMONITORING

Loránd Eröss, László Entz, Dániel Fabó

08:00 – 08:45 PRACTICAL TIPS FOR TRAINEES XI.

BALLROOM

NEUROMODULATION

Andrea Antal

08:00 – 08:45 PRACTICAL TIPS FOR TRAINEES XII.

ERZSÉBET I. ROOM

VEPS

Letizia Leocani

08:00 – 08:45 PRACTICAL TIPS FOR TRAINEES XIII.

CORSO ROOM

BAEP

Markus Kofler

08:00 – 08:45 PRACTICAL TIPS FOR TRAINEES XIV.

LÁNCZID ROOM

MEP

Tihomir Ilic

09:00 – 10:30 SYMPOSIUM XVI.

BALLROOM

ROBOTIC HAND PROSTHESIS AND PHANTOM LIMB PAIN**Chair:** Giuseppe Granata**S108****RESTORATION OF SOMATOSENSORY FEEDBACK AND BIDIRECTIONAL REAL-TIME CONTROL OF A PROSTHETIC HAND USING PERIPHERAL NERVOUS SYSTEM SIGNALS**

Giuseppe Granata

*Università Cattolica del Sacro Cuore, Department of Neuroscience, Rome, Italy***S109****MAGNETOENCEPHALOGRAPHIC-BASED BRAIN–MACHINE INTERFACE ROBOTIC HAND FOR CONTROLLING SENSORIMOTOR CORTICAL PLASTICITY AND PHANTOM LIMB PAIN**Takufumi Yanagisawa¹, Ryohei Fukuma², Ben Seymour³, Kouichi Hosomi², Haruhiko Kishima², Hiroshi Yokoi⁴, Masayuki Hirata¹, Toshiki Yoshimine¹, Yukiyasu Kamitani⁵, Youichi Saitoh²¹ Osaka University, Endowed Research Division of Clinical Neuroengineering, Osaka, Japan² Osaka University, Department of Neurosurgery, Osaka, Japan³ University of Cambridge, Neurology, Cambridge, United Kingdom⁴ The University of Electro-Communications, Engineering, Tokyo, Japan⁵ Kyoto University, Department of Information Science and Technology, Kyoto, Japan

**S110****PHANTOM LIMB PAIN – A CORRELATE OF MALADAPTIVE NEURAL PLASTICITY**

Robin Bekrater-Bodmann

*Central Institute of Mental Health, Department of Cognitive and Clinical Neuroscience, Mannheim, Germany***S111****BRAIN REORGANIZATION FOLLOWING THE USE OF ROBOTIC HAND PROSTHESIS IN FOUR AMPUTEES**

Riccardo Di Iorio

*Università Cattolica del Sacro Cuore, Department of Neurology, Rome, Italy***09:00 – 10:30 SYMPOSIUM XVII.****ERZSÉBET I. ROOM****THE NEUROPHYSIOLOGY OF SLEEP EEG CONSTITUENTS 1.****Chair:** Péter Halász, Anita Lüthi**S112****CELLULAR BASIS OF SLEEP OSCILLATIONS**

László Acsády

*Institute of Experimental Medicine, Hungarian Academy of Sciences, Laboratory of Thalamus Research, Budapest, Hungary***S113****THE THALAMO-CORTICAL SYSTEM AS CENTRAL ACTOR OF NREM SLEEP**

Magor Lőrincz

*University of Szeged, Department of Physiology, Anatomy and Neuroscience, Szeged, Hungary***S114****SLEEP SPINDLES AND THEIR BIOLOGICAL SIGNIFICANCE**

Anita Lüthi

*University of Lausanne, Department of Fundamental Neurosciences (DNF), Lausanne, Switzerland***S115****SLEEP SLOW WAVE OSCILLATION AND HOMEOSTASIS**

Róbert Bódizs

*Semmelweis University, Institute of Behavioural Sciences, Budapest, Hungary***S116****THE HETEROGENEITY OF SLEEP SLOW WAVES**

Péter Ujma

*Semmelweis University, Institute of Behavioural Sciences, Budapest, Hungary***09:00 – 10:30 SYMPOSIUM XVIII.****CORSO ROOM****AXONAL EXCITABILITY AND DIABETIC POLYNEUROPATHY****Chair:** Hatice Tankisi, Hilmi Uysal**S117****EXCITABILITY TESTING IN THE 21ST CENTURY**

Hugh Bostock

*Institute of Neurology, University College London, Sobell department, London, United Kingdom***S118****MECHANISMS OF DIABETIC NEUROPATHY**

Hatice Tankisi

*Aarhus University Hospital, Clinical Neurophysiology, Aarhus, Denmark***S119****AXONAL EXCITABILITY STUDIES IN DIABETIC NEUROPATHY**

Hilmi Uysal

*Akdeniz University, Department of Neurology, Antalya, Turkey***09:00 – 10:30 FREE COMMUNICATION VI.****LÁNCÍD ROOM****NEUROPHYSIOLOGY OF PERIPHERAL NERVOUS SYSTEM 2.****Chair:** Edina Varga**O120****SENSORY CONDUCTION SLOWING DOES NOT PRECEDE MOTOR SLOWING IN THE DEVELOPMENT OF MILD CARPAL TUNNEL SYNDROME**Birger Johnsen¹, Sorosh Tabatabaeifar², Susanne Svendsen³, Poul Frost², Anders Fuglsang-Frederiksen⁴¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark² Aarhus University Hospital, Danish Ramazzini Centre, Department of Occupational Medicine, Aarhus, Denmark³ Regional Hospital West Jutland – University Research Clinic, Danish Ramazzini Centre, Department of Occupational Medicine, Herning, Denmark⁴ Aarhus University Hospital, Clinical Neurophysiology, Aarhus, Denmark**O121****ALPHA MOTOR NEURON EXCITABILITY AND FORCE GENERATION IN SPASTICITY**Serkan Uslu¹, Tunca Nüzket¹, Can Ozcan², Suha Yagcioglu³, Hilmi Uysal⁴¹ Akdeniz University, Biophysics, Antalya, Turkey² Bogazici University, Institute of Biomedical Engineering, Istanbul, Turkey³ Hacettepe University, Biophysics, Ankara, Turkey⁴ Akdeniz University, Department of Neurology, Antalya, Turkey**O122****NERVE EXCITABILITY AT DIFFERENT TARGET LEVELS IN MULTIFOCAL MOTOR NEUROPATHY**Maria Kovalchuk¹, Hessel Franssen¹, Leonard J Van Schelven², Boudewijn Sleutjes¹¹ University Medical Centre Utrecht, Brain Centre Rudolf Magnus, Utrecht, The Netherlands² University Medical Centre Utrecht, Department of Medical Technology and Clinical Physics, Utrecht, The Netherlands**O123****OPTIMIZING THE ELECTRODIAGNOSTIC ACCURACY IN GUILLAIN-BARRÉ SYNDROME SUBTYPES: SPARSE LINEAR DISCRIMINANT ANALYSIS VERSUS CRITERIA SETS**Antonino Uncini¹, Luigi Ippolito², Nortina Shahrizaila³, Yukari Sekiguchi⁴, Satoshi Kuwabara⁴¹ University "G. d'Annunzio" Chieti-Pescara, Italy, Department of Neuroscience, Imaging and Clinical Sciences, Chieti, Italy² University "G. d'Annunzio" Chieti-Pescara, Italy, Department of Economics, Pescara, Italy³ University of Malaya, Medicine, Kuala Lumpur, Malaya⁴ Chiba University, Department of Neurology, Chiba, Japan**O124****EXCITABILITY TESTS WITH HIGH-DENSITY SURFACE-EMG: A NOVEL APPROACH TO STUDY SINGLE MOTOR AXONS**Boudewijn Sleutjes¹, Ernest Boskovic², Leonard Van Schelven², Judith Drenthen³, Maria Kovalchuk¹, Paul Lumens¹, Leonard Van den Berg¹, Hessel Franssen¹¹ University Medical Centre Utrecht, Department of Neurology, Utrecht, The Netherlands² University Medical Centre Utrecht, Department of Medical Technology & Clinical Physics, Utrecht, The Netherlands³ Erasmus MC, University Medical Centre Rotterdam, Department of Clinical Neurophysiology, Rotterdam, The Netherlands



0125

LONG-TERM OUTCOMES OF PATIENTS WITH ULNAR NEUROPATHY AT THE ELBOW ACCORDING TO PATHOPHYSIOLOGY OF THE NERVE LESION

Gregor Omejec, Tomaž Žgur, Simon Podnar

University Medical Center Ljubljana, Institute of Clinical Neurophysiology, Ljubljana, Slovenia

0126

RELATION BETWEEN NERVUS TIBIALIS CONDUCTION VELOCITY VALUES, SOMATOSENSORY EVOKED POTENTIALS PARAMETERS VALUES AND SPATIAL PERCEPTION THRESHOLD IN PATIENTS WITH SUBCLINICAL DIABETIC POLYNEUROPATHY

Zoran Peric¹, Stevo Lukic¹, Aleksandar Stojanov², Biljana Zivadinovic¹¹ Department of Neurology Medical Faculty University of Nish, Department of Neurology, Nish, Serbia² Clinical Centre of Nish, Clinic of Neurology, Nish, Serbia

0127

NEUROPHYSIOLOGICAL LOCALISATION OF ULNAR NEUROPATHY AT THE ELBOW: VALIDATION OF DIAGNOSTIC CRITERIA DEVELOPED BY A TASKFORCE OF THE DANISH SOCIETY OF CLINICAL NEUROPHYSIOLOGY

Kirsten Pugdahl¹, Sándor Beniczky¹, Benedikte Wanscher², Erisela Qerama¹, Birger Johnsen¹, Martin Ballegaard³, Krisztina Benedek², Jørgen Sønderborg⁴, Anders Fuglsang-Frederiksen¹¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark² Rigshospitalet Glostrup, Clinical Neurophysiology, Copenhagen, Denmark³ Rigshospitalet, Clinical Neurophysiology, Copenhagen, Denmark⁴ Mølholm private hospital, Clinical Neurophysiology, Vejle, Denmark

0128

EVALUATION OF MUSCLE FIBERS DIAMETER USING ANALYSIS OF MOTOR UNIT POTENTIALS

Ewa Zalewska

Nalecz Institute of Biocybernetics and Biomedical Engineering, PAS, Department of Neuroengineering, Warsaw, Poland

A36

METHODOLOGY FOR RECORDING RELIABLE WRIST EXTENSORS AND WRIST FLEXORS COMPOUND MUSCLE ACTION POTENTIALS

Joao Leote¹, Michela Campolo², Larisa Pascan³, Tânia Marques³, Verónica Teixeira³, Jordi Casanova-Molla², Josep Valls-Solé²¹ Instituto de Biofísica e Engenharia Biomédica, Faculdade de Ciências, Universidade de Lisboa. Portugal, Neurosurgery Department, Hospital Garcia de Orta. Almada. Portugal² Unitat d'Electromiografia, Servei de Neurologia, Hospital Clínic, Universitat de Barcelona, IDIBAPS (Institut d'Investigació Biomèdica August Pi i Sunyer), Barcelona 08036, Spain., Neurology, Barcelona, Spain³ Escola Superior de Tecnologia da Saúde de Lisboa. Instituto Politécnico de Lisboa. Portugal., Neurofisiologia, Lisbon, Portugal

09:00 – 10:30

FREE COMMUNICATION VII.

ISTVÁN ROOM

NEUROPHYSIOLOGY IN PEDIATRICS

Chair: Delphine Taussig, Yan Pereon

0129

INTELLECTUAL FUNCTIONING AND P300 POTENTIAL IN ADOLESCENTS WITH NEWLY DIAGNOSED MULTIPLE SCLEROSIS

Slawomir Krocza¹, Urszula Stolarska², Izabela Witek³, Krystyna Fiederer⁴¹ Jagiellonian University, Chair of Child and Adolescent Neurology, Kraków, Poland² Laboratory of Neuropsychology, University Children's Hospital, Kraków, Poland³ Department of Child Neurology, University Children's Hospital, Kraków, Poland⁴ Laboratory of Neurophysiology, Chair of Child and Adolescent Neurology, Kraków, Poland

0130

MOTOR REPRESENTATION AREAS OF UPPER LIMB MUSCLES IN HEALTHY CHILDREN, ADOLESCENTS AND ADULTS – A DEVELOPMENTAL NAVIGATED TMS STUDY

Laura Säisänen¹, Mervi Könönen², Eini Niskanen³, Timo Lintu⁴, Niina Lintu⁴, Ritva Vanninen⁵, Petro Julkunen¹, Sara Määttä⁶¹ Kuopio University Hospital, Department of Clinical Neurophysiology, Kuopio, Finland² Kuopio University Hospital, Department of Radiology, Kuopio, Finland³ University of Eastern Finland, Applied Physics, Kuopio, Finland⁴ University of Eastern Finland, Department of Physiology, Kuopio, Finland⁵ University of Eastern Finland, Department of Radiology, Kuopio, Finland⁶ University of Eastern Finland, Department of Clinical Neurophysiology, Kuopio, Finland

0131

NON-INVASIVE, MULTIMODAL ANALYSIS OF CORTICAL ACTIVITY, BLOOD VOLUME AND NEUROVASCULAR COUPLING IN INFANTILE SPASMS USING EEG-FNIRS MONITORING

Emilie Bourel-Ponchel, Mahdi Mahmoudzadeh, Fabrice Wallois

University of Picardie Jules Verne, INSERM U1105 GRAMFC, Amiens, France

0132

AN EEG-BASED DECISION-SUPPORT SYSTEM FOR DIAGNOSIS AND PROGNOSIS OF AUTISM SPECTRUM DISORDER

Jan Srengers¹, Erika Juarez Martinez², Sonja Simpraga², Floor Jansen³, Chantal Vlaskamp¹, Bob Oranje¹, Simon-Shlomo Poil², Klaus Linkenkaer-Hansen², Hilgo Bruining¹¹ Brain Center Rudolf Magnus, University Medical Center Utrecht, Department of Psychiatry, Utrecht, The Netherlands² VU University, Department of Integrative Neurophysiology, Center for Neurogenomics and Cognitive Research, Neuroscience Campus Amsterdam, Amsterdam, The Netherlands³ Brain Center Rudolf Magnus, University Medical Center Utrecht, Department of Neurology, Utrecht, The Netherlands

0133

OBJECTIVE DETECTION OF CORTICAL GLUCOSE METABOLIC ABNORMALITIES IN CHILDREN WITH EPILEPSY SURGERY: VALIDATION WITH INTRACRANIAL EEG

Csaba Juhasz¹, Vinod Pilli¹, Eishi Asano¹, Ajay Kumar¹, Sandeep Sood², Harry Chugani¹, Aimee Luat¹, Jeong-Won Jeong¹¹ Wayne State University School of Medicine, Pediatrics and Neurology, Detroit, USA² Wayne State University School of Medicine, Pediatrics and Neurosurgery, Detroit, USA

0134

THE DYSFUNCTION OF AUTONOMIC NERVOUS SYSTEM IN CHILDREN WITH PAROXYSMAL DISORDERS

Aleksandra Gergont

Jagiellonian University, Kraków, Chair of Child and Adolescent Neurology, Kraków, Poland

0135

SENSORY EVOKED POTENTIALS AND CENTRAL MOTOR CONDUCTION TIMES IN CHILDREN WITH DYSTONIA HELP PREDICT OUTCOMES FROM DEEP BRAIN STIMULATION (DBS)

Verity McClelland¹, Doreen Fialho², Denise Flexney-Briscoe³, Graham Holder⁴, Markus Elze⁵, Hortensia Gimeno⁶, Ata Siddiqui⁷, Richard Selway⁸, Kerry Mills¹, Jean-Pierre Lin⁶¹ King's College London, Basic and Clinical Neuroscience, London, United Kingdom² King's College Hospital, London, Department of Clinical Neurophysiology, London, United Kingdom³ Evelina London Children's Hospital, London, Clinical Neurophysiology, London, United Kingdom⁴ Moorfields Eye Hospital, London, Clinical Neurophysiology, London, United Kingdom⁵ F. Hoffmann-La Roche AG, Biostatistics, Basel, Switzerland⁶ Evelina London Children's Hospital, London, Children's Neurosciences, London, United Kingdom⁷ Evelina London Children's Hospital, London, Neuroradiology, London, United Kingdom⁸ King's College Hospital, London, Functional Neurosurgery, London, United Kingdom

10:30 – 10:45

Coffee Break



10:45 – 11:45 **ECCN General Assembly** **BALLROOM**

10:45 – 12:15 **TEACHING COURSE 18** **LÁNCÍD ROOM**
“NEUROPATHIC” OR “MYOPATHIC”: PITFALLS OF NEEDLE EMG TESTING

Yann Pereon
Head of Clinical Neurophysiology in Nantes, France

10:45 – 12:15 **TEACHING COURSE 22** **BÉLA B ROOM**
VIDEO-EEG COURSE: HYPERMOTOR SEIZURES

György Rásonyi
Department of Clinical Neurophysiology, Neurocenter, Rigshospitalet, Copenhagen, Denmark

Anna Kelemen
Epilepsy Center, Department of Neurology, National Institute of Clinical Neuroscience, Budapest, Hungary

11:45 – 12:45 **POSTER SESSION II. (detailed program please see page 75 - 87)**

Brain stimulation II. (P299 – 311)
 CN and neuroimaging (P312 – 317)
 CN of the autonomic nervous system (P318 – 322)
 Intraoperative neurophysiological methods (P323 – 326)
 Neurophysiology in the intensive care unit (P327 – 332)
 Cutting edge techniques in CN (P365 – 372)

ERZSÉBET I. ROOM
 CN in the diagnosis and treatment of diseases II. (P333 – 364)
 Neurophysiology of brain/mind problem (P373 – 377)
 Neurophysiology of cognition (P378 – 385)

11:45 – 12:05 **CLINICAL ASPECT OF INTRAOPERATIVE NEUROMONITORING** **CORSO ROOM**
 Zoltán Horváth
Department of Neurology, University of Szeged, Hungary

12:45 – 13:45 **Lunch Break**

13:45 – 15:15 **SYMPOSIUM XIX.** **BALLROOM**
PATHOPHYSIOLOGY OF BLEPHAROSPASM REVISITED
Chair: Mark Hallett

S136
CLINICAL FEATURES AND BLINK REFLEX IN BLEPHAROSPASM
 Antonella Conte, Alfredo Berardelli
Sapienza, University of Rome and IRCCS Neuromed, Department of Neurology and Psychiatry, Rome, Italy

S138
SENSORY TRICKS, STARTLE AND PREPULSE INHIBITION IN BLEPHAROSPASM
 Josep Valls-Sole
Hospital Clinic, University of Barcelona, Department of Neurology, Barcelona, Spain

S139
PHOTOPHOBIA
 Mark Hallett
National Institute of Neurological Disorders and Stroke, NIH, Human Motor Control Section, Bethesda, USA

13:45 – 15:15 **SYMPOSIUM XX.** **ERZSÉBET I. ROOM**
ELECTROPHYSIOLOGY OF AGING
Chair: Márk Molnár

S140
HIGH FREQUENCY EEG OSCILLATIONS IN COGNITIVE DECLINE AND AGING
 Krisztina Benedek¹, Martin Lauritzen²
¹ Rigshospitalet Glostrup, Clinical Neurophysiology, Glostrup, Denmark
² University of Copenhagen, Department of Neuroscience and Pharmacology, Copenhagen, Denmark

S141
AGING AND AUTOMATIC DETECTION OF DEVIANCY IN VISION: EVENT-RELATED POTENTIAL STUDIES
 István Czigler, Zsófia Gaál, István Sulykos
Institute of Cognitive Neuroscience and Psychology, HAS, Department of Cognitive Psychology, Budapest, Hungary

S142
ATTENTION PARAMETERS AND ERP CORRELATES IN AGING INDIVIDUALS
 Kathrin Finke¹, Natan Napiorkowski², Iris Wiegand³, Anders Petersen⁴, Hermann J. Müller², Thomas Töllner²
¹ Jena University Hospital and LMU Munich, I) Neurology, II) Psychology, Jena, Germany
² Ludwig Maximilians Universität München (LMU Munich), Psychology, Munich, Germany
³ Max Planck Institute for Human Development, Human Development, Berlin, Germany
⁴ Copenhagen University, Psychology, Copenhagen, Denmark

S143
EMOTIONS, EPISODIC MEMORY AND ERROR MONITORING – AGE-DEPENDENT EVENT-RELATED POTENTIAL CHARACTERISTICS
 Márk Molnár
Institute of Cognitive Neuroscience and Psychology, HAS, Experimental Psychology, Budapest, Hungary

13:45 – 15:15 **SYMPOSIUM XXI.** **CORSO ROOM**
PRIMARY HEADACHES AND CLINICAL NEUROPHYSIOLOGY
Chair: János Tajti, László Vécsei

S144
CORTICAL SPREADING DEPRESSION, RELEVANCE TO MIGRAINE AND ACUTE BRAIN INJURY IN HUMANS, AND NEW MECHANISMS
 Martin Lauritzen
Rigshospitalet Glostrup, Clinical Neurophysiology, Glostrup, Denmark

S145
INVESTIGATING THE KYNURENINE PATHWAY IN A NOVEL – IN VITRO – MODEL: POSSIBILITY FOR SIMULTANEOUS BIOCHEMICAL, HISTOLOGICAL AND ELECTROPHYSIOLOGICAL ASSESSMENTS
 Judit Herédi¹, Gábor Veres², Anikó Magyariné Berkó¹, László Vécsei², József Toldi¹, Levente Gellért¹
¹ University of Szeged, Department of Physiology, Anatomy and Neuroscience, Szeged, Hungary
² University of Szeged, Department of Neurology, Szeged, Hungary

**S146****THE MODULATION OF CSD IN ANIMALS**

Arpad Pardutz

*University of Szeged, Department of Neurology, Szeged, Hungary***S147****IMAGING BIOMARKERS OF PRIMARY HEADACHE DISORDERS**

Zsigmond Tamas Kincses, Nikolett Szabo, Peter Farago, Andras Kiraly, Laszlo Vecsei

*University of Szeged, Department of Neurology, Szeged, Hungary***S148****EVOKED POTENTIAL STUDIES IN MIGRAINE: OVERVIEW OF RESULTS AND HINTS TO NEUROMODULATION THERAPY**

Judit Afra

*National Institute of Clinical Neurosciences, Budapest, Outpatient Department, Budapest, Hungary***13:45 – 15:15****SYMPOSIUM XXII.****LÁNCÍD ROOM****PRESURGICAL EVALUATION OF CHILDREN WITH PHARMACORESISTANT EPILEPSY****Chair:** Delphine Taussig**S149****VIDEO-EEG MONITORING IN YOUNG CHILDREN**

Monika Eisermann

*Paris Descartes University, Department of Clinical Neurophysiology, Paris, France***S150****PERICTAL LATERALIZING SIGNS IN CHILDHOOD SEIZURES**

András Fogarasi

*Bethesda Children's Hospital, Head of Neurology Department, Budapest, Hungary***S151****STEREOELECTROENCEPHALOGRAPHY (SEEG) IN CHILDREN**

Delphine Taussig

*Fondation Rothschild, Paris, Paediatric neurosurgery, Paris, France***13:45 – 15:15****FREE COMMUNICATION VIII. – FUNCTIONAL CONNECTIVITY****ERZSÉBET II. ROOM****Chair:** Luis Garcia Larrea, Paolo Maria Rossini**0152****INVESTIGATING EFFECTIVE CONNECTIVITY IN THE MOTOR NETWORK WITH TMS-EVOKED CORTICAL POTENTIALS**Karita S.-T. Salo^{1,2}, Tuomas P. Mutanen^{1,2}, Selja Vaalto^{1,2,3}, Matti Stenroos¹, Niko Mäkelä^{1,2}, Risto J. Ilmoniemi^{1,2}¹Department of Neuroscience and Biomedical Engineering, Aalto University School of Science, Espoo, Finland²BioMag Laboratory, HUS Medical Imaging Center, Helsinki University Hospital, Helsinki, Finland³Department of Clinical Neurophysiology, HUS Medical Imaging, Helsinki University Hospital, Helsinki, Finland**0153****PREPULSE INHIBITION IS DEFICIENT IN HEMIFACIAL SPASM**

Aysegul Gunduz, Meral E. Kiziltan

*Istanbul University, Cerrahpasa School of Medicine, Department of Neurology, Istanbul, Turkey***0154****DEACTIVATION OF DEFAULT MODE NETWORK IN FOCAL EPILEPSY, INFERRED BY SINGLE PULSE ELECTRICAL STIMULATION**Mihai Dragos Maliia¹, Cristian Donos², Andrei Barborica³, Ioana Mindruta⁴, Irina Popa⁴, Mirela Ene³,Sandor Beniczky¹¹ Danish Epilepsy Center, Department of Clinical Neurophysiology, Dianalund, Denmark² University of Texas Health Science Center at Houston, Department of Neurosurgery, Houston, USA³ University of Bucharest, Physics Department, Bucharest, Romania⁴ University Emergency Hospital, Department of Neurology, Bucharest, Romania**0155****PRE-SEIZURE BRAIN NETWORKS ARCHITECTURE AS INDEX OF PREDICTION IN EPILEPTIC SEIZURE**Francesca Miraglia¹, Fabrizio Vecchio¹, Catello Vollomo², Filomena Fuggetta³, Beatrice Cioni³, Paolo Maria Rossini²¹ IRCCS San Raffaele Pisana, Brain Connectivity Laboratory, Rome, Italy² Università Cattolica del Sacro Cuore, Department of Neurology, Rome, Italy³ Università Cattolica del Sacro Cuore, Department of Neurosurgery, Rome, Italy**0156****A FUNCTIONAL CONNECTIVITY ANALYSIS OF PATIENTS WITH TEMPORAL LOBE EPILEPSY****WITH DIFFERENT PROPAGATION PATTERNS**Nermin Gorkem Sirin¹, Elif Kurt², Cigdem Ulasoglu Yıldız², Ani Kicik³, Zerrin Karaaslan¹, Ali Bayram²,Tamer Demiralp⁴, Candan Gurses¹¹ Istanbul University, Istanbul Faculty of Medicine, Department of Neurology, Istanbul, Turkey² Istanbul University, Hulusi Behcet Life Sciences Research Laboratory, Istanbul, Turkey³ Istanbul University, Aziz Sancar Institute of Experimental Medicine, Department of Neuroscience, Istanbul, Turkey⁴ Istanbul University, Istanbul Faculty of Medicine, Department of Physiology, Istanbul, Turkey**0157****MAPPING THE FUNCTION AND CONNECTIVITY OF THE CINGULATE GYRUS USING STEREO-ENCEPHALOGRAPHY (SEEG)**Irina Popa¹, Cristian Donos², Dragos Mihai Maliia¹, Andrei Barborica², Edouard Hirsch³, Julia Scholly³,Maria Paola Valenti-Hirsch³, Anca Arbune¹, Andrei Daneasa¹, Ioana Mindruta⁴¹ Emergency University Hospital Bucharest, Neurology Department, Bucharest, Romania² University of Bucharest, Physics Department, Bucharest, Romania³ Strasbourg University Hospital, Neurology Department, Strasbourg, France⁴ "Carol Davila" University of Medicine and Pharmacy, Neurology Department, Bucharest, Romania**0158****EXCESSIVE INHIBITORY VISUOMOTOR CONNECTIONS IN PARKINSON'S DISEASE WITH FREEZING OF GAIT**

Gionata Strigaro, Chiara Pizzamiglio, Paolo Barbero, Giacomo Tondo, Luca Magistrelli, Cristina Rovellotti,

Cristoforo Comi, Roberto Cantello

*University of Piemonte Orientale, Department of Translational Medicine, Section of Neurology, Novara, Italy***15:15 – 15:30****Coffee Break****15:30 – 17:00****PLENARY LECTURES****BALLROOM****Chair:** Jonathan Cole**HUMAN NEUROPHYSIOLOGY TO DIAGNOSE, PREVENT AND TREAT PAIN**

Luis Garcia-Larrea

*Neurological Hospital of Lyon, Inserm & University Claude Bernard Lyon, Lyon, France***RTMS AS A ROUTINE TREATMENT IN NEUROLOGY, ARE WE READY YET?**

Letizia Leocani

*Senior Researcher, Coordinator of Didactic Area of the Neurological Department, San Raffaele Scientific Institute, Milan, Italy***17:00 – 17:10****Break**



17:10 – 18:45 FREE COMMUNICATION IX.

BALLROOM

NEUROPHYSIOLOGY OF THE AUTONOMIC NERVOUS SYSTEM**Chair:** Vildan Yayla, Mario Habek**0160****THE ROLE OF BRAINSTEM IN SYNCOPE DEVELOPMENT**Mario Habek¹, Luka Crnosija¹, Tereza Gabelic², Ivan Adamec², Magdalena Krbot Skoric²¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia**0161****THE EFFECT OF FOOD INTAKE ON PATIENTS WITH POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME**Berislav Ruska¹, Luka Crnosija¹, Magdalena Krbot Skoric², Ivan Adamec², Tereza Gabelic², Mario Habek¹¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia**0162****POSTPRANDIAL HYPOTENSION IN NEUROLOGICAL DISEASES: A SYSTEMATIC REVIEW AND META-ANALYSIS**Magdalena Krbot Skoric¹, Antun Pavelic², Luka Crnosija², Mario Habek²¹ University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia² University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia**0163****AUTONOMIC NERVOUS SYSTEM DYSFUNCTION IN PATIENTS WITH HIGH OBSTRUCTIVE SLEEP APNEA RISK**Barbara Barun¹, Marina Mioc¹, Magdalena Krbot Skoric¹, Monika Mudrovic², Natasa Milosevic², Luka Crnosija², Mario Habek²¹ University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia² University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia**0164****DIFFERENT PATTERNS OF DYSAUTONOMIA IN RELAPSING AND PROGRESSIVE MULTIPLE SCLEROSIS**Luka Crnosija¹, Ivan Adamec², Magdalena Krbot Skoric², Tereza Gabelic², Mario Habek¹¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia**0165****DIFFERENCES IN NEURAL HEART RATE REGULATION BETWEEN PATIENTS WITH RELAPSING AND PROGRESSIVE FORMS OF MULTIPLE SCLEROSIS**Luka Crnosija¹, Magdalena Krbot Skoric², Tereza Gabelic², Ivan Adamec², Mario Habek¹¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia

17:10 – 18:45 SYMPOSIUM XXIII.

ERZSÉBET I. ROOM

THE NEUROPHYSIOLOGY OF SLEEP 2.**Chair:** Péter Halász**S166****MICRO-STRUCTURE OF NREM SLEEP**

Péter Halász

National Institute of Clinical Neurosciences, Budapest, Epilepsy Unit, Budapest, Hungary

S167**SENSORY WORKUP DURING NONREM SLEEP**

Helene Bastuji

Centre de Recherche en Neurosciences de Lyon, Neuropain Team, Lyon, France

S168**CORTICAL UNIT AND FIELD ACTIVITY DURING SLEEP CYCLICITY**

Istvan Ulbert

Institute of Cognitive Neuroscience and Psychology, HAS, Budapest, Hungary

S169**SLEEP SPINDLES AND EPILEPSY**

Daniel Fabo

National Institute of Clinical Neurosciences, Budapest, Epilepsy Unit, Budapest, Hungary

S170**REM - DREAMING - EMOTIONS: THE NEUROPHYSIOLOGY OF NIGHTMARE DISORDER**Péter Simor¹, Borbála Blaskovich², Vivien Reicher², Richárd Reichard²¹ Eötvös Lorand University, Department of Affective Psychology, Budapest, Hungary² Budapest University of Technology and Economics, Cognitive Science Department, Budapest, Hungary

17:10 – 18:45

FREE COMMUNICATION X.

CORSO ROOM

NEUROPHYSIOLOGY OF COGNITION**Chair:** Jonathan Cole, Nathan Gadoth**0171****THE ROLE OF CORTEX-BRAINSTEM INTEGRATION IN AUDITORY PERCEPTION**Lyubov Oknina¹, Adila Usupova², David Pitschilauri³, Vitaly Podlepich³, Irina Skoriatina¹¹ Institute of Higher Nervous Activity and Neurophysiology of RAS (IHNA&NPh RAS), Department of Clinical Neurophysiology, Moscow, Russia² M.V. Lomonosov Moscow State University, Faculty of fundamental medicine, Moscow, Russia³ Burdenko Neurosurgery Institute, Department of Neurosurgery, Moscow, Russia**0172****CONFLICT RESOLUTION INFLUENCES MOTOR PREPARATION OF STEP INITIATION**

Arnaud Delval, Aurore Braquet, Céline Tard, Luc Defebvre, Philippe Derambure, Kathy Dujardin

Univ. Lille, Inserm, U1171 - Degenerative & Vascular Cognitive Disorders, F-59000 Lille, France, Clinical Neurophysiology, Lille, France

0173**UNILATERAL DEEP BRAIN STIMULATION OF SUBTHALAMIC NUCLEUS DOES NOT AFFECT REACTIVE INHIBITION**

Giovanni Mirabella

Sapienza University of Rome, Department of Physiology and Pharmacology, Rome, Italy

0174**PRELIMINARY RESULTS OF TESTING THE RECOVERIX SYSTEM ON STROKE PATIENTS**Danut Irimia¹, Rupert Ortner¹, Francisco Fernandes¹, Christoph Guger¹, [Alexander Heilinger](#)¹, Martin Walchshofer¹, Johannes Gruenwald²¹ G.tec Medical Engineering GmbH, Research & Development, Schiedlberg, Austria² Guger Technologies OG, Research & Development, Schiedlberg, Austria

**0175****HIGH-DENSITY ERPS FOR WORKING MEMORY FOR FACES, WORDS, AND FIGURES IN YOUNG AND ELDER HEALTHY VOLUNTEERS**

Elena Mnatsakanian

*Institute of Higher Nervous Activity & Neurophysiology RAS, Human Higher Nervous Activity Lab, Moscow, Russia***0176****LTP-LIKE CORTICAL PLASTICITY IN AD PATIENTS: A NOVEL BIOMARKER OF DISEASE PROGRESSION**Francesco DI Lorenzo¹, Caterina Motta¹, Maria Concetta Pellicciari¹, Viviana Ponzo¹, Sonia Bonni¹, Carlo Caltagirone¹, Alessandro Martorana², Giacomo Koch¹¹ IRCCS Fondazione Santa Lucia, Non Invasive Stimulation Unit, Rome, Italy² University of Rome "Tor Vergata", Medicina Dei Sistemi, Rome, Italy**17:10 – 18:45****FREE COMMUNICATION XI.****LÁNCÍD ROOM****INTRAOPERATIVE NEUROPHYSIOLOGY****Chair:** Amal Mokeem, Antonio Martins da Silva**0177****NOVEL METHOD OF INTRAOPERATIVE OCULAR MOVEMENT MONITORING USING A PIEZOELECTRIC DEVICE: EXPERIMENTAL STUDY OF OMNAPP (OCULAR MOTOR NERVE ACTIVATING PIEZOELECTRIC POTENTIALS) AND CLINICAL APPLICATION FOR SKULL BASE SURGERIES**

Kiyohiko Sakata

*Kurume University, Department of Neurosurgery, Kurume, Japan***0178****CORRELATION BETWEEN POSTOPERATIVE VISUAL OUTCOME AND INTRAOPERATIVE VISUAL EVOKED POTENTIALS DURING ENDOSCOPIC TRANSPHENOIDAL SURGERY**

Yui Nagata

*Kurume University, Department of Neurosurgery, Fukuoka, Japan***0179****INTRAOPERATIVE BLINK REFLEX IN MICROVASCULAR DECOMPRESSION FOR HEMIFACIAL SPASM. A CASE REPORT AND PROPOSAL OF A NEW METHOD TO MONITOR THE EFFICIENCY OF DECOMPRESSION**

Dimitrios Kefalas, Frederik Enders, Daniel Haenggi

*University Hospital Mannheim, Department of Neurosurgery, Mannheim, Germany***0181****USEFULNESS OF TRANSCRANIAL MOTOR EVOKED POTENTIAL DURING SURGERY FOR GLIOMAS LOCATED CLOSE TO THE MOTOR PATHWAY**

Nobuyuki Takeshige, Keiko Suematsu, Shinji Nakashima, Yui Nagata, Kiyohiko Sakata, Motohiro Morioka

*Kurume University, Neurosurgery, Fukuoka, Japan***17:10 – 18:45****SYMPOSIUM XXIV.****ERZSÉBET II. ROOM****NEUROPLASTICITY IN PHYSICAL THERAPY****Chair:** Ann Abdel Kader**S182****INTRODUCTION TO NEUROPLASTICITY AND ITS APPLICATION IN NEUROREHABILITATION**

Salma Marzouk

*Cairo University, Department of Neurophysiology, Cairo, Egypt***S183****PHYSIOLOGIC BASIS OF NEUROPLASTICITY**

Hesham Nafia

*Cairo University, Neurophysiology Laboratory, Cairo, Egypt***S184****EFFECT OF DIFFERENT FREQUENCIES OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION ON COGNITIVE FUNCTION IN STROKE**Heba Raafat¹, Ebtisam Fahmy², Sandra Ahmed², Abdulaleem Atteya³, Tahani Mousa³¹ Cairo University, Clinical Neurophysiology, Faculty of Medicine, Cairo, Egypt² Cairo University, Department of Neurology, Cairo, Egypt³ Cairo University, Physical Therapy for Neuromuscular Disorders and Its surgery, Cairo, Egypt**S185****THE EFFECT OF BILATERAL ARM TRAINING ON MOTOR AREAS EXCITABILITY IN CHRONIC STROKE PATIENTS**Walaa Ragab¹, Moshera Darwish¹, Mohamed El Tamawy², Ann Abdel Kader³¹ Faculty of Physical Therapy- Cairo University, Physical Therapy for Neuromuscular Disorders and Its surgery, Cairo, Egypt² Faculty of Medicine- Cairo University- Egypt, Department of Neurology, Cairo, Egypt³ Faculty of Medicine- Cairo University- Egypt, Clinical Neurophysiology, Cairo, Egypt**S186****EFFECT OF RECIPROCAL PEDALING EXERCISE ON CORTICAL REORGANIZATION AND GAIT IN STROKE PATIENTS**Mahmoud Rezk¹, Moshera Darweesh¹, Mohamed ElTamawy², Mye Basheer³¹ Faculty of Physical Therapy- Cairo University, Physical Therapy for Neuromuscular Disorders and Its Surgery, Cairo, Egypt² Faculty of Medicine- Cairo University- Egypt, Department of Neurology, Cairo, Egypt³ Faculty of Medicine- Cairo University- Egypt, Clinical Neurophysiology, Cairo, Egypt**S187****INFLUENCE OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION ON COGNITIVE AND MOTOR PERFORMANCE IN PARKINSON'S DISEASE PATIENTS**Mohamed S. El Tamawy¹, Moshera H. Darwish², Amira M. El Gohary³, Heba A. Khalifa²¹ Cairo University, Neurology, Faculty of Medicine, Cairo, Egypt² Cairo University, Neuromuscular disorders and its surgery, Faculty of Physical Therapy, Cairo, Egypt³ Cairo University, Clinical Neurophysiology, Faculty of Medicine, Cairo, Egypt**S188****THE ROLE OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IN TREATMENT OF DIABETIC POLYNEUROPATHIC RESISTANT PAIN**Ann Abdel Kader¹, Amira El Gohary¹, Husam Murad², Dina El Salmawy¹¹ Cairo University, Clinical Neurophysiology, Faculty of Medicine, Cairo, Egypt² Cairo University, Neurology, Faculty of Medicine, Cairo, Egypt

**09:00 – 10:30 PLENARY LECTURES**

BALLROOM

Chair: Anita Kamondi**NEUROGRAPHY – DID YOU THINK OF THIS?**

Erik Stålberg

*Uppsala Neuroscience, Department of Clinical Neurophysiology, Uppsala, Sweden***THE EMERGENCE OF A CIRCUIT MODEL FOR ADDICTION: SYNAPTIC MECHANISMS AND IMPLICATIONS FOR THERAPY**

Christian Lüscher

*University Hospital Geneva, Department of Basic Neuroscience & Clinic of Neurology, Geneva, Switzerland***10:30 – 11:00 Coffee Break****11:00 – 12:30 SYMPOSIUM XXV.**

BALLROOM

THE MYSTERY OF CEREBELLUM**Chair:** Martin Bares, Mario Manto**S191****CEREBELLAR CONTRIBUTIONS TO FEAR BEHAVIOUR**

Charlotte Lawrenson, Stella Koutsikou, Bridget Lumb, Richard Apps

*University of Bristol, School of Physiology, Pharmacology and Neuroscience, Bristol, United Kingdom***S192****THE ROLE OF THE CEREBELLUM IN MOTION CONTROL**

Mario Manto

*FNRS ULB Belgium, UEM GRIM, Brussels, Belgium***S193****THE ROLE OF THE CEREBELLUM IN TREMOR GENESIS**Andrea Kovács¹, Nándor Pintér², Anita Kamondi³¹ *Semmelweis University, János Szentágothai Doctoral School of Neurosciences, National Institute of Clinical Neurosciences, Department of Neurology, Budapest, Hungary*² *Dent Neurologic Institute, Neuroimaging Research, Amherst, NY, USA*³ *National Institute of Clinical Neurosciences, Semmelweis University, Department of Neurology, Budapest, Hungary***S194****THE ROLE OF THE CEREBELLUM IN MOVEMENT DISORDERS**

Martin Bares

*Masaryk University, Brno, Czech Republic, 1st Department of Neurology, Brno, Czech Republic***11:00 – 12:30 SYMPOSIUM XXVI.**

ERZSÉBET I. ROOM

PRESURGICAL EVALUATION IN EPILEPSY SURGERY**Chair:** Loránd Erőss**S195****PHYSIOLOGICAL PROPERTIES OF THE SEIZURE ONSET ZONE AND BRAIN CONNECTIVITY: INSIGHTS GAINED FROM CALLOSOTOMY PROCEDURES**

Ashesh Mehta

*Hofstra Northwell School of Medicine, Department of Neurosurgery, Manhasset, USA***S196****NEW APPROACH TO PRESURGICAL EVALUATION IN EPILEPSY SURGERY**

Loránd Erőss

*National Institute of Clinical Neurosciences, Budapest, Department of Functional Neurosurgery and Center of Neuromodulation, Budapest, Hungary***S197****FORAMEN OVALE ELECTRODES IN EPILEPSY**László Entz¹, Dániel Fabó², Péter Halász¹, László Halász², Loránd Erőss¹¹ *National Institute of Clinical Neurosciences, Budapest, Department of Functional Neurosurgery and Center of Neuromodulation, Budapest, Hungary*² *National Institute of Clinical Neurosciences, Budapest, Epilepsy Unit, Budapest, Hungary***11:00 – 12:30 SYMPOSIUM XXVII.**

LÁNCÍD ROOM

THE INTERICTAL AND ICTAL BEHAVIOUR OF EPILEPTIC NEURONS**Chair:** Daniel Fabo**S198****DIFFERENT REGION-SPECIFIC NETWORKS SUSTAIN FOCAL SEIZURES WITH A FAST-ACTIVITY ONSET: EVIDENCE FROM PATIENTS AND ANIMAL MODELS**

Marco De Curtis

*Fondazione IRCCS Istituto Neurologico Carlo Besta, Epilepsy Unit, Milan, Italy***S199****GENERATION OF HEALTHY AND PATHOLOGICAL SYNCHRONOUS EVENTS IN THE HIPPOCAMPUS: MODULATION OF CELLULAR AND NETWORK PARAMETERS RESULTS IN ALTERED DYNAMICS**

Attila Gulyas

*Institute of Experimental Medicine, Hungarian Academy of Sciences, Laboratory of Cerebral Cortex Research, Budapest, Hungary***S200****PAROXYZMAL DEPOLARIZATION SHIFT – IS IT AN INTERICTAL PHENOMENON IN HUMANS?**

Daniel Fabo

*National Institute of Clinical Neurosciences, Budapest, Epilepsy Unit, Budapest, Hungary***11:00 – 12:30 FREE COMMUNICATION XII.**

ERZSÉBET II. ROOM

BRAIN STIMULATION 2.**Chair:****O207****SAFETY AND EFFECTS ON MOTOR CORTEX EXCITABILITY OF FIVE CLOSELY REPEATED CATHODAL TRANSCRANIAL DIRECT CURRENT STIMULATIONS**Antonino Uncini¹, Filippo Zappasodi¹, Gabriella Musumeci², Riccardo Navarra¹, Massimo Caulo¹, Vincenzo Di Lazzaro²¹ *University "G. d'Annunzio" Chieti-Pescara, Italy, Department of Neuroscience, Imaging and Clinical Sciences, Chieti, Italy*² *Università Campus Bio-Medico di Roma, Department of Medicine, Rome, Italy***O201****INTERHEMISPHERIC PROCESSING IN HYPERKINETIC MOVEMENT DISORDERS**Tommaso Bocci¹, Davide Barloscio¹, Laura Parenti¹, Anna De Rosa¹, Simone Rossi², Alberto Priori³, Ferdinando Sartucci¹¹ *University of Pisa, Department of Clinical and Experimental Medicine, Pisa, Italy*² *University of Siena, Department of Neurological and Neurosensory Sciences, Siena, Italy*³ *University of Milan, Dipartimento di Scienze della Salute, Milan, Italy*



0202

COMBINING THE STRENGTHS OF PASSIVE FUNCTIONAL MAPPING AND ELECTRICAL CORTICAL STIMULATION

Robert Prueckl¹, Christopher Kapeller¹, Johannes Gruenwald¹, Christoph Guger¹, Francisco Fernandes², Martin Walchshofer², Alexander Heilingner², Hiroshi Ogawa³, Kyousuke Kamada³, Milena Korostenskaja⁴

¹ Guger Technologies OG, Research & Development, Schiedlberg, Austria

² G.tec medical engineering GmbH, Research & Development, Schiedlberg, Austria

³ Asahikawa Medical University, Neurosurgery, Asahikawa, Japan

⁴ Florida Hospital for Children, Neurosurgery, Orlando, USA

0203

NEUROMODULATION OF LOWER LIMB MOTOR CIRCUITRY WITH TRANSCUTANEOUS LUMBAR SPINAL CORD DIRECT CURRENT STIMULATION

Mamede De Carvalho¹, Mariana Pereira¹, Sofia Fernandes², Pedro Cavaleiro Miranda²

¹ Institute of Physiology, Faculty of Medicine, University of Lisbon, Instituto de Medicina Molecular, Lisboa, Portugal

² Faculdade de Ciências, Universidade de Lisboa, Instituto de Biofísica e Engenharia Biomédica, Lisboa, Portugal

0204

SIMULTANEOUS BI-HEMISPHERIC REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION FOR UPPER LIMB MOTOR RECOVERY IN CHRONIC STROKE: A DOUBLE BLIND PLACEBO CONTROLLED STUDY

Raffaella Chieffo¹, Giuseppe Scopelliti¹, Mario Fichera¹, Giovanni Di Maggio¹, Roberto Santangelo¹, Simone Guerrieri¹, Elise Houdayer¹, Abraham Zangen², Giancarlo Comi¹, Letizia Leocani¹

¹ Hospital San Raffaele, Department of Neurology, Milan, Italy

² Ben-Gurion University, Department of Life Sciences, Beer-Sheva, Israel

0205

MOTOR EVENT-RELATED DESYNCHRONIZATION/SYNCHRONIZATION (ERD/ERS) IS MODULATED BY TRANSCRANIAL STATIC MAGNETIC FIELD STIMULATION (TSMS)

Gurutzi Azcona¹, Manuel Alegre², Guglielmo Foffani³

¹ Complejo Hospitalario de Navarra, Clinical Neurophysiology, Pamplona, Spain

² Clínica Universidad de Navarra, Clinical Neurophysiology, Pamplona, Spain

³ Hospital Universitario HM Puerta del Sur, Center for Neuroscience, Madrid, Spain

0206

THE EFFICACY OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IN TREATING PATIENTS WITH CHRONIC DAILY HEADACHE

Ann Abdel Kader¹, Ebtesam Fahmy², Ayatullah Ahmad¹, Amira Labib¹, Leqaa Elmekawwy¹

¹ Cairo University, Department of Clinical Neurophysiology, Cairo, Egypt

² Cairo University, Department of Neurology, Cairo, Egypt

0208

EVIDENCE BY DIRECT CURRENT STIMULATION (TDCS) OF CEREBELLUM INVOLVEMENT IN PAIN PERCEPTION AND MODULATION IN HUMANS

T. Bocci¹, D. Barloscio¹, L. Parenti¹, R. Ferrucci², A. Priori², M. Valeriani^{3,4}, F. Sartucci^{1,5}

¹ Department of Clinical and Experimental Medicine, Cisanello Neurology Unit, Pisa University Medical School, Pisa, Italy

² Department of Neurological Sciences, University of Milan, Fondazione IRCCS Ospedale Maggiore Policlinico, Milan, Italy

³ Division of Neurology, Ospedale Bambino Gesù, IRCCS, Rome, Italy

⁴ Center for Sensory-Motor Interaction, Aalborg University, Aalborg, Denmark

⁵ Neuroscience Institute, CNR, Pisa, Italy

11:00 – 12:30

FREE COMMUNICATION XIII.

ISTVÁN ROOM

NEUROPHYSIOLOGY IN THE DIAGNOSIS AND TREATMENT OF DISEASES 2.

Chair: Tihomir Ilic

0209

IMPROVED DIAGNOSIS OF CERVICAL MYELOPATHY THROUGH MULTI-MODAL NEUROPHYSIOLOGICAL ASSESSMENTS

Jan Rosner¹, Catherine Jutzeler², Michele Hubli¹, John Kramer², Armin Curt¹

¹ Balgrist University Hospital, Spinal Cord Injury Center, Zurich, Switzerland

² ICDORD, ICDORD (International Collaboration on Repair Discoveries), Vancouver, Canada

0210

ABNORMAL MOVEMENTS MIMICKING TREMOR IN AMYOTROPHIC HANDS IN ADULTS

Joao Leote¹, Judith Navarro-Otano², Jordi Casanova-Molla², Joseph Valls-Solé²

¹ Instituto de Biofísica e Engenharia Biomédica, Faculdade de Ciências, Universidade de Lisboa. Portugal, Neurosurgery Department, Hospital Garcia de Orta. Almada. Portugal., Almada, Portugal

² Unitat d'Electromiografia, Servei de Neurologia, Hospital Clínic, Universitat de Barcelona, IDIBAPS (Institut d'Investigació Biomèdica August Pi i Sunyer), Neurology, Barcelona, Spain

0211

FIRST SEEG EXAMINATION IN UNIVERSITY OF PÉCS

Marton Toth¹, Zsolt Horvath², Tamas Doczi², Diana Kuperczko², Jozsef Janszky²

¹ University of Pécs, Department of Neurology, Pécs, Hungary

² University of Pécs, Department of Neurosurgery, Pécs, Hungary

0212

SHORTENING OF THE DURATION OF SLEEP SPINDLES; A DIAGNOSTIC BIOMARKER FOR POST-TRAUMATIC EPILEPSY

Pedro Andrade, Asla Pitkänen

A.I. Virtanen Institute for Molecular Sciences, Epilepsy Research laboratory, Kuopio, Finland

0213

IMPORTANCE OF MUSCULAR STRENGTH FOR CARDIOVASCULAR FUNCTION IN PARKINSON'S DISEASE

Mahmoud Alomari¹, Hanan Khalil¹, Omar Khabour², Robert Wood³

¹ Jordan University of Science and Technology, Rehabilitation Sciences, Irbid, Jordan

² Jordan University of Science and Technology, Medical Laboratory Science, Irbid, Jordan

³ New Mexico State University, Kinesiology, Las Cruces, USA

0214

INTERDEPENDENCE OF HEART AND BRAIN BIOELECTRICAL ACTIVITY

Ewa Zalewska

Nalecz Institute of Biocybernetics and Biomedical Engineering, PAS, Department of Neuroengineering, Warsaw, Poland

11:00 – 12:30

PRACTICAL TIPS FOR TRAINEES XV-XVI.

VIEW A ROOM

SMALL FIBRE TESTING

Dirk Czesnik

NERVE CONDUCTION BLOCK: WHAT, WHERE, WHY AND WHEN?

Antonino Uncini

12:30 – 13:00

CLOSING CEREMONY

BALLROOM



11:45 – 12:45 POSTER SESSION I.

BALLROOM

BRAIN STIMULATION I.

Chair: Vildan Yayla

BALLROOM

P215

DRIVING HUMAN MOTOR CORTICAL OSCILLATIONS LEADS TO BEHAVIOURALLY RELEVANT CHANGES IN LOCAL GABA(A) INHIBITION: A TACS-TMS STUDY

Magdalena Nowak¹, Emily Hinson¹, Freek Van Ede², Alek Pogosyan³, Andrea Guerra⁴, Andrew Quinn², Peter Brown³, Charlotte Stagg¹
¹ University of Oxford, Nuffield Department of Clinical Neurosciences, Oxford, United Kingdom

² University of Oxford, Department of Psychiatry, Oxford, United Kingdom

³ University of Oxford, MRC Brain Network Dynamics Unit, Oxford, United Kingdom

⁴ Sapienza University of Rome, Department of Neurology and Psychiatry, Rome, Italy

P216

THE EFFICACY OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IN TREATING PATIENTS WITH CHRONIC DAILY HEADACHE

Ann Abdel Kader¹, Ebtesam Fahmy², Ayatullah Ahmad¹, Amira Labib¹, Leqaa Elmekkawy¹
¹ Cairo University, Department of Clinical Neurophysiology, Cairo, Egypt

² Cairo University, Department of Neurology, Cairo, Egypt

P217

SERUM METABOLIC PROFILE OF CREATINE CORRELATES WITH REPEATED MOTOR EVOKED POTENTIALS: A STUDY ON TMS-INDUCED REPETITION SUPPRESSION

Elisa Kallioniemi¹, Olli Kärkkäinen², Sara Määttä¹, Mervi Könönen¹, Petri Kivimäki³, Outi Kaarre⁴, Virve Kekkonen⁴, Eila Laukkanen⁴, Tommi Tolmunen⁴
¹ Kuopio University Hospital, Department of Clinical Neurophysiology, Kuopio, Finland

² University of Eastern Finland, School of Pharmacy, Kuopio, Finland

³ University of Eastern Finland, School of Medicine, Kuopio, Finland

⁴ Kuopio University Hospital, Department of Adolescent Psychiatry, Kuopio, Finland

P218

MOTOR CORTICAL ADAPTATION TO EXTERNAL STIMULI IS ALTERED IN UNVERRICHT-LUNDBORG TYPE MYOCLONUS EPILEPSY

Petro Julkunen¹, Olli Löfberg¹, Elisa Kallioniemi¹, Reetta Kälviäinen², Esa Mervaala¹
¹ Kuopio University Hospital, Department of Clinical Neurophysiology, Kuopio, Finland

² Kuopio University Hospital, Department of Neurology, Kuopio, Finland

P219

CORTICAL EXCITABILITY IN DYSTROPHIA MYOTONICA TYPE 1

Vildan Yayla¹, Arsida Bajrami¹, Filiz Azman², Nejla Sozer¹, Sultan Cagirci³
¹ Bakirkoy Dr. Sadi Konuk Training And Research Hospital, Department of Clinical Neurophysiology and Neurology, Istanbul, Turkey

² Sirmak State Hospital, Department of Neurology, Sirmak, Turkey

³ Denizli Servergazi State Hospital, Department of Neurology, Denizli, Turkey

P220

EXTRACTION AND DECODING OF VAGUS NERVE MEDIATED BLOOD PRESSURE AND RESPIRATORY INFORMATION FOR BIOELECTRONIC MEDICINE PURPOSES

Cristian Sevcencu

Aalborg University, Department of Health Science and Technology, Aalborg, Denmark

P222

DIAGNOSTIC AND THERAPEUTIC POSSIBILITIES OF TRANSCRANIAL MAGNETIC STIMULATION IN PATIENTS AFTER TRAUMATIC BRAIN INJURY

Miroslav Kopachka¹, Elena Troshina¹, Elena Sharova², Oleg Zaitsev³, Marina Chelyapina², Lubov Oknina²
¹ Federal State Autonomous Institution «N. N. Burdenko National Scientific and Practical Center for Neurosurgery» the Ministry of Healthcare of the Russian Federation, Clinical Neurophysiology, Moscow, Russia

² Institute of Higher Nervous Activity and Neurophysiology of RAS (IHNA&NPh RAS), Clinical Neurophysiology, Moscow, Russia

³ Federal State Autonomous Institution «N. N. Burdenko National Scientific and Practical Center for Neurosurgery» the Ministry of Healthcare of the Russian Federation, Department of Psychiatry, Moscow, Russia

P223

ANALYSIS OF ABDUCTOR POLLICIS BREVIS AND ORBICULARIS ORIS MUSCLES REPRESENTATION OF FULL FACE TRANSPLANTATION PATIENTS USING TMS

Kadir Gök¹, Ela Naz Döğer¹, Mehmet Berke Göztepe², Melahat Gök³, Hilmi Uysal⁴, Özlenen Özkan⁵, Ömer Özkan⁵, Utku Şenol⁶, Ebru Apaydın Doğan⁴, Ebru Barçın⁴, İnci Bilge¹, Ayhan Şavkliydiz¹, Hamza Feza Carlak¹, Övünç Polat¹, Ömer Halil Çolak¹
¹ Akdeniz University, Faculty of Engineering, Department of Electrical and Electronics Engineering, Antalya, Turkey

² Akdeniz University, Faculty of Medicine, Antalya, Turkey

³ Akdeniz University, Faculty of Medicine, Department of Physiology, Antalya, Turkey

⁴ Akdeniz University, Faculty of Medicine, Department of Neurology, Antalya, Turkey

⁵ Akdeniz University, Faculty of Medicine, Department of Plastic and Reconstructive Surgery, Antalya, Turkey

⁶ Akdeniz University, Faculty of Medicine, Department of Radiology, Antalya, Turkey

P224

EFFECT OF THE ANODAL TRANSCRANIAL DIRECT CURRENT STIMULATION OVER THE CEREBELLUM ON THE MOTOR CORTEX EXCITABILITY

Bülent Cengiz¹, Mehlika Ateş², Halil Alaydın³
¹ Gazi University Faculty of Medicine, Clinical Neurophysiology, Ankara, Turkey

² Dışkapı Yıldırım Beyazıt Education and Research Hospital, Department of Neurology, Ankara, Turkey

³ Gazi University Faculty of Medicine, Department of Neurology, Ankara, Turkey

P225

EFFECT OF 30, 50 AND 100 HZ TETHA BURST STIMULATION ON HEALTHY INDIVIDUALS

Zeynep Ozdemir, Gorkem Sirin, Yesim Kayki, Erkan Acar, Aysun Soysal

Bakirkoy Prof. Dr. Mazhar Osman Training and Research Hospital for Psychiatric, Neurologic and Neurosurgical Diseases, Department of Neurology, Istanbul, Turkey

P226

THE EFFECT OF INTERSTIMULUS INTERVAL BETWEEN THE CONDITIONING AND TEST STIMULUS ON INHIBITION AND FASCILITATION: A TRANSCRANIAL MAGNETIC STIMULATION STUDY

Zeynep Ozdemir, Gorkem Sirin, Yesim Kayki, Erkan Acar, Aysun Soysal

Bakirkoy Prof. Dr. Mazhar Osman Training and Research Hospital for Psychiatric, Neurologic and Neurosurgical Diseases, Department of Neurology, Istanbul, Turkey

PERIPHERAL NERVE ULTRASOUND EXAMINATIONS

BALLROOM

Chair: Zsuzsanna Arányi

P227

CARPAL TUNNEL SYNDROME GRADING USING HIGH-RESOLUTION ULTRASONOGRAPHY

Hala Elhabashy¹, Reem Atef¹, Basma Bahgat¹, Sandra Ahmed², Aya Salah¹
¹ Cairo University, Clinical Neurophysiology, Cairo, Egypt

² Cairo University, Neurology, Cairo, Egypt


P228
REVERSIBLE AXONAL CONDUCTION BLOCKS AND SONOGRAPHIC DISTAL MEDIAN-NERVE ENLARGEMENT IN A YOUNG PATIENT WITH ACUTE MOTOR AXONAL NEUROPATHY

Marija Rakic¹, Zsuzsanna Arányi², Arastum Karimov¹, Benjamin Bereznai¹, Erika Scheidl¹
¹ Evangelisches Krankenhaus Dierdorf-Selters, Department of Neurology, Selters, Germany

² Sennelweis University, Department of Neurology, Budapest, Hungary

P229
PERIPHERAL NERVE INJURY AFTER NERVE BLOCKADE

Nils Wolfram, Janus Kaufmann Lindquist, Martin Lauritzen

Rigshospitalet Glostrup, Clinical Neurophysiology, Copenhagen, Denmark

P230
ULNAR EPINEURAL DISCONTINUITY AND ELECTROPHYSIOLOGICAL CHANGES IN A YOUNG GIRL FOLLOWING ULNAR FRACTURE

Janus Kaufmann Lindqvist, Nils Wolfram

University of Copenhagen, Department of Clinical Neurophysiology, Glostrup, Denmark

P231
HIGH RESOLUTION ULTRASOUND OF PERIPHERAL NERVES IN AMYOTROPHIC LATERAL SCLEROSIS

Erisela Qerama, Simon Østergaard Wehrs, Sara Silkær Bak, Maria Thelin Johansson, Anders Fuglsang-Frederiksen

Aarhus University Hospital, Department of Neurophysiology, Aarhus, Denmark

CN IN THE DIAGNOSIS AND TREATMENT OF PAEDIATRIC DISORDERS
Chair: Maria-Dominique Lamblin, András Fogarasi

BALLROOM
P232
ATTENTION DEFICIT HYPERACTIVITY DISORDER IN CHILDREN; CLINICAL AND POLYSOMNOGRAPHIC STUDY

Ahmed Elghoneimy¹, Ann Abdel Kader², Omneya Raafat³, Ayatullah Ahmad², Amira Labib², Basma Elsayed²
¹ Cairo University, Department of Neurology, Cairo, Egypt

² Cairo University, Department of Clinical Neurophysiology, Cairo, Egypt

³ Cairo University, Department of Psychiatry, Cairo, Egypt

P233
LOCAL AND DISTANT DYSREGULATION OF SYNCHRONIZATION AROUND INTERICTAL SPIKES IN BECTS

Emilie Bourel-Ponchel, Mahdi Mahmoudzadeh, Fabrice Wallois

University of Picardie Jules verne, INSERM U1105 GRAMFC, Amiens, France

P235
LOCALIZING NON-EPILEPTIC ABNORMAL BRAIN FUNCTION IN CHILDREN USING HIGH DENSITY EEG (HDEEG): ELECTRIC SOURCE IMAGING (ESI) OF FOCAL SLOWING

Sara Baldini¹, Ana Coito², Christian Korff³, Karl Schaller⁴, Margitta Seeck¹, Francesca Pittau¹, Serge Vulliemoz¹
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ELECTROPHYSIOLOGICAL ASSESSMENT OF GUILLAIN-BARRE SUBTYPES IN A SAMPLE OF IRAQI CHILDREN

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AXONAL EXCITABILITY FINDINGS IN TYPE 1 DIABETES MELLITUS – MEDIAN NERVE VERSUS TIBIAL NERVE COMPARISON

Pinar Gencpınar¹, Gamze Celmeli², Abir Alaamel³, Gizem Kızılay³, Özgür Duman⁴, Senay Haspolat⁴, Hilmi Uysal³
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FUNCTIONAL CONNECTIVITY
Chair: Fabrizio Vecchio, Márk Molnár

BALLROOM
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HOMONYMOUS IB INHIBITION DURING REMOTE MUSCLE CONTRACTION

Miklos Lukacs

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MUSCLE CONTRACTION DOES NOT ALWAYS TRIGGER THE APPEARANCE OF MOTOR EVOKED POTENTIAL POLYPHASIA IN HEALTHY INDIVIDUALS

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GENDER DIFFERENCES IN RESTING STATE FUNCTIONAL BRAIN NETWORKS

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INSULA CONNECTIVITY DURING WAKEFULNESS AND SLEEP STUDIED THROUGH SINGLE PULSE ELECTRICAL STIMULATION DURING SEEG RECORDINGS

Anca Adriana Arbune¹, Ioana Mindruta¹, Mihai Maliia¹, Irina Popa¹, Cristian Donos², Sabina Ene², Jean Ciurea³,

Andrei Barborica²
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³ Bagdasar-Arseni Emergency Hospital, Neurosurgery, Bucharest, Romania

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DYNAMIC TIME WARPING DISTANCE BASED CONNECTIVITY: A NEW METHOD FOR RESTING-STATE FMRI FUNCTIONAL CONNECTIVITY ANALYSIS

Regina Meszlényi¹, Ladislav Peska², Petra Hermann¹, Krisztian Buza¹, Viktor Gál¹, Zoltán Vidnyánszky¹
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² Charles University, Faculty of Mathematics and Physics, Prague, Czech Republic

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FUNCTIONAL CONNECTIVITY ANALYSIS OF CORTICO-CORTICAL EVOKED POTENTIALS

Bálint File¹, Emília Tóth², Virág Bokodi², Zsolt Keczer¹, László Entz³, István Ulbert¹, Dániel Fabó²
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NEUROPHYSIOLOGY OF SENSORY SYSTEMS

BALLROOM

Chair: Hatice Tankisi

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NORMAL CORTICAL MODULATION OF SUBCORTICAL STRUCTURES IS ALTERED IN CERVICAL DYSTONIA

Meral E. Kiziltan, Oya Ozturk, Aysegul Gunduz*Istanbul University, Cerrahpasa School of Medicine, Department of Neurology, Istanbul, Turkey*

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FREQUENCY DEPENDENT CURRENT PERCEPTION THRESHOLD IN JAPANESE

Setsu Nakatani-Enomoto¹, Madoka Yamazaki², Yoshitsugu Kamimura³, Hiroyuki Enomoto¹, Kanako Wake⁴, Soichi Watanabe⁴, Yoshikazu Ugawa¹¹ *Fukushima Medical University, Department of Neurology, Fukushima, Japan*² *Daito Bunka University, Department of Health Science, Saitama, Japan*³ *Utsunomiya University, Department of Information Science, Utsunomiya, Japan*⁴ *National Institute of Information and Communications Technology, Electromagnetic Compatibility Laboratory Applied Electromagnetic Research Institute, Tokyo, Japan*

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ABDOMINAL ACUPUNCTURE REDUCES PAIN AT THE SPINAL CORD LEVEL

Massimiliano Valeriani¹, Elisa Testani², Stefano Liguori³, Daniele Coraci⁴, Cristiano Pecchioli⁵, Luca Padua⁶, Costanza Pazzaglia⁵¹ *Ospedale Bambino Gesù, Neurology, Rome, Italy*² *University of Siena, Neurology, Siena, Italy*³ *Paracelso Institute, Paracelso Insitute, Rome, Italy*⁴ *Sapienza University of Rome, C) Board of Physical Medicine and Rehabilitation, Rome, Italy*⁵ *Don Carlo Gnocchi Onlus Foundation, Neurology, Milan, Italy*⁶ *Università Cattolica del Sacro Cuore, Department of Neuroscience, Rome, Italy*

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PAINFUL LASER EVOKED POTENTIAL INHIBITION DURING HIGH-FREQUENCY NON-NOXIOUS

SOMATOSENSORY STIMULATION

Massimiliano Valeriani¹, Vincenzo Rizzo², Costanza Pazzaglia³, Angelo Quartarone², Catello Vollono⁴¹ *Ospedale Bambino Gesù, Neurology, Rome, Italy*² *University of Messina, Department of Neurosciences, Psychiatry, and Anaesthesiological Science, Messina, Italy*³ *Don Carlo Gnocchi Onlus Foundation, Neurology, Milan, Italy*⁴ *Università Cattolica del Sacro Cuore, Department of Neuroscience, Rome, Italy*

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LASER EVOKED CUTANEOUS SILENT PERIODS IN DIAGNOSIS OF CHEMOTHERAPY INDUCED SMALL FIBER NEUROPATHY

Baris Isak¹, Hatice Tankisi², Lise Ventzel³, Kirsten Pughdahl², Nanna Brix-Finnerup³, Anders Fuglsang-Frederiksen²¹ *Marmara University Hospital, Department of Neurology, Istanbul, Turkey*² *Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark*³ *Aarhus University, Danish Pain Research Center, Aarhus, Denmark*

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LEPS ABNORMALITIES IN THE EVALUATION OF DYSPIGMENTED AND HYPOESTHETIC PATCHES IN TUBERCULOID LEPROSY

Sara Yagüe

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SIMULTANEOUS RECORDING OF CERVICAL AND OCULAR VESTIBULAR-EVOKED MYOGENIC POTENTIALS

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POSTER SESSION I.

ERZSÉBET I. ROOM

OTHER 1.

Chair: Tudor Lupescu

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CONTRIBUTION OF ELECTROPHYSIOLOGY IN MUSCULAR CHANNELOPATHIES DIAGNOSIS

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PREPULSE INHIBITION OF BLINK REFLEX AFTER DIFFERENT TYPES OF SOMATOSENSORY STIMULI

Meral E. Kiziltan, Aysegul Gunduz*Istanbul University, Cerrahpasa School of Medicine, Department of Neurology, Istanbul, Turkey*

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KNOWLEDGE OF ELECTROMYOGRAPHY (EMG) AMONG SUB-SAHARAN AFRICAN PATIENTS – A PILOT SURVEY

Philip Adebayo¹, Funmilola Taiwo², Mayowa Owolabi³¹ *Aga Khan Hospital, Neurology, Dar es Salaam, Tanzania*² *Benjamin Carson (Snr) Schools of Medicine, Ilshah, Neurology, Ilshah, Nigeria*³ *University of Ibadan, Neurology, Ibadan, Nigeria*

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CARPAL TUNNEL SYNDROME AND OBJECT DROPPING IN YOUNG DENTISTS

Zeliha Matur¹, Tunahan Zengin², Naci Emre Bolu², Ali Emre Öge³¹ *Istanbul Bilim University, Faculty of Medicine, Department of Neurology, Istanbul, Turkey*² *Istanbul University, Istanbul Faculty of Medicine, Istanbul, Turkey*³ *Istanbul University, Istanbul Faculty of Medicine, Department of Neurology, Istanbul, Turkey*

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INCREASED BARRETT-BARRETT CONDUCTANCE IN MOTOR AXONS OF PATIENTS WITH ANTI-GAD ANTIBODY

Tomoko Nakazato¹, Kazuaki Kanai¹, Yasushi Shimo¹, Hugh Bostock², Nobutaka Hattori¹¹ *Juntendo University School of Medicine, Department of Neurology, Tokyo, Japan*² *University College London, Institute of neurology, London, United Kingdom*

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SMELL TRIGGERED SEIZURE IN A PATIENT WITH TEMPORAL LOBE EPILEPSY

Emel Ur Özçelik, Hakan Yener, Mine Sezgin, Nermin Görkem Şirin, Betül Baykan

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DETECTION OF EARLY MOTOR INVOLVEMENT IN DIABETIC POLYNEUROPATHY USING A NOVEL MUNE METHOD-MSCANFIT

MUNE

Alexander Kristensen

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OBJECT DROPPING IN CARPAL TUNNEL SYNDROME: CLINICAL AND ELECTROPHYSIOLOGICAL FEATURES

Zeliha Matur¹, Emine Taşkıran², Ali Emre Öge³¹ *Istanbul Bilim University, Faculty of Medicine, Department of Neurology, Istanbul, Turkey*² *Istanbul University, Cerrahpasa School of Medicine, Department of Neurology, Istanbul, Turkey*³ *Istanbul University, Istanbul Faculty of Medicine, Department of Neurology, Istanbul, Turkey*



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SPINDLE-SHAPED HIGH FREQUENCY ($\pm$ 100 HZ) OSCILLATORY ACTIVITY IN SCALP EEG OF CHILDREN

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CORTICAL EXCITABILITY CHANGES IN THE EARLIEST STAGES OF AMYOTROPHIC LATERAL SCLEROSIS (ALS)

Sophia Volik¹, Sergey Nikitin², Eugenia Naumova²

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² Medical Center "Practical Neurology", Society of Experts in Neuromuscular Disease, Clinical Neurophysiology, Moscow, Russia

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CONTRACEPTIVE IMPLANT INDUCED ULNAR NEUROPATHY

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OTHER 2.

Chair: Concepcion Maeztu, Tihomir Illic

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EFFECT OF STRUCTURAL COMPLEXITIES IN HEAD MODELLING ON NEONATAL EEG SOURCE ANALYSIS

Hamed Azizollahi, Ardalan Aarabi, Fabrice Wallios

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SJÖGREN'S SYNDROME PRESENTING WITH MYELITIS AND WITHOUT SICCA SYMPTOMS

Hacer Erdem Tilki, Şeyda Bayıl

Ondokuz mayıs university, Department of Neurology, Samsun, Turkey

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CORRELATION OF THYROID FUNCTION DISTURBANCES AND AMYOTROPHIC LATERAL SCLEROSIS SYNDROME

Tinatın Kherkheulidze¹, Maia Beridze², Nana Kvirkvelaia³, Omar Samushia³, Tsira Manjgaladze²,

Nino Khizanishvili⁴, Eka Devidze²

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PERIODICS LATERALIZED ÉPILEPTIFORM DISCHARGES RECORDED IN A CENTRO-PONTIC MYELINOLYSIS , A CASE REPORT

Fatima Zohra Benchohra

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SWALLOWING AND BRAINSTEM REFLEXES BEFORE AND AFTER MANDIBULAR SAGITTAL SPLIT OSTEOTOMY

Ayşenur Uzun¹, Zeliha Matur², Leyla Baysal Kırac³, Ali Emre Öge⁴

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THE EFFECTS OF HIGH-DOSE STEROIDS ON CORTICAL EXCITABILITY IN ACUTE MULTIPLE SCLEROSIS RELAPSES

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SMALL FIBER ASSESSMENT BY SUDOSCAN IN TRANSTHYRETIN FAMILIAL AMYLOID POLYNEUROPATHY TREATED PATIENTS – A LONGITUDINAL STUDY

José Castro¹, João Costa Costa², Isabel Castro¹, Daisy Abreu², Nilza Gonçalves², Isabel Conceição¹

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² Faculty of Medicine – University of Lisbon, Laboratory of Clinical Pharmacology and Therapeutics, Lisbon, Portugal

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AN UNUSUAL DEMYELINATING NEUROPATHY IN A PATIENT WITH DEFECTS IN THE DCTN1 GENE

Roberto Sans-Boza, Eva Villamil

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THE LRRK2-R1441C MUTATION DISRUPTS LONG-TERM POTENTIATION-LIKE PLASTICITY IN PARKINSON'S DISEASE PATIENTS

Raffaele Dubbioso, Anna De Rosa, Marcello Esposito, Silvio Peluso, Rosa Iodice, Giuseppe De Michele,

Lucio Santoro, Fiore Manganelli

Federico II University of Naples, Department of Neurosciences, Reproductive Sciences and Odontostomatology, Naples, Italy

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CARDIOVASCULAR FUNCTION AND BDNF IN PARKINSON'S DISEASE

Mahmoud Alomari

Jordan University of Science and Technology, Rehabilitation Sciences, Irbid, Jordan

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CONTRIBUTION TO NEUROLOGY FROM MILITARY MEDICAL SERVICE DURING THE RUSSO-TURKISH WAR (1877-1878) AND RUSSO-JAPANESE WAR (1904-1905) BY V.M.BEKHTEREV, HIS COLLEAGUES, AND STUDENTS

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EXPERIMENTAL NEUROPHYSIOLOGY

Chair: Vildan Yayla, Jonathan Cole

ERZSÉBET I. ROOM

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PLEASANT AND UNPLEASANT SOUND PERCEPTION IN PATIENTS WITH SEVERE AND MODERATE TBI USING CORRELATION DIMENSION D2 ANALYSIS

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THE EFFECTS OF SEX HORMONE FLUCTUATIONS IN MENSTRUAL CYCLE ON THE EEG DELTA RESPONSE

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THE EEG ALPHA RESPONSE IS AFFECTED BY CHANGES IN SEX HORMONE LEVELS IN TWO PHASES OF MENSTRUAL CYCLE

Gulsum Akdeniz¹, Emine Feyza Yurt¹, Gulsen Yilmaz¹, Gamze Dogan²
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² Hacettepe University, School of Medicine, Ankara, Turkey

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DISTRIBUTION OF SINGLE UNIT ACTIVITY PATTERNS IN SUBTHALAMIC NUCLEUS OF PARKINSONIAN PATIENTS

Elena Belova¹, Artem Nezvinskiy¹, Ulia Semenova¹, Svetlana Usova¹, Valentin Popov², Anna Gamaleya², Alexey Tomskiy², Alexey Sedov¹
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DYNAMICAL CHANGES ASSOCIATED WITH INTERICTAL EPILEPTIC SPIKES: AN IN VIVO STUDY USING MULTIMODAL RECORDING IN RATS

Lemay Araf-Yemmi, Cristian Arnal-Real, Mahdi Mahmoudzadeh, Fabrice Wallois

INSERM U1105, GRAMFC, Université de Picardie Jules Verne, CHU SUD, Medicine, Amiens, France

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THE NEUROPHYSIOLOGICAL MECHANISMS LINKING STUTTERING AND NORMAL SPEECH

Alexander Whillier¹, Sina Hommel¹, Nicole Neef², Alexander Wolff von Gudenberg³, Walter Paulus¹, Martin Sommer¹
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² Max Planck Institute for Human Cognitive and Brain Sciences, Department of Neuropsychology, Leipzig, Germany

³ Institut der Kasserler Stottertherapie, Speech Therapy, Kassel, Germany

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EFFECTS OF ODOURS ON ELECTROPHYSIOLOGICAL RESPONSES TO LASER PAIN STIMULI

Nicholas Fallon¹, Stephanie Cook², Vicente De Soto¹, Katerina Kokmotou¹, Andrej Stancak¹
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CN METHODS IN PREDICTING THE OUTCOME AND MONITORING THE COURSE OF A DISEASE
Chair: Antonio Martins da Silva, Nathan Gadoth

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EARLY DIFFERENTIAL DIAGNOSTIC BETWEEN AXONAL AND DEMYELINATING FORM OF GUILLAIN-BARRÉ SYNDROME IN CHILDREN

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POSTOPERATIVE CLINICAL MOTOR FINDINGS CORRELATIONS WITH IONM MEP RESULTS DURING INTRAMEDULLARY SPINAL CORD TUMOR REMOVAL. PRESENTATION OF 2 CASES

Vizmary Montes-Peña¹, Vincenzo Tramontano², Francesco Sala², Christian Soda²
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² Azienda Ospedaliera Universitaria Integrata Verona, Department of Neurosurgery, Verona, Italy

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VISUAL AND BRAINSTEM AUDITORY EVOKED POTENTIALS ABNORMALITIES IN THE PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

Anna Pokryszko-Dragan¹, Magdalena Szmyrka², Elzbieta Kusinska¹, Edyta Dziadkowiak¹, Marta Waliszewska-Prosó¹, Piotr Wiland², Ryszard Podemski¹
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LONGITUDINAL STUDY OF CORTICAL EXCITABILITY IN TREATED VERSUS UNTREATED PATIENTS WITH PROGRESSIVE MULTIPLE SCLEROSIS

Samar S. Ayache, Alain Créange, Jean-Pascal Lefaucheur, Moussa A. Chalah

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CHARACTERIZATION OF EVOLVING EEG PATTERNS IN PATIENTS WITH REMARKABLE LATE RECOVERY FROM COMA AFTER CARDIAC ARREST

Péter Forgács, Nicholas Schiff

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NON-INVASIVE DETECTION OF FAST RIPPLES IN LOW-NOISE EEG RECORDINGS

Ece Boran¹, Georgia Ramantani², Pamela Märzendorfer¹, Tabea Albert¹, Gabriel Curio³, Peter Hilfiker², Thomas Grunwald², Johannes Sarnthein¹, Tommaso Fedele¹
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³ Campus Benjamin Franklin, Charité, Neurology, Berlin, Germany

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BIOPHYSICAL INSIGHTS OF SENSORY AXONS IN MULTIFOCAL MOTOR NEUROPATHY

Boudewijn Sleutjes¹, Maria Kovalchuk¹, Leonard Van Schelven², Leonard Van den Berg¹, Hessel Franssen³
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² University Medical Centre Utrecht, Department of Medical Technology and Clinical Physics, Utrecht, The Netherlands

³ University Medical Centre Utrecht, UEM GRIM, Utrecht, The Netherlands

CN IN THE DETERMINATION OF PERSONALISED TREATMENT OPTIONS
Chair: Ferenc Nagy

ERZSÉBET I. ROOM
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NEUROPHYSIOLOGY IN THE ASSESSMENT OF THE EFFICACY OF THE REHABILITATION OF SENSOMOTOR DISTURBANCES DUE TO SPINAL CORD LESIONS

Vladislav Voitenkov¹, Evgenia Ekusheva², Natalia Sripchenko¹
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² I.M. Sechenov First Moscow State Medical University, Moscow, Russia

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USING OF BEREITSCHAFTSPOTENTIALS AND POLYMIOGRAPHY RECORDINGS AS A FUNDAMENTAL DIAGNOSTIC KEY OF AN UNCOMMON TYPE OF MOVEMENT DISORDER. CASE REPORT OF A SPINAL-GENERATED MOVEMENT DISORDER AT SLEEP ONSET CAUSING SEVERE INSOMNIA

Vizmary Montes-Peña¹, Jose Luis Boada-Cuellar¹, Sara Sánchez-Valiente², Diego Rodríguez-Mena¹
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² Clinical University Hospital Lozano Blesa, Department of Neurology, Zaragoza, Spain

**P295****EFFECTS OF FUNCTIONAL ELECTRIC STIMULATION AND TASK SPECIFIC TRAINING ON GAIT RECOVERY IN PATIENTS WITH STROKE: RANDOMIZED CONTROLLED TRIAL**Salma Marzouk¹, Amr Hassan², Mohamed Marzouk³, Moshira Darweesh⁴, Rasha Nazeer⁴¹ Cairo University, Department of Neurophysiology, Cairo, Egypt² Cairo University, Department of Neurology, Cairo, Egypt³ Cairo University, Department of Physiology, Cairo, Egypt⁴ Cairo University, Department of Physiotherapy, Cairo, Egypt**P296****STUDY OF SINGLE FIBER ELECTROMYOGRAPHY USING CONCENTRIC NEEDLE IN HEALTHY SUBJECTS**

Kazimierz Tomczykiewicz, Marta Durka-Kęsy

Military Institute of Medicine, Department of Neurology, Warsaw, Poland

P297**ATYPICAL CARPAL TUNNEL SYNDROME CAUSED (MIMICKED) BY BIFID MEDIAN NERVE**Zoltan Horváth¹, Elza Szabó¹, Gabriella Kovács², Edina T. Varga¹, László Vecsei^{1,3}¹ Department of Neurology, University of Szeged, Hungary² Affidea Diagnosztika-Szeged, Hungary³ MTA-SZTE Neuroscience Research Group, Szeged, Hungary**P298****CAN MUSIC ENHANCE MOVEMENT INTENTION?**Yoshie Nakajima¹, Tatsuya Mima², Yoshiyuki Tadokoro¹¹ Tokyo Medical university, Department of Nursing, Tokyo, Japan² Ritsumeikan University, The Graduate School of Core Ethics and Frontier Sciences, Kyoto, Japan

11:45 – 12:45

POSTER SESSION II.

BALLROOM

BRAIN STIMULATION II.**Chair:** Walter Paulus, Mika Kallio

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P299**MOTOR MAPPING WITH NAVIGATED TRANSCRANIAL MAGNETIC STIMULATION: DOES MORE STIMULI INCREASE THE ACCURACY?**Alexandra Poydasheva¹, Andrey Chernyavskiy², Ilya Bakulin¹, Natalia Suponeva¹, Michael Piradov³¹ Research Center of Neurology, Neurorehabilitation, Moscow, Russia² Institute of Physics and Technology, Russian Academy of Sciences, Moscow, Russia³ Research Center of Neurology, Moscow, Russia**P300****INFLUENCE OF RTMS WITH HIGH AND LOW FREQUENCY STIMULATION ON MOTOR AND EXECUTIVE FUNCTION IN PARKINSON'S DISEASE. FOLLOW-UP STUDY FOR HALF YEAR**Judit Mály¹, Noémi Geisz¹, Elek Dinya²¹ Institute of Neurorehabilitation, Sopron, Hungary² Digital Health Department of Semmelweis University, Budapest, Hungary**P301****CONTRIBUTION OF SOMATOSENSORY AND AUDITORY PROCESSING TO THE TMS EVOKED CORTICAL RESPONSE: A SHAM TMS-EEG STUDY**Virginia Conde¹, Irina Akopian¹, Leo Tomasevic¹, Konrad Stanek¹, Til Ole Bergmann², Hartwig Roman Siebner¹¹ Hvidovre Hospital, Danish Research Centre for Magnetic Resonance, Hvidovre, Denmark² University of Tübingen, Department of Neurology & Stroke, Tübingen, Germany**P302****RIGHT PARIETAL TDCS AND OBJECT-LOCATION MEMORY**Jovana Bjekić¹, Marija Čolić², Marko Živanović³, Sladjan Milanović¹, Saša Filipović¹¹ University of Belgrade - Institute for Medical Research, Department of Neuroscience, Belgrade, Serbia² University of Belgrade - Faculty of Sport and Physical Education, Department of Psychology, Belgrade, Serbia³ University of Belgrade - Faculty of Philosophy, Department of Psychology, Belgrade, Serbia**P303****TRANSCRANIAL DIRECT CURRENT STIMULATION OVER PARIETAL CORTEX AND ASSOCIATIVE MEMORY**Jovana Bjekić¹, Marko Živanović², Jelena Vujičić², Saša Filipović¹¹ University of Belgrade - Institute for Medical Research, Department of Neuroscience, Belgrade, Serbia² University of Belgrade - Faculty of Philosophy, Department of Psychology, Belgrade, Serbia**P304****WHERE LESS IS MORE: CONDUCTION FAILURES MAY LIMIT THE UPPER FREQUENCY IN RTMS INDUCED PLASTICITY AND IN CELL CULTURE DATA**Islam Halawa¹, Amir Goldental², Yuichiro Shirota¹, Ido Kanter³, Walter Paulus⁴¹ University Medical Centre Goettingen, Georg-August-University, Department of Clinical Neurophysiology, Göttingen, Germany² Bar Ilan University, Physics Department, Ramat Gan, Israel³ Gonda Multidisciplinary Brain Research Center at Bar Ilan University, Physics Department, Ramat Gan, Israel⁴ University Medical Centre Goettingen, Georg-August-University, Clinical Neurophysiology, Göttingen, Germany**P305****EFFECT OF PULSE WIDTH AND PHASE ON MEP LATENCY AND ITS SIGNIFICANCE IN INDUCING CORTICAL PLASTIC CHANGES**

Islam Halawa, Yuichiro Shirota, Martin Sommer, Walter Paulus

University Medical Centre Goettingen, Georg-August-University, Department of Clinical Neurophysiology, Göttingen, Germany

**P306****MOTOR CORTEX TRNS REDUCE PAIN AND IMPROVE AFFECTIVE AND COGNITIVE IMPAIRMENT IN PATIENTS WITH FIBROMYALGIA: PRELIMINARY RESULTS OF A RANDOMIZED SHAM-CONTROLLED TRIAL**

Filippo Brighina, Massimiliano Curatolo

*UO Neurologia e Neurofisiopatologia, Clinical Neurophysiology and Department of Neurology, Palermo, Italy***P307****TMS-BASED CORTICAL MAPPING IN DOUBLE-ARM TRANSPLANTATION**Kadir Gök¹, Ela Naz Döğer¹, Mehmet Berke Göztepe², Hilmi Uysal³, Özlenen Özkan⁴, Ömer Özkan⁴, Utku Şenol⁵, Ebru Apaydin Doğan³, Ebru Barçın³, İnci Bilge¹, Ayhan Şavkliyildiz¹, Hamza Feza Carlak¹, Övünç Polat¹, Ömer Halil Çolak¹¹ Akdeniz University, Faculty of Engineering, Department of Electrical and Electronics Engineering, Antalya, Turkey² Akdeniz University, Faculty of Medicine, Antalya, Turkey³ Akdeniz University, Faculty of Medicine, Department of Neurology, Antalya, Turkey⁴ Akdeniz University, Faculty of Medicine, Department of Plastic and Reconstructive Surgery, Antalya, Turkey⁵ Akdeniz University, Faculty of Medicine, Department of Radiology, Antalya, Turkey**P308****CROSS-FREQUENCY COUPLING IN THE HUMAN EPILEPTIC HIPPOCAMPUS**Virág Bokodi¹, Emília Tóth¹, Zoltán Somogyvári², Zsófia Maglóczy³, László Entz⁴, Loránd Eröss⁴, István Ulbert⁵, Dániel Fabó⁶¹ National Institute of Clinical Neurosciences, Budapest, Epilepsy Research laboratory, Budapest, Hungary² Hungarian Academy of Sciences, Wigner Research Institute for Physics, Budapest, Hungary³ Hungarian Academy of Sciences, Institute of Experimental Medicine, Budapest, Hungary⁴ National Institute of Clinical Neurosciences, Budapest, Neurosurgery, Budapest, Hungary⁵ Research Center for Natural Sciences, Hungarian Academy of Sciences, Institute of Cognitive Neuroscience and Psychology, Budapest, Hungary⁶ National Institute of Clinical Neurosciences, Budapest, Neurology Department, Budapest, Hungary**P309****TINNITUS RTMS TREATMENT GUIDED BY LOCAL SYNCHRONICITY OF THE RESTING STATE FMRI – A CASE REPORT**Tuomo Starck¹, Tuija Keinänen¹, Vesa Kiviniemi², Mika Kallio¹, Usko Huuskonen¹¹ Oulu University Hospital, Clinical Neurophysiology, Oulu, Finland² Oulu University Hospital, Diagnostic imaging, Oulu, Finland**P310****THERAPEUTIC USE OF TRANSCRANIAL MAGNETIC STIMULATION IN PAIN PATIENTS**Leo Alho¹, Jaakko Matomäki¹, Eliisa Löyttyniemi², Tero Taiminen¹, Satu Jääskeläinen¹¹ Turku University Hospital, Department of Clinical Neurophysiology, Turku, Finland² University of Turku, Dept of Biostatistics, Turku, Finland**P311****THE EFFECTIVENESS OF THE COMPLEX REPETITIVE PERIPHERAL MAGNETIC STIMULATION (RPMS) IN TREATMENT OF LUMBOSACRAL RADICULOPATHY**Vera Blokhina¹, Miroslav Kopachka², Elena Troshina², Elina Melikyan³, Sergey Nikolaev⁴¹ Medical Center “DeVita”, Moscow, Russia, Center for , Moscow, Russia² N.N. Burdenko National Scientific and Practical Center for Neurosurgery, Russia, Center for , Moscow, Russia³ Department of Medical Rehabilitation, Russian National Research Medical University named by N.I. Pirogov, Moscow, Russia, Center for , Moscow, Russia⁴ Medical Company Elf Ltd, Vladimir, Russia, Center for , Vladimir, Russia**CN AND NEUROIMAGING****Chair:** Csaba Juhász, István Kondákor**BALLROOM****P312****FMRI ANALYSIS OF THE HUMAN BRAIN’S NEUROPLASTICITY AS A BASIS OF MOVEMENT DISORDERS COMPENSATION AFTER TRAUMATIC BRAIN INJURY**Elena Sharova¹, Galina Boldyreva², Marina Chelyapina², Alexander Smirnov³, Anton Azarov⁴, Tatiana Mukhina⁵, Alexsey Gavron⁵, Michael Kulikov⁶, Evgenia Alexandrova⁷, Igor Pronin³¹ Institute of Higher Nervous Activity and Neurophysiology of RAS (IHNA&NPh RAS) , Clinical Neurophysiology, Moscow, Russia² Institute of Higher Nervous Activity and Neurophysiology of RAS (IHNA&NPh RAS) , Department of Clinical Neurophysiology, Moscow, Russia³ Federal State Autonomous Institution «N .N.Burdenko National Scientific and Practical Center for Neurosurgery» the Ministry of Healthcare of the Russian Federation, Department of Radiology, Moscow, Russia⁴ M.V. Lomonosov Moscow State University, Physics Department, Moscow, Russia⁵ National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Physics Department, Moscow, Russia⁶ Institute of Higher Nervous Activity and Neurophysiology of RAS (IHNA&NPh RAS) , Informatics, Moscow, Russia⁷ Federal State Autonomous Institution «N .N.Burdenko National Scientific and Practical Center for Neurosurgery» the Ministry of Healthcare of the Russian Federation, Department of TBI, Moscow, Russia**P313****CHANGES IN EEG COMPLEXITY OF BRAIN DYNAMICS ASSOCIATED WITH BOLD FLUCTUATIONS DURING RESTING STATE**Olga Martynova, Galina Portnova, Alina Sushinskaia-Teterova, Vladislav Balaev, Mikhail Atanov, Alexey Ivanitsky
Institute of Higher Nervous Activity and Neurophysiology of RAS (IHNA&NPh RAS), Human Higher Nervous Activity Lab, Moscow, Russia**P314****TWO DISTINCT PHENOTYPES OF CORTICOMOTOR HAND REPRESENTATION IN HUMAN MOTOR CORTEX**Raffaele Dubbioso, Estelle Raffin, Silas Haahr Nielsen, Kristoffer Hougaard Madsen, Peter Jagd Sørensen, Sofie Johanna Nilsson, Axel Thielscher, Hartwig Roman Siebner
Copenhagen University , Danish Research Centre for Magnetic Resonance, Centre for Functional and Diagnostic Imaging and Research (DRCMR), Copenhagen, Denmark**P315****SIMPLE CORRELATION ANALYSIS REVEALS FALSELY INTERPRETED INTERICTAL SPIKES CORRELATED TO ARTEFACTUAL SOURCES: A SIMULTANEOUS EEG–FMRI STUDY**Sampsa Turunen¹, Linda Kuusela², Liisa Metsähonkala³, Outi Sipilä⁴¹ Helsinki University Hospital, Department of Clinical Neurophysiology, HUS Medical Imaging Center, Helsinki, Finland² Helsinki University Hospital, Department of Radiology, HUS Medical Imaging Center, Helsinki, Finland³ Helsinki University Hospital, Epilepsy Unit, Department of Pediatric Neurology, Helsinki, Finland⁴ Helsinki University Hospital, Department of Nuclear Medicine, HUS Medical Imaging Center, Helsinki, Finland**P317****EXPLORING THE LATERALIZATION OF EMPATHY FOR PAIN**Nami Taniguchi¹, Naruhito Hironaga¹, Yuichi Takei², Yoshimasa Motoyama³, Mariko Hayamizu³, Shozo Tobimatsu¹¹ Kyushu University, Clinical Neurophysiology, Fukuoka, Japan² Gunma University, Psychiatry and Neuroscience, Gunma, Japan³ Kyushu University, Anesthesiology and Critical Care Medicine, Fukuoka, Japan

**CN OF THE AUTONOMIC NERVOUS SYSTEM****BALLROOM****Chair:** Mario Habek, Douglas Hägerström**P318****HEART RATE VARIABILITY IS NOT ABLE TO DETECT CARDIOVASCULAR AUTONOMIC DYSFUNCTION IN PATIENTS WITH CLINICALLY ISOLATED SYNDROME**Iva Milivojevic¹, Ivan Adamec², Luka Crnosija³, Magdalena Krbot Skoric², Tereza Gabelic², Tin Pavicic³, Mario Habek³¹ Special Hospital for Medical Rehabilitation Krapinske Toplice, Department of Physiotherapy, Krapinske Toplice, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia³ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia**P319****DIFFERENCES IN ADRENERGIC COMPONENTS OF BAROREFLEX RESPONSE TO VALSALVA MANEUVER IN PATIENTS WITH POSTURAL TACHYCARDIA SYNDROME AND HEALTHY SUBJECTS**Dunja Pucic¹, Bojana Nevajdic¹, Tomislav Mutak¹, Luka Crnosija¹, Magdalena Krbot Skoric², Tereza Gabelic², Ivan Adamec², Mario Habek¹¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia**P320****DIFFERENCES IN ADRENERGIC COMPONENTS OF BAROREFLEX RESPONSE TO VALSALVA MANEUVER IN PATIENTS WITH MULTIPLE SCLEROSIS AND HEALTHY SUBJECTS**Tomislav Mutak¹, Dunja Pucic¹, Bojana Nevajdic¹, Magdalena Krbot Skoric², Luka Crnosija¹, Tereza Gabelic¹, Gorana Vukorepa³, Ivan Adamec², Mario Habek¹¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia³ University Hospital Dubrava, Department of Neurology, Zagreb, Croatia**P321****DIFFERENCES IN ADRENERGIC COMPONENTS OF BAROREFLEX RESPONSE TO VALSALVA MANEUVER IN DIFFERENT PHENOTYPES OF MULTIPLE SCLEROSIS**Bojana Nevajdic¹, Tomislav Mutak¹, Dunja Pucic¹, Magdalena Krbot Skoric², Luka Crnosija¹, Tereza Gabelic², Biljana Dapic³, Ivan Adamec², Mario Habek¹¹ University of Zagreb, School of Medicine, Department of Neurology, Zagreb, Croatia² University Hospital Center Zagreb, Department of Neurology, Zagreb, Croatia³ General Hospital Zadar, Department of Neurology, Zadar, Croatia**P322****FULLY AUTOMATED R-PEAK DETECTION ALGORITHM FOR PATIENTS WITH EPILEPSY: FIRST STEP TOWARDS PORTABLE SEIZURE DETECTOR**Jesper Jeppesen¹, Sándor Beniczky¹, Peter Johansen², Per Sidenius³, Anders Fuglsang-Frederiksen¹¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark² Aarhus University, Department of Engineering, Aarhus, Denmark³ Aarhus University Hospital, Department of Neurology, Aarhus, Denmark**INTRAOPERATIVE NEUROPHYSIOLOGICAL METHODS****BALLROOM****Chair:** Mamede De Carvalho**P323****VALUE OF PULSE-TRAIN STIMULATION OF THE PEDICLE TRACKS FOR THE DETECTION OF THORACIC SCREWS MALPOSITION IN SCOLIOSIS SURGERY**Laura López Viñas¹, Lidia Cabañes Martínez¹, M. del Mar Moreno¹, Carlos Valera¹, Gema De Blas¹, Miguel Antón², Jesús Burgos¹, Ignacio Regidor¹¹ Hospital Universitario Ramon y Cajal, Clinical Neurophysiology, Madrid, Spain² Hospital Universitario Ramon y Cajal, Orthopedics, Madrid, Spain**P324****IMPROVEMENT IN THE REPRODUCIBILITY OF VISUAL EVOKED POTENTIALS IN INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING**Laura López Viñas¹, María del Mar Moreno Galera¹, Lidia Cabañes Martínez¹, Victor Rodríguez Berrocal², Luis Ley Urzaiz², Guillermo Martín Palomeque¹, Ignacio Regidor¹¹ Hospital Universitario Ramon y Cajal, Clinical Neurophysiology, Madrid, Spain² Hospital Universitario Ramon y Cajal, Neurosurgery, Madrid, Spain**P325****FEATURES OF INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING USED IN CAROTID ENDARTERECTOMY**Mariia Podgurskaia¹, Daria Ivanova¹, Sergey Nikhitin², Astanda Mushba¹, Oleg Vinogradov¹¹ National Medical and Surgical Center of Pirogov, 1st Department of Neurology, Moscow, Russia² Practical Neurology Center, 1st Department of Neurology, Moscow, Russia**P326****THE ROLE OF INTRAOPERATIVE NEUROPHYSIOLOGICAL MONITORING IN CAROTID ENDARTERECTOMY (CEE)**Podgurskaia Gennadiyevna¹, Ivanova Sergeevna¹, Vinogradov Ivanovich¹, Muhba Vasilievna¹, Nikitin Sergeevich²¹ National Medical and Surgical Center of Pirogov, 1st Department of Neurology, Moscow, Russia² Medical Center "Practical Neurology", Society of Experts in Neuromuscular Disease, 1st Department of Neurology, Moscow, Russia**NEUROPHYSIOLOGY IN THE INTENSIVE CARE UNIT****BALLROOM****Chair:** Mamede De Carvalho**P327****NONCONVULSIVE STATUS EPILEPTICUS CAUSED BY HERPES ENCEPHALITIS: NEUROPHYSIOLOGICAL FINDINGS AND CONTRIBUTION TO INTENSIVE CARE UNIT MANAGEMENT**

Manuel Lujan-Bonete, Pau Giner-Bayarri, Mercedes Gonzalez, Blanca Hoyo-Rodrigo

Hospital Universitario Dr. Peset, Department of Clinical Neurophysiology, Valencia, Spain

P328**NOT ONLY THE ABSENCE BUT ALSO AMPLITUDE REDUCTION OF CORTICAL SEPS PREDICT OMINOUS OUTCOME IN COMATOSE PATIENTS AFTER CARDIAC ARREST**Riccardo Carrai¹, Antonello Grippo², Maddalena Spalletti², Maenia Scarpino², Cesarina Cossu², Giovanni Lanzo², Adriano Peris³, Giuseppe Olivo⁴, Serafina Valente⁵, Aldo Amantini²¹ SODc Neurofisiopatologia, Dipartimento Neuromuscolo-Scheletrico e degli Organi di Senso, AOU Careggi, Florence, Italy² SODc Neurofisiopatologia, Neuromuscolo-Scheletrico e degli Organi di Senso, AOU Careggi, Florence, Italy³ Cure Int Trauma e Supp Extracorporei, Neuromuscolo-Scheletrico e degli Organi di Senso, AOU Careggi, Florence, Italy⁴ Cardioanestesia e Cardiorianimazione, Dipartimento Anestesia e Rianimazione, AOU Careggi, Florence, Italy⁵ Interventistica Cardiologica Strutturale, Cardioracovascolare, Florence, Italy

**P329****REPEATABILITY OF SSEPS DURING AND AFTER TARGETED TEMPERATURE MANAGEMENT**Carin Eertman-Meijer¹, Marleen Tjepkema-Cloostermans¹, Michel Van Putten²¹ Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands² University of Twente and Medisch Spectrum Twente, Department of Clinical Neurophysiology and Neurology, Enschede, The Netherlands**P330****EVENT-RELATED POTENTIAL COMBINED WITH MIDDLE LATENCY SOMATOSENSORY EVOKED POTENTIAL IMPROVE THE PREDICTION OF AWAKENING FROM COMA**

Yifei Liu, Yingying Su, Yan Zhang, Miao Wang, Weibi Chen, Gang Liu, Mengdi Jiang

Xuanwu Hospital, Capital Medical University, Neuro-intensive care unit, Beijing, China

P331**CLINICAL AND ELECTROENCEPHALOGRAPHY ROLE IN PREDICTION OF OUTCOME IN SURVIVORS AFTER CARDIOPULMONARY RESUSCITATION**Hanan Hosny¹, Mona Nada², Ehab Shaker³, Amani Nawito², Mohamed Seleem⁴, Rehab Hassan¹, Hesham Nafia¹¹Department of Clinical Neurophysiology, Beni Suef University, Beni Suef, Egypt²Department of Clinical Neurophysiology, Cairo University, Cairo, Egypt³Neurology, Cairo University, Cairo, Egypt⁴National Heart Institute Hospital, Cairo, Egypt**P332****THE DEVELOPMENT OF NCUS IN CHINA: A 2ND NATIONWIDE SURVEY**Yingying Su¹, Suyue Pan², Wen Jiang³, Furong Wang⁴, Le Zhang⁵, Zhenhai Wang⁶, Bin Peng⁷, Xusheng Huang⁸¹ Xuanwu Hospital, Capital Medical University, Neurology, Beijing, China² Nanfang Hospital, Southern Medical University, Neurology, Guangdong, China³ Xijing Hospital, Fourth Military Medical University, Neurology, Xian, China⁴ Tongji Hospital of Tongji Medical College, Huazhong University of Science and Technology, Neurology, Wuhan, China⁵ Xiangya Hospital Central South University, Neurology, Changsha, China⁶ General Hospital of Ningxia Medical University, Neurology, Ningxia, China⁷ Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Neurology, Beijing, China⁸ Chinese People's Liberation Army General Hospital, Neurology, Beijing, China**CUTTING EDGE TECHNIQUES IN CN****Chair:** Ivan Rektor, Alfons Schnitzler**BALLROOM****P365****AUTOMATED CHIN EMG ANALYSIS FOR QUANTIFICATION OF REM SLEEP WITHOUT ATONIA**Jesper Jeppesen¹, Marit Otto¹, Yoon Frederiksen², Allan Hansen³, Tatyana Fedorova³, Karoline Knudsen³,Per Borghammer³, Michael Sommerauer³¹ Aarhus University Hospital, Department of Clinical Neurophysiology, Aarhus, Denmark² Aarhus University, Department of Clinical Medicine & Department of Psychology, Aarhus, Denmark³ Aarhus University Hospital, Department of Nuclear Medicine and PET Centre, Aarhus, Denmark**P366****MULTIMODAL EEG/ECOG AND FAST OPTICAL SIGNAL MEASUREMENTS IN INTERICTAL EPILEPTIC SPIKES**

Mahdi Mahmoudzadeh, Mana Manoochchri, Fabrice Wallois

University of Picardie Jules Verne, Medicine, Amiens, France

P367**IDENTIFICATION OF NEURAL RESPONSES TO HUMAN FACES USING WIRELESS MULTICHANNEL EEG RECORDINGS.**Vicente Soto¹, John Tyson-Carr¹, Katerina Kokmotou¹, Hannah Roberts¹, Stephanie Cook¹, Nicholas Fallon¹,Timo Giesbrecht², Andrej Stancak¹¹ University of Liverpool, Department of Psychology, Liverpool, United Kingdom² UNILEVER Research and Development, Research & Development, Liverpool, United Kingdom**P368****EPILEPTIFORM AND SLEEP SPINDLE ACTIVITY IN ANTERIOR NUCLEUS OF THE THALAMUS IN TEMPORAL LOBE EPILEPSY PATIENTS**Zsófia Jordán¹, Márta Virág¹, Boglárka Hajnal¹, Róbert Bódizs², Peter Ujma², Anna Kelemen¹, László Halász³,László Entz³, Dániel Fabó¹, Loránd Erőss³¹ National Institute of Clinical Neurosciences, Budapest, Epilepsy Unit, Budapest, Hungary² Semmelweis University, Institute of Behavioural Sciences, Budapest, Hungary³ National Institute of Clinical Neurosciences, Budapest, Department of Functional Neurosurgery and Center of Neuromodulation, Budapest, Hungary**P369****OSCILLATORY ACTIVITY IN THE HUMAN INTERNAL GLOBUS PALLIDUS IN DIFFERENT PATHOLOGIES**Manuel Alegre¹, Mar Carmona-Abellán², Miguel Valencia³, Elena Urrestarazu¹, Jorge Guridi⁴, Julio Artieda¹¹ Clínica Universidad de Navarra, Clinical Neurophysiology, Pamplona, Spain² Clínica Universidad de Navarra, Neurology, Pamplona, Spain³ CIMA, University of Navarra, Neurophysiology laboratory, Pamplona, Spain⁴ Clínica Universidad de Navarra, Neurosurgery, Pamplona, Spain**P370****THE THALAMO-CORTICAL GENERATORS OF SLEEP SPINDLES AS REVEALED BY LAMINAR ANALYSIS OF NEOCORTEX**Boglárka Hajnal¹, Peter Ujma², Robert Bodizs², Emilia Toth³, Lorand Eross⁴, Istvan Ulbert⁵, Sydney Cash⁶, Daniel Fábó⁷¹ National Institute of Clinical Neurosciences, Budapest, János Szentágotthai Doctoral School of Neurosciences, Semmelweis University, Budapest, Hungary, Epilepsy Unit, Budapest, Hungary² Semmelweis University, Institute of Behavioral Science, Budapest, Hungary³ Faculty of Information Technology and Bionics, Pázmány Péter Catholic University, Budapest, Hungary⁴ National Institute of Clinical Neurosciences, Functional Neurosurgery, Budapest, Hungary⁵ Inst. for Psychology, Hungarian Academy of Sciences, Comparative Psychophysiology, Budapest, Hungary⁶ Massachusetts General Hospital, Neurology, Boston, USA⁷ National Institute of Clinical Neurosciences, Epilepsy Unit, Budapest, Hungary**P371****SIMULATION AND ESTIMATION OF HAWKES PROCESSES FOR MODELING EEG DATA TO FORECAST EPILEPTIC SEIZURES**György Perczel¹, Loránd Erőss², Dániel Fabó³, László Gerencsér⁴, Zsuzsanna Vágó¹¹ Faculty of Information Technology and Bionics, Pázmány Péter Catholic University, Budapest, Hungary² National Institute of Clinical Neurosciences, Department of Functional Neurosurgery and Center of Neuromodulation, Budapest, Hungary³ National Institute of Clinical Neurosciences, Epilepsy Unit, Budapest, Hungary⁴ Institute for Computer Science and Control, Hungarian Academy of Sciences, Budapest, Hungary**P372****INFERENCE OF INTRA AND INTER HIPPOCAMPAL DIRECTED CAUSAL RELATIONSHIPS BASED ON FORAMEN OVALE RECORDINGS**Zoltán Somogyvári¹, Boglárka Hajnal², Péter Halász³, Loránd Erőss⁴, Dániel Fabó³¹ Wigner Research Centre for Physics, Hungarian Academy of Sciences, Department of Theory, Budapest, Hungary² National Institute of Clinical Neurosciences, Semmelweis University, János Szentágotthai Doctoral School of Neurosciences, Department of Clinical Neurophysiology and Epileptology, Budapest, Hungary³ National Institute of Clinical Neurosciences, Department of Clinical Neurophysiology and Epileptology, Budapest, Hungary⁴ National Institute of Clinical Neurosciences, Department of functional neurosurgery, Budapest, Hungary



POSTER SESSION II.

ERZSÉBET I. ROOM

CN IN THE DIAGNOSIS AND TREATMENT OF DISEASES 1.

ERZSÉBET I. ROOM

Chair: Satu Jääskeläinen

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VALUE OF ELECTROPHYSIOLOGICAL STUDIES IN DETECTING LUMBO-SACRAL RADICULOPATHY IN PATIENTS WITH QUESTIONABLE MRI FINDINGS

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COMPARISON OF MEDIAN NERVE DISTAL MOTOR RESPONSES IN PATIENTS WITH CHRONIC INFLAMMATORY DEMYELINATING POLYNEUROPATHY AND CARPAL TUNNEL SYNDROME

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THE CARPAL TUNNEL SYNDROME AND THE DOUBLE CRUSH SYNDROME HYPOTHESIS: REVISITED

Heba Raafat, Mye Basheer, Amira El Gohary

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THE FAILURE OF A RHYTHM...NOT ALWAYS CORTICAL...

Pedro Guimarães, Joel Guedes, Paulo Coelho, Vera Espírito Santo, João Lopes, João Ramalheira,

António Martins da Silva

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CONCENTRIC NEEDLE SINGLE FIBER ELECTROMYOGRAPHY IN PATIENTS WITH MYASTHENIA GRAVIS

Kazimierz Tomczykiewicz, Jacek Staszewski

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LONG-TERM ELECTROCORTICOGRAPHIC MONITORING AND PATHOLOGICAL HIGH-FREQUENCY OSCILLATIONS IN TUMOR-RELATED EPILEPSY

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THE MUNE METHOD AS A COMPLEMENTARY TEST TO ROUTINE EMG IN AMYOTROPHIC LATERAL SCLEROSIS

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PAINFUL LEGS AND MOVING TOES SYNDROME ASSOCIATED WITH PERIPHERAL NERVE HYPEREXCITABILITY AND CENTRAL NERVOUS SYSTEM INVOLVEMENT

Sara Cors-Serra, Ángeles Lloret-Alcañiz, Paula Cases-Bergón, Cristina Ipiéns-Escuer, Lara Mauri-Fàbrega, Mika B. Aiko-Gesler

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DIAGNOSTIC UTILITY OF MUNIX METHOD IN ESTIMATION OF MOTOR UNITS LOSS IN POST-POLIO SYNDROME.

Malgorzata Gawel¹, Ewa Zalewska², Elzbieta Szmidt-Salkowska¹, Marta Lipowska¹, Anna Lusakowska³, Anna Kostera-Pruszczyk³¹ Medical University of Warsaw, Department of Neurology, Warsaw, Poland² Nalecz Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw, Poland³ Medical University of Warsaw, Department of Neurology, Warsaw, Poland

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THE ELECTROPHYSIOLOGIC FEATURES OF NEUROLYMPHOMATOSIS

Kee Duk Park¹, Woo-Kyung Kim², Hyung Jun Park¹, Ha Young Shin³, Seung Min Kim³¹ Ewha Womans University College of Medicine, Department of Neurology, Seoul, Korea² Hallym University College of Medicine, Department of Neurology, Seoul, Korea³ Yonsei University College of Medicine, Department of Neurology, Seoul, Korea

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MOTOR CORTICAL EXCITABILITY CHANGES IN EARLY STAGE ALS PATIENTS USING AUTOMATIC THRESHOLD TRACKING METHOD

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CN IN THE DIAGNOSIS AND TREATMENT OF DISEASES 2.

ERZSÉBET I. ROOM

Chair: Benedikte Wanscher

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ANOTHER BRICK IN THE WALL: IS HEXANE NEUROPATHY A 'NODO-PARANODOPATHY'?

Sezin Alpaydin Baslo¹, Oya Ozturk¹, Cengiz Dayan¹, Dilek Atakli¹, Mehmet Baris Baslo²¹ Bakirkoy Prof. Dr. Mazhar Osman Training and Research Hospital for Psychiatric, Neurologic and Neurosurgical Diseases, Neurology, Istanbul, Turkey² Istanbul University, Istanbul Faculty of Medicine, Neurology, Istanbul, Turkey

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MEDIAN NERVE CONDUCTION ACROSS THE WRIST IN GBS AND CTS

Sezin Alpaydin Baslo¹, Oya Ozturk¹, Merve Yatmazoglu¹, Dilek Atakli¹, Mehmet Baris Baslo²¹ Bakirkoy Prof. Dr. Mazhar Osman Training and Research Hospital for Psychiatric, Neurologic and Neurosurgical Diseases, Neurology, Istanbul, Turkey² Istanbul University, Istanbul Faculty of Medicine, Neurology, Istanbul, Turkey

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THE INFLUENCE OF METFORMIN TREATMENT ON SIGNALING SYSTEMS, AMP-ACTIVATED KINASE AND MITOCHONDRIAL DYNAMICS IN THE HYPOTHALAMUS OF AGOUTI-MICE (AY/A)

Irina Zakharova, Kira Derkach, Inna Zorina, Irina Romanova, Lyubov Bayunova, Alexander Shpakov

I.M. Sechenov Institute of Evolutionary Physiology and Biochemistry of Russian Academy of Sciences, Department of Endocrinology, Saint-Petersburg, Russia

**P348****BASILINE SHIFTS AND HIGH FREQUENCY OSCILLATIONS IN HIPPOCAMPAL STEREO-ELECTROENCEPHALOGRAPHY AS SURROGATE MARKERS OF THE ICTAL ONSET ZONE IN MESIAL TEMPORAL LOBE SEIZURES**Nick Tsarouchas¹, Liam Gray², Khalid Hamandi³, Glen Brimble¹, Ben Thomas¹¹ Cardiff University Hospital of Wales, Department of Clinical Neurophysiology, Cardiff, United Kingdom² Cardiff University Hospital of Wales, Department of Neurosurgery, Cardiff, United Kingdom³ Cardiff University Hospital of Wales, Department of Neurology, Cardiff, United Kingdom**P349****ASSESSMENT OF PREVALENCE AND RISK FACTORS FOR CARPAL TUNNEL SYNDROME IN POLIO SURVIVORS**Metin Mercan, Arsida Bajrami, Ibrahim Acir, Vildan Yayla

Bakirkoy Dr. Sadi Konuk Training And Research Hospital, Department of Neurology, Istanbul, Turkey

P350**AMYOTROPHIC LATERAL SCLEROSIS (ALS) A DISEASE WHEN NEUROPHYSIOLOGY IS AN ESSENTIAL TOOL EVEN IN THE 21TH CENTURY**

Klára Fekete, Tímea Polyák, István Fekete, Róbert Rostás, Ferenc Mechler

University of Debrecen, Department of Neurology, Debrecen, Hungary

P351**THE ASSESSMENT OF REPEATER F-WAVES IN PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS**Nermin Gorkem Sirin¹, Emel Oguz Akarsu², Hava Ozlem Dede², Lala Mehdikhanova², Elif Kocasoy Orhan², Mehmet Baris Baslo², Halil Atilla Idrisoglu², Ali Emre Oge²¹ Istanbul University, Aziz Sancar Institute of Experimental Medicine, Department of Neuroscience, Istanbul, Turkey² Istanbul University, Istanbul Faculty of Medicine, Department of Neurology, Istanbul, Turkey**P352****NEUROMYOTONIA – A RARE BUT IMPORTANT ELECTROPHYSIOLOGICAL FINDING**

Henning Piilgaard, Martin Lauritzen, Krisztina Benedek

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P353**A PROSPECTIVE STUDY OF HIGH RESOLUTION ULTRASOUND IN BRACHIAL PLEXOPATHIES - CORRELATION WITH THE ELECTROPHYSIOLOGICAL MEASUREMENTS**

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CN IN THE DIAGNOSIS AND TREATMENT OF DISEASES 3.**Chair:** Ann Abdel Kader, Pal Larsson**ERZSÉBET I. ROOM****P357****RIPPLING MUSCLE DISEASE: TWO CASES NOT ASSOCIATED WITH MYOPATHY AND REVIEW OF THE LITERATURE**

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REDUCED HAND DEXTERITY IN PARKINSON'S DISEASE PATIENTS IS ASSOCIATED WITH IMPAIRED INTRACORTICAL INHIBITIONAleksandra Kačar¹, Saša Filipović²¹ Klinički Centar Srbije – Neurološka Klinika, Department of Clinical Neurophysiology, Belgrade, Serbia² University of Belgrade – Institute for Medical Research, Department of Neuroscience, Belgrade, Serbia**NEUROPHYSIOLOGY OF BRAIN/MIND PROBLEM****Chair:** Paolo Maria Rossini, Christian Gerloff

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Humaglobin Liquid rövidített alkalmazási előírás: Humaglobin Liquid 50 g/l oldatos infúzió; humán normál immunglobulin intravénás alkalmazására (Mlg). Milliliterenként 50 mg humán normál immunglobulin tartalmaz. Humán plazmafehérjék (melynek legalább 95%-a IgG). Az IgG alosztályok százalékos megoszlása (közelítő értékek): IgG1 62,1%, IgG2 34,8%, IgG3 2,5%, IgG4 0,6%. A maximális IgA tartalom 50 mikrogramm/ml. **Segédanyagok:** maltóz, injekcióhoz való víz. **Terápiás javallatok:** **Immunglobulin-pótló terápia felnőttek, gyermekek és serdülők (0 – 18 év) számára az alábbi esetekben:** • Károsodott antitesttermeléssel társuló primer immunhiányos szindrómák. • Hypogammaglobulinaemia és recurrens bakteriális fertőzések krónikus lymphocytás leukaemiában, ha az antibiotikum profilaxis eredménytelennek bizonyult. • Hypogammaglobulinaemia és recurrens bakteriális fertőzések myeloma multiplex plató fázisában, ha a beteg a pneumococcus elleni immunizálásra nem reagált. • Hypogammaglobulinaemia, allogén haematopoietikus őssejt transzplantáció (HSCT) esetén. • Recurrens bakteriális fertőzésekkel társuló congenitalis AIDS. **Immundeficienciák kezelésére felnőttek, gyermekek és serdülők (0 – 18 év) számára az alábbi esetekben:** • Primer immunthrombocytopenia (ITP) magas vérzési kockázattal vagy műtétek előtt a vérlemezkeszám korrigálására. • Guillain-Barré szindróma. • Krónikus gyulladásos demyelinizációs polyradiculoneuropathia (CIDP). • Kawasaki-betegség. Ellenjavallatok: a készítmény hatóanyagával vagy maltóz, injekcióhoz való víz szembeni túlérzékenység. Humán immunglobulinokkal szembeni túlérzékenység, különösen azon esetekben, amikor a beteg IgA elleni antitesthordozó. **Különleges figyelmeztetések és az alkalmazással kapcsolatos óvintézkedések:** Bizonyos súlyos mellékhatások az alkalmazott infúzió sebességével függhetnek össze. A készítmény milliliterenként 100 mg maltózt tartalmaz. A maltóz a vércukorszint vizsgálatnál tévesen megemlekedett cukorszintet eredményezhet és ennek következtében a nem megfelelő inzulin adagolás életveszélyes hipoglikémiához és halálhoz vezethet. **Mellékhatások:** Esetenként előfordulhat hidegrázás, fejfájás, szédülés, láz, hányás, allergiás reakció, hányinger, arthralgia, vérnyomáscsökkenés és mérsékelt derékfájdalom. A humán normál immunglobulinok ritkán okozhatnak hirtelen vérnyomáscsökkenést és izolált esetekben anaphylaxiás shockot. Reverzibilis aszeptikus meningitis eseteket és ritkán átmeneti bőreakciókat figyeltek meg a humán normál immunglobulin alkalmazása kapcsán. Reverzibilis haemolitikus reakciókat észleltek, különösen A, B és AB vércsoportú betegeknél. Ritkán transzfúzió igényű haemolitikus anaemia alakulhat ki nagy dózisú Mlg kezelés után. Észlelték szérum kreatininszint növekedést és/vagy akut veseelégtelenséget. Nagyon ritkán thromboembolias reakciókat (pl. szívinfarktust, stroke-t, tüdőembóliát, mélyvénás thrombost) jelentettek. **Inkompatibilitások:** Kompatibilitási vizsgálatok hiányában ez a gyógyszer nem keverhető más gyógyszerekkel. ATC kód: J06BA02. **Felhasználhatósági időtartam:** 3 év. A készítményt felbontás után azonnal fel kell használni. **Különleges tárolási előírások:** Hűtőszekrényben (2°C – 8°C) tárolandó. Nem fagyasztható! A fénytől való védelem érdekében az üveg az eredeti csomagolásban tárolandó. Felhasználás előtt, de a felhasználási időn belül az 50, 100 és 200 ml-es kiszerelésű készítmények szobahőmérsékleten (max. +25°C) 6 hónapig tárolhatók. A szobahőmérsékleten ennél tovább tárolt termék nem használható fel. A szobahőmérsékleten történő tárolás után a termék már nem tehető vissza a hűtőszekrénybe. A szobahőmérsékleten való tárolás kezdeti időpontját a külső dobozon fel kell tüntetni. A forgalomba hozatali engedély jogosultja: HUMAN BioPlazma Kft. 2100 Gödöllő, Táncsics Mihály út 80. Magyarország. **A forgalomba hozatali engedély száma:** • OGYI-T-9757/05 - 1 g/20 ml 20 ml-es injekciós üveg • OGYI-T-9757/06 - 2,5 g/50 ml 50 ml-es injekciós üveg + felfüggesztő pánt • OGYI-T-9757/07 - 5 g/100 ml 100 ml-es injekciós üveg + felfüggesztő pánt • OGYI-T-9757/08 - 10 g/200 ml 200 ml-es injekciós üveg + felfüggesztő pánt. A szöveg ellenőrzésének dátuma: 2017. június 10. Tétel elszámolás alá eső hatóanyag. A termék árát a www.eop.hu oldalon tekinthetjük meg.

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