



# DANUBE NEUROLOGY NEWSLETTER

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## INTERNATIONAL DANUBE NEUROLOGY SYMPOSIUM FOR NEUROLOGICAL SCIENCES AND CONTINUING EDUCATION

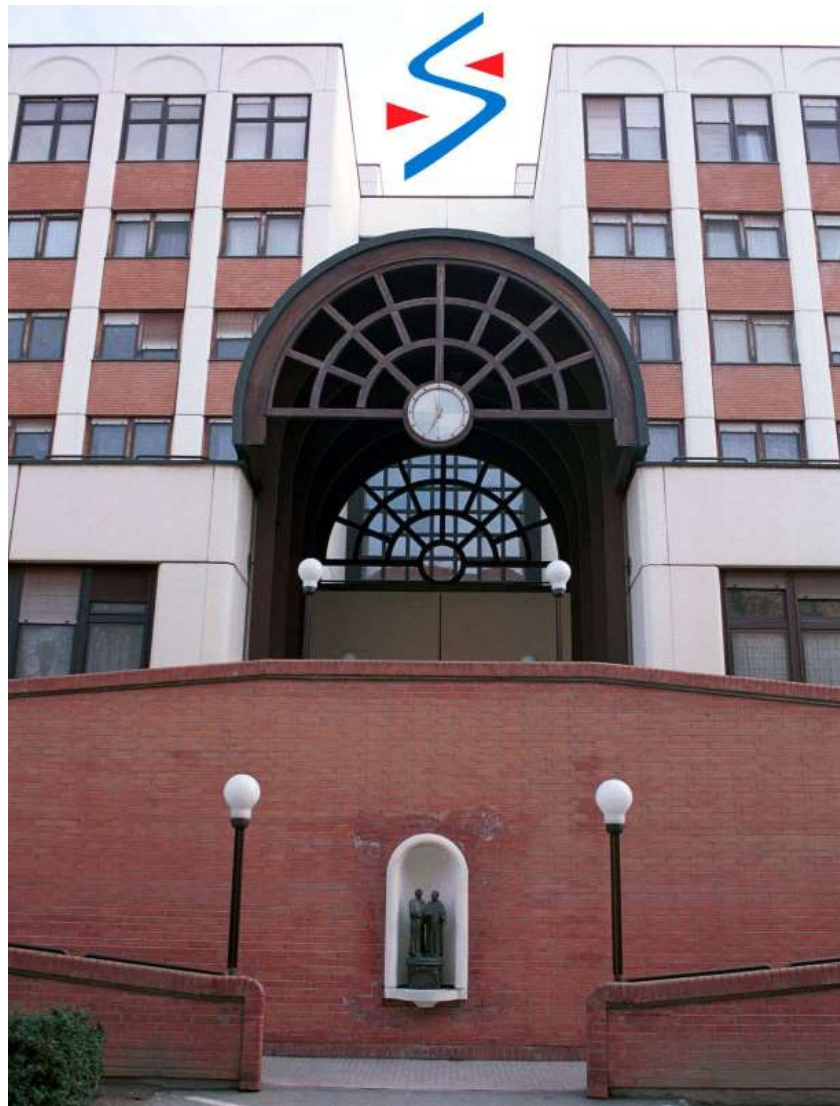
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## **Contents:**

- 1. Obituary of Professor Imre Szirmai (by Professor Dániel Bereczki)**
- 2. Scientific programme of the 51<sup>st</sup> International Danube Neurology Symposium (2019) (by Professor Ovidiu - Alexandru Bajenaru)**
- 3. Summary of the 51<sup>st</sup> International Danube Neurology Symposium (2019) (by Professor Ovidiu - Alexandru Bajenaru)**
- 4. Summary of the 15<sup>th</sup> International Danube Teaching Course in Kazimierz, Poland (by Professor Konrad Rejdak)**
- 5. Dysfunction of the central autonomic network and its cardiovascular effects in patients with cerebral diseases (by Professor Max J. Hilz)**
- 6. Historical events of the International Danube Symposia (1999-2019) (by Professor László Vécsei)**
- 7. Future Conferences, Meetings, Courses and Symposia of the International Danube Symposium for Neurological Sciences and Continuing Education**
- 8. Present and Future Activities of the International Danube Symposium for Neurological Sciences and Continuing Education**
- 9. Finances of the International Danube Symposium for Neurological Sciences and Continuing Education**
- 10. Web-site of the International Danube Symposium for Neurological Sciences and Continuing Education**

## **1. Obituary of Professor Imre Szirmai (by Professor Dániel Bereczki)**



Professor Imre Szirmai (Szászvár, May 13, 1942. – Budapest, October 23, 2018.)

Professor Imre Szirmai had been an exceptional character of Hungarian neurology in the last 3 decades. He graduated at Pécs Medical University in 1966, and obtained board certification in neurology, psychiatry, and clinical neurophysiology. He developed his career at the Department of Neurology and Psychiatry in Pécs (1966-1993). From 1993 to 2007 he was the head of the Department of Neurology at Semmelweis University, Budapest. Until 2018 he had continuously participated in the clinical and educational activities of the department and coordinated the „Clinical Neurological Research” program of the doctoral school. His research interest covered a wide range within neurology: from cerebral microcirculation and metabolism in epileptic seizures to the EEG features of Jakob–Creutzfeld disease, from hemorheological methods in cerebrovascular diseases to the disturbances of speech and consciousness. His achievements had been acknowledged by scientific degrees and recognitions both in Hungary and abroad.

Professor Szirmai had a renaissance personality with sarcastic humor and a European view of science and arts. He published over 120 scientific papers, edited textbooks, and wrote several historical books and fine art publications. His oil paintings were presented at 4 exhibitions.

He obtained international research experiences at the Neurophysiological Institute of the Austrian Academy of Sciences (1976-1977), at the Biomedizinische Technik Institute of Graz Technical University (1977-1978), in the Ludwig Boltzmann Institute in Vienna, and spent a longer period as a visiting professor in Porto (2007-2008). He had shorter visits in several institutes in Canada, Finland, Germany, Austria and France, and had long-term relationship with the Neurological Department of Freiburg University (1994-2013).

Professor Szirmai was the president of the Hungarian Society of Neurologists and Psychiatrists (1993-2004), was a founder and later president of the Hungarian Scientific Parkinson Society, and served on the boards of several other scientific societies and foundations. He represented Hungary in the board of the European Federation of Neurological Societies (EFNS), and in the Union Européenne des Médecins Spécialistes (UEMS) Board of Neurology (1997-2010). He participated in editorial boards of several journals like *Perfusion*, *Hungarian Medical Language*, *Neuropsychopharmacologia Hungarica*, *Clinical Neurosciences* and was the editor of *Medi-art*.

„It is impossible to know but is possible to teach neurology” – dedicated Professor Szirmai the last edition of his Neurology textbook in 2017. Neurology is a field of medicine with the fastest development, therefore it is justified to re-edit classical national textbooks about every 5 years. The first edition of professor Szirmai’s textbook was published in 2001 followed by subsequent editions in 2005, 2011 and 2017. Prof. Szirmai emphasized the importance of teaching neurology by high standards, and he had not only edited textbooks, and participated in establishing the e-learning system of the Department of Neurology at Semmelweis University, but also lead practical classes for medical students, and delivered lectures in gradual and postgraduate neurological courses – in Hungarian, English and German languages until 2018.

We have lost an excellent clinical neurologist and a great teacher devoted to transfer neurological knowledge for colleagues and the upcoming generations.

## **2. Scientific programme of the 51<sup>st</sup> International Danube Neurology Symposium (2019)** (by Professor Ovidiu - Alexandru Bajenaru)

Date: 16-18 May, 2019

Venue: Crystall Ballrooms Palace, Bucharest, Calea Rahovei No. 198 A

### **THURSDAY 16 May 2019 Bucharest Hall**

#### 13.00 – 15.30 The 51<sup>st</sup> International Danube Symposium & EAN Day

13.00 – 13.15 Opening ceremony - Prof. Dr. Laszlo Vecsei, Prof. Dr. Dafin Fior Mureşanu, Prof. Dr. Ovidiu Băjenaru

13.15 – 14.00 Honorary Conference "Gheorghe Marinescu" - Prof. Dr. Franz Fazekas - EAN President (Austria)

14.00 – 14.20 European Academy of Neurology (EAN) – Vision and Mission - Prof. Dr. Dafin Fior Mureşanu

14.20 – 14.50 The side-effects of cancer therapy - Prof. Dr. Wolfgang Grisold (Austria)

14.50 – 15.20 Central autonomic dysfunction - Prof. Dr. Max Hilz (Germany)

15.20 – 15.30 Coffee break

#### 15.30 – 17.45 Section: Neurehabilitation (Joint session with EFNR) (Chairpersons: Prof. Dr. Dafin Mureşanu, Prof. Dr. Volker Hoemberg)

15.30 – 15.55 Results of the CAPTAIN II trial - a new horizon in TBI treatment - Prof. Dr. Dafin Fior Mureşanu

15.55 – 16.20 Evidence based medicine in post stroke recovery - Prof. Dr. Nathan Bornstein (Israel)

16.20 – 16.45 rtPA fibrinolysis – still actual in modern treatment of acute ischemic stroke? - Prof. Dr. Ovidiu Băjenaru

16.45 – 17.10 Therapeutic impact of Cerebrolysin on brain microvasculature-implications in combination with tPA and thrombectomy for acute treatment of ischemic stroke - Prof. Dr. Michael Chopp (USA)

17. 10 – 17.35 Pharmacology in neurorehabilitation - Prof. Dr. Volker Hoemberg (Germany)

17.35 – 17.45 Discussion

### **FRIDAY 17 May 2019 Bucarest Hall**

#### 09.00 – 11.00 Section: Neurocognitive disorders (Chairpersons: Prof. Dr. Max Hilz, Prof. Dr. Amos Korczyn)

09.00 – 09.25 Modified cognitive performance in patients treated by carotid artery stenting - a subdomain analysis correlated with the persistence of microembolic signals - Dr. Cristina. Laza, Dr. Florina. A. Antochi, Prof. Dr. Ovidiu Băjenaru

09.25 – 09.50 Brain cleaning systems and neurodegeneration - Prof. Dr. Bogdan Popescu

09.50 – 10.20 Special lecture: „Dementia: new approaches and opportunities” - Prof. Dr. Vladimir Hachinski (Canada)

10.20 – 10.45 Alzheimer’s disease - past, present and future - Prof. Dr. Amos D. Korczyn (Israel)

10.45 – 11.10 Diffuse Lewy Body Disease - Prof. Dr. Daniel Truong (USA)

11.10 – 11.20 Discussion

11.20 – 11.30 Coffee break

11.30 – 13.25 Section: Multiple sclerosis and other inflammatory disorders of the CNS - Chairpersons: Prof. Rodica Bălașa, Prof. Dr. Jelena Drulovic

11.30 – 11.55 The development of an experimental protocol for the assessment of the immunophenotype and the intracellular secretory profile of T helper cells from patients with multiple sclerosis - Prof. Dr. Rodica Balasa, Dr. M.Dobreanu, Dr. S. Maier, Dr. A. Romaniuc, Dr. D. Manu

11.55 – 12.20 Working status of persons with multiple sclerosis - Prof. Dr. Jelena Drulovic (Serbia)

12.20 – 12.45 Cognitive dysfunction in multiple sclerosis - Assoc Prof. Dr. Cristina. Panea

12.45 – 13.10 Kynurenines in neurological disorders – biomarker and therapeutic possibilities - Prof. Dr. Laszlo Vecsei (Hungary)

13.10 – 13.25 Discussion

13.25 – 14.15 Lunch Break

13.25 – 14.15 Business Meeting - International Danube Neurology Association

14.15 – 15.45 Section: Peripheral neuropathies - Chairpersons: Dr. Tudor Lupescu, Dr. Amalia Ene

14.15 – 14.40 Inflammatory neuropathies - a clinical approach - Dr. Tudor Lupescu

14.40 – 15.05 Recognizing and treating hereditary transthyretin amyloidosis - Dr. Laura Obici (Italy)

15.05 – 15.30 Romanian experience in amyloid neuropathy with transthyretine - Dr. Amalia Ene

15.30 – 15.45 Discussion

15.45 – 16.45 Section: Movement disorders - Chairpersons: Prof. Ovidiu Băjenaru, Dr. Cristian Falup Pecurariu

15.45 – 16.10 Functional movement disorders – a shift from classical psychopathological view to recent neurobiological evidence - Dr. Oana Obrișcă, Prof. Dr. Mark J. Edwards, Dr. Amalia Ene, Prof. Dr. Ovidiu Bajenaru

16.10 – 16.35 Restless legs syndrome - Conf. Dr. Cristian Falup- Pecurariu

16.35 – 16.45 Discussion

16.45 – 17.00 Coffee break

17.00 – 19.15 Section: Cerebrovascular diseases - Chairpersons: Prof. Laszlo Csiba, Assoc. Prof. Dr. Cristina Tiu

17.00 – 17.25 Implementing stroke action plan 2018-2030 in Romania - Assoc. Prof. Dr. Cristina Tiu, Dr. Elena Terecoasă, Dr. Vlad Eugen Tiu, Dr. Răzvan Alexandru Radu, Prof. Dr. Ovidiu Băjenaru

17.25 – 17.50 Hypertension as important stroke risk factor: early vascular and cognitive changes and the reversibility - Prof. Dr. Laszlo Csiba, Dr. Enikő Csikai, Dr. Mónika Andrejkovics, Dr. Bernadett Balajthy-Hidegh, Dr. Gergely Hofgárt, Dr. László Kardos, Dr. Ágnes Diószegi, Dr. Róbert Rostás, Dr. Katalin R. Czuriga-Kovács, Dr. Éva Csongrádi (Hungary)

17.50 – 18.15 Vascular Aphasias - Prof. Dr. Dragos Cătălin Jianu, Dr. Claudia Barsan, Dr. Georgiana Munteanu

18.15 – 18.40 A basilar „roller-coaster” – case report - Dr. Adina Virginia Crăciunoiu, Dr. Mihai Radu Ionescu, Dr. Cristina Iulia Cernat, Dr. Patricia Ioan, Dr. Bogdan Dorobăț, Prof. Dr. Ovidiu-Alexandru Băjenaru.

18.40 – 18.50 Discussion

## **SATURDAY 18 May 2019 Bucharest Hall**

09.00 – 11.50 Young neurologists session - Chairpersons: Prof. Ovidiu Băjenaru, Prof. Dr. Bogdan Popescu

09.00 – 09.20 The spectrum of motor neuron diseases - Dr. Delia Tulbă, Dr. Liviu Cozma, Dr. Iulia Olaru, Dr. Antonia Lefter, Dr. Cristina Mitu, Prof. Dr. Bogdan Ovidiu Popescu

09.20 – 09.40 Autoimmune syndrome induced by adjuvants (ASIA) – a controversial diagnosis - Dr. Nicoleta Gherghel, Dr. Adina Stan, Dr. Nicu Draghici, Prof. Dr. Dafin Fior Muresanu

09.40 – 10.00 Spontaneous intracranial hypotension – a challenging diagnosis - Dr. Radu Răzvan, Dr. A. Niculescu, Dr. L. M. Ioniță, Dr. I. L. Enache, Dr. E Terecoasă

10.00 – 10.20 Diagnostic challenges in autoimmune encephalitis - Dr. Liviu Cozma, Dr. Delia Tulbă, Dr. Iulia Olaru, Dr. Zela Cofoiian-Amet, Dr. Andreea Florea, Dr. Cristina Mitu, Prof. Dr. Bogdan Ovidiu Popescu

10.20 – 10.40 Stent-graft – a good choice of therapeutic approach in some clinical diagnosis - Dr. Dana Ștefan, Dr. Athena Ribigan, Dr. Vlad Tiu, Dr. B. Dorobat, Dr. F Antochi

10.40 – 11.00 Outcome aspects in patients with acute ischemic stroke and carotid artery occlusion - Dr. Andreea Banica, Dr. Simona Petrescu, Conf. Dr. Cristina Panea

11.00 – 11.20 Ischemic stroke and acute Pemphigus-coincidence - Dr. Ana-Maria Enascuta, dr. Maria Liliana Gealapu, Dr. Cristina Burtea, Dr. Olivia Racila, Dr. Alexandra Liliana Popa, Dr. Daniel Naconecinii, Assoc. Prof. Dr. Dan I Cuciureanu

11.20 – 11.40 Bilateral cerebellar hemorrhage – a case report - Dr. Alexander Cristian, Dr. Adina Stan,

Nicoleta Gherghel, Simona Manole, Horatiu Stan, Prof. Dr. Dafin Fior Muresanu

11.40 – 11.50 Discussion

11.50 – 12.00 Coffee break

12.00 – 13.00 Section: Epilepsy (Joint session with ASNER) - Chairpersons: Assoc Prof. Dr. Cristina Panea, Dr. Ioana Mîndruță

12.00 – 12.20 Importance of electrophysiology in an MRI negative case of posterior cortex epilepsy surgically cured - Dr. Camelia Lentoiu, Dr. Ioana Mindruta, Prof. Dr. Ovidiu-Alexandru Bajenaru

12.20 – 12.40 Insular epilepsy: clinical features and epileptic network - Dr. Andrei Daneasa, Dr. Ioana Mindruta, Prof. Dr. Ovidiu-Alexandru Bajenaru

12.40 – 13.00 Cingulate cortex involvement in drug resistant frontal lobe epilepsy - Dr. Irina Popa, Dr. Ioana Mindruta, Prof. Dr. Ovidiu-Alexandru Bajenaru

13.00 – 13.15 Discussion

13.00 – 13.15 Closing ceremony of International Danubian Symposium Prof. Dr. Bogdan Popescu, Prof. Dr. Dafin Mureșanu, Prof. Dr. Ovidiu Băjenaru

### **3. Summary of the 51<sup>st</sup> International Danube Neurology Symposium (2019)** (by Professor Ovidiu - Alexandru Bajenaru)

Between May 16 – 18, 2019, the 51<sup>st</sup> International Danube Symposium has been organised by the Danube Neurological Association in Bucharest (Romania), in joint with the XVII-th National Congress of the Romanian Society of Neurology. The local organizer was the Romanian Society of Neurology, chaired by Prof. Ovidiu-Alexandru Bajenaru MD, PhD – Honorary President of the Romanian Society.

This edition of the Danube Symposium has been attended by more than 900 participants, due to its very attractive program and outstanding scientific international personalities who joined the Romanian neurologists, have been present in Bucharest: Prof. Vladimir Hachinski (Canada) – past President of WFN, Prof. Wolfgang Grisold (Austria) – Secretary General of the WFN, Prof. Laszlo Vecsei (Hungary) – Secretary General of the Danube Neurological Association, Prof. Max Hilz (Germany), Prof. Natan Bornstein (Israel), Prof. Amos Korczyn (Israel), Prof. Michael Chopp (USA), Prof. Volker Hoemberg (Germany), Prof. Daniel Truong (USA), Prof. Jelena Drulovic (Serbia), Dr. Laura Obici (Italy), Prof. Laszlo Csiba (Hungary). This edition of the Danube Symposium was opened by a traditional ceremony in which Prof. Franz Fazekas – the actual President of the European Academy of Neurology, has been awarded with the Honorary medal and diploma “Gh. Marinescu”- the most important official public recognition of the Romanian Society of Neurology for the most prominent personalities in international neurology; this session has been followed by a session dedicated to EAN day, during which members of the Board of EAN and WFN (Prof. Wolfgang Grisold, Prof. Max Hilz and Prof. Dafin Muresanu) have presented scientific papers and the most important aspects and tasks of the EAN activity. A very interesting and dynamic session has been dedicated to neurorehabilitation after stroke (sustained by Prof. Natan Bornstein, Prof. Ovidiu-Alexandru Bajenaru, Prof. Michael Chopp, Prof. Volker Hoemberg and the actual president of EFNR Prof. Dafin Muresanu) which was organized in joint with the European Federation of Neurorehabilitation (EFNR). One of the most attractive sessions was that which addressed the topic of “Neurocognitive disorders” with fascinating papers on the most actual problems in this field, presented by Prof. Vladimir Hachinski, Prof. Amos Korczyn, Prof. Bogdan-Ovidiu Popescu and Dr. Cristina Laza. The session dedicated to “Multiple sclerosis and other inflammatory disorders of CNS” allowed interesting presentations by Prof. Laszlo Vecsei, Prof. Jelena Drulovic, Prof. Rodica Balasa and Prof. Cristina Panea. A special session was dedicated to “peripheral neuropathies”, during which Dr. Tudor Lupescu, Dr. Laura Obici and Dr. Amalia presented very actual interesting data. Other very interesting sessions approached some aspects of “Movement disorders” (Dr. Laura Obrisca, Dr. Cristian Falup-Pecurariu), “Cerebrovascular diseases” (Prof. Laszlo Csiba, Prof. Cristina Tiu, Prof. Dragos-Catalin Jianu and Dr. Adina Craciunoiu) and very modern new concepts and approach in “Epilepsy” (Dr. Ioana Mindruta, Dr. Camelia Lentoiu, Dr. Andrei Daneasa, Dr. Irina Popa). The last, but not at all less important was a session of oral presentations of residents in neurology, which impressed by the quality of the work and very well organised presentations of these young neurologists: Dr. Delia Tulba, Dr. Nicoleta Gherghel, Dr. Radu Razvan, Dr. Liviu Cozma, Dr. Dana Stefan, Dr. Andrea Banica and Dr. Ana-Maria Gealapu.

In conclusion, the organizers consider that the 51<sup>st</sup> International Danube Symposium (organized in Bucharest in May 2019, joint with the annual Congress of the Romanian Society of Neurology) has been an outstanding successful scientific meeting which combined some of the most important contributions of some of the most important experts in Europe (in particular in the Danube space) and in the world, and also of the Romanian neurologists both at the level of experts and young neurologists and residents in neurology.

**Photos about the 51<sup>th</sup> International Danube Neurology Symposium**



*prof. Ovidiu Bajenaru, prof. László Vécsei, prof. Dafin Muresanu*



*assoc. prof. Cristina Tiu, prof. Bogdan Popescu, prof. Ovidiu Bajenaru, prof. Dafin Muresanu*



*prof. Ovidiu Bajenaru, prof. Max Hilz, prof. Vladimír Hachinski*



*prof. Michael Chopp and the audience*



*prof. Vladimir Hachinski, prof. László Vécsei,  
prof. Ovidiu Bajenaru*



*prof. Amos Korczyn*



*Prof. Rodica Balasa, Prof. Jelena Drulovic*



*prof. Daniel Truong*

#### **4. Summary of the 15<sup>th</sup> International Danube Teaching Course in Kazimierz, Poland** (by Professor Konrad Rejdak)

15<sup>th</sup> International Danube Teaching Course took place on 13-14 June 2019 in Kazimierz Dolny – historical centre of medieval culture of Poland.

The meeting was organised under the auspices of the International Danube Symposium for Continuing Education in Neurological Sciences by the Department of Neurology Medical University of Lublin and Lublin Branch of Polish Neurological Society (Head: Prof. dr. Konrad Rejdak).

The scientific programme focused on the newest aspects of multiple sclerosis, epilepsy, headache, and stroke but also included the special session on neurorehabilitation. The new session was introduced into the programme with interactive case reports by experts in different fields of the clinical neurology.

The highest educative and scientific level of this conference was guaranteed by the attendance of internationally recognised experts and scientists from the country with prof. Amos Korczyn (Israel) as a special guest.

The meeting was very successful with around 250 participants including students and residents who were given a free admission to the scientific part of the meeting.

This was the last meeting in this location and next year we will continue in beautiful city of Zamość a renaissance pearl in the south of Poland.





*Speakers and participants; in the center: prof. Amos Korczyn, prof. Teofan Domżał, prof. Konrad Rejdak, prof. Krzysztof Selmaj and others.*

### **5. Dysfunction of the central autonomic network and its cardiovascular effects in patients with cerebral diseases** (by Professor Max J. Hilz)



*Correspondence:* Prof. Dr. med.habil. Dr. h.c. Max J. Hilz, University of Erlangen-Nuremberg, Germany, Icahn School of Medicine at Mount Sinai, New York, NY, USA, E-mail: max.hilz@outlook.com

*Key words:* central autonomic nervous system, stroke, epilepsy, multiple sclerosis. traumatic brain injury. heart-brain interaction

Dysfunction of the central autonomic network (CAN) results in impaired modulation of organ function including e.g. inadequate visceromotor, neuroendocrine, pain, and behavioral responses (1, 2). The CAN consists of many structures that control and modify autonomic function and assure adequate adjustment to instantaneous physiological challenges (2). Among these interconnected structures are for example the nucleus tractus solitarii, the parabrachial region, the periaqueductal grey matter and many rostral CAN areas, such as the magnocellular neurons of the supraoptic and paraventricular nuclei, the hypothalamus, the prefrontal cortex, anterior cingulate cortex, the central nucleus of the amygdala or the insular cortex, pathways to the dorsal vagal nucleus, nucleus ambiguus and rostral ventrolateral medulla (2, 3).

Clinical testing of CAN function is largely based on the analysis of sympathetic and parasympathetic heart rate and blood pressure modulation (4). Using this approach, various studies have shown associations between changes in cardiovascular modulation and cerebral lesions, e.g. after stroke (for references see, e.g. 5), in multiple sclerosis (for references see, e.g. 6), in epilepsy (7) or months and years after traumatic brain injury (8). After stroke, lesions involving the insular cortex are often associated with cardiovascular complications such as increases in myocardial infarction, myocardial stunning or arrhythmias. Vladimir Hachinski and his group had investigated the possible role of the insula in increased risk of cardiovascular complications and mortality rates after stroke (9-12). Oppenheimer et al. showed the impact of insular cortex stimulation on lethal cardiac arrhythmias (10). The group also studied the topographic correlations between specific lesions or stimulations of the left and right insula and cardiovascular control (12). Various studies demonstrated associations between myocardial infarctions occurring within a few days after stroke and lesions involving the insular cortex (13, 14). Increased sympathetic activity after stroke may also induce myocardial stunning or Takotsubo syndrome which is associated with deterioration of the neurological status, outcome and prognosis, and with increased mortality rates compared to stroke patients who did not develop myocardial stunning (15, 16). In a recent study, we demonstrated associations between increased sympathetic modulation of heart rate and blood pressure and cerebral lesions due to multiple sclerosis that were located close to the left insular cortex and left hippocampus (17).

Moreover, we showed hemispheric differences in autonomic cardiovascular modulation. In patients with drug-refractory temporal lobe epilepsy who underwent WADA-testing to determine the hemispheric speech- and memory-dominance before epilepsy surgery, unilateral amobarbital-induced inactivation of the left hemisphere resulted in an increase in sympathetic cardiovascular modulation while inactivation of the right hemisphere enhanced parasympathetic modulation (18).

Similarly, strictly unilateral lesions of the ventromedial prefrontal cortex (VMPFC) which is essential for adequate cardiovascular responses to emotional stimuli resulted in side-dependent changes of autonomic responses to visual emotional stimuli (19). In patients with a left VMPFC lesion, the presentation of slightly happy or slightly unhappy images resulted in heart rate and blood pressure changes that were significantly smaller although similar to the responses of healthy persons. In contrast, right-sided VMPFC lesions yielded paradoxical and exaggerated cardiovascular responses to the emotional stimuli (19).

Epilepsy surgery with removal of the amygdalae also alters cardiovascular autonomic modulation (20). The amygdalae are essential e.g. for processing conditioned fear responses and interact with many structures including the basal forebrain, limbic striatum, hypothalamus, periaqueductal gray and various other brainstem areas to ensure adequate autonomic, endocrine, and motor responses to emotional stimuli (2.). In epilepsy patients, resection of the left- or right-sided amygdala, yields a decrease in sympathetic modulation of heart rate and blood pressure and an increase in cardiovagal activity (20). The decrease in sympathetic activity may be beneficial in epilepsy patients who frequently experience seizure related tachycardia or tachyarrhythmias (20). However, in stroke patients, changes in autonomic balance may add to an increased cardiovascular risk. Yet, pathomechanisms leading to myocardial infarction and death after stroke still need to be clarified. In a study performed in epileptic cats, Lathers and co-workers observed a “one-to-one” transmission of epileptic brain discharges onto the cats’ hearts (21). Such activity may cause myocardial damage (22). Sympathetic hyperactivity causes increased troponin I levels, diffuse myofibrillary necrosis, perivascular as well as interstitial fibrosis and vacuolization of myocytes (22-24).

Increased sympathetic modulation but decreased parasympathetic as well as overall autonomic modulation also persist month and years after a mild traumatic brain injury (mTBI) (25). This subtle impairment of central autonomic control might contribute to the well-known long-term increase in mortality rates in patients who had suffered a mild TBI (26).

During the first 24 hours after acute ischemic stroke, patients show similar changes in autonomic function with a decrease in the overall autonomic modulation and a shift in sympathetic-parasympathetic balance towards too much sympathetic and too little parasympathetic activity, and these changes are more prominent in patients with more severe stroke (27).

In conclusion, assessment of autonomic function in patients suffering from central nervous system disorders significantly adds to a better understanding of inherent cardiovascular complications and may help improve therapeutic approaches and thus prognosis of patients.

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## **6. Historical events of the International Danube Symposia (1999-2019)** (by Professor László Vécsei)

"The roots for the foundation of the Danube Symposium (Donausymposium) can be traced back until **1956**, when Prof. Dr. Hans Hoff, leader of the University Clinic of Psychiatry and Neurology Vienna was invited to neurological and psychiatric clinics in the former Tchechoslovakia, Yugoslavia and Hungary. In the following years, several lectures were held by Prof. Hoff and Prof. Dr. Gerstenbrand, on the other hand numerous Central and East-European scientists had the chance to travel to the strictly neutral Austria and to exchange scientific experience with the Austrian colleagues. As a consequence of these mutual exchange activities it was finally agreed to organize and to hold an international Symposium called "Donausymposium" in May **1962** in Vienna under the participation of neurological scientists from Austria, Western Germany, Switzerland and Central, East and South-European countries. After the successful conference it was decided to continue this kind of meeting." (Professor Franz Gerstenbrand)

31 <sup>th</sup> Danube Neurology Symposium	1999	Szeged	L. Vécsei
32 <sup>th</sup> Danube Neurology Symposium	2000	Baja	J. Czopf
33 <sup>th</sup> Danube Neurology Symposium	2001	Lublin	Z. Stelmasiak
34 <sup>th</sup> Danube Neurology Symposium	2002	Bratislava	P. Traubner
35 <sup>th</sup> Danube Neurology Symposium	2003	Beograd	V. Kostic
36 <sup>th</sup> Danube Neurology Symposium	2004	Sofia	S. Yanceva
37 <sup>th</sup> Danube Neurology Symposium	2005	Ljubljana	Z. Pirtosek
38 <sup>th</sup> Danube Neurology Symposium	2006	Brno	I. Rektor
39 <sup>th</sup> Danube Neurology Symposium	2007	Wuerzburg	P. Riederer

40 <sup>th</sup> Danube Neurology Symposium	2008	Bucharest	O. Bajenaru
41 <sup>th</sup> Danube Neurology Symposium	2009	Linz	G. Rasnmayr
42 <sup>th</sup> Danube Neurology Symposium	2010	Zagreb	V. Demarin and M. Relja
43 <sup>th</sup> Danube Neurology Symposium	2011	Dresden	H. Reichmann
44 <sup>th</sup> Danube Neurology Symposium	2012	Szeged	L. Vécsei
45 <sup>th</sup> Danube Neurology Symposium	2013	Prague	E. Ruzicka
46 <sup>th</sup> Danube Neurology Symposium	2014	Montenegro	V. Kostic and R. Raicevic
47 <sup>th</sup> Danube Neurology Symposium	2015	Dusseldorf	H.P. Hartung
48 <sup>th</sup> Danube Neurology Symposium	2016	Ljubljana	Z. Pirtosek
49 <sup>th</sup> Danube Neurology Symposium	2017	Budapest	S. Komoly and L. Vécsei
50 <sup>th</sup> Danube Neurology Symposium	2018	Debrecen	L. Csiba and L. Vécsei
51 <sup>st</sup> Danube Neurology Symposium	2019	Bucharest	O. Bajenaru

## **7. Future Conferences, Meetings, Courses and Symposia of the International Danube Symposium for Neurological Sciences and Continuing Education**

### *7.1. The 52<sup>nd</sup> International Danube Neurology Symposium*

Date: during PTN national meeting, 23-26. 09. 2020

Professor Konrad Rejdak and Professor Zbigniew Stelmasiak (Lublin, Poland)

### *7.2. The 53<sup>rd</sup> International Danube Neurology Symposium*

Date: 2021

Professor Gerhard Ransmayr (Linz, Austria)

### *7.3. The 54<sup>th</sup> International Danube Neurology Symposium*

Date: 2022

Professor Dragoslav Sokic (Belgrade, Serbia)

### *7.4. The 55<sup>th</sup> International Danube Neurology Symposium*

Date: 2023

Professor Peter Turčáni (Bratislava, Slovakia)

## **8. Present and Future Activities of the International Danube Symposium for Neurological Sciences and Continuing Education**

- The **International Danube Symposium for Neurological Sciences and Continuing Education** fosters and coordinates fellowship programs for young neurologists from Danube Countries
- Coordination of future **Danube Neurology Symposia**
- The **Danube Neurology Newsletter** is available free of charge (also downloadable) on Internet in electronic version
- Information about future events (**Calendar of events**)
- We also consider as our task to help with the activity of the **EAN** in the Danube-countries.

## **9. Finances of the International Danube Symposium for Neurological Sciences and Continuing Education**

According to previous decision of the Danube Neurology Curatorium Meeting, the financial sources of the International Danube Symposium for Neurological Sciences and Continuing Education from all kinds of symposia, conferences, meetings, teaching/training or other kinds of courses under the roof and auspices of our organization, are as follows: According to a final report of the meetings, symposia, etc. to be handed in electronically to the Head Office in Szeged, Hungary, the financial surplus of all meetings should be divided 70:30 between the Local Organizers and the permanent International Danube Neurology Symposium Head Office in Szeged, Hungary. Or the amount of min. EUR 2,500 is to be transferred – together with the financial report – to the Head Office according to our invoice.

## **10. Web-site of the International Danube Symposium for Neurological Sciences and Continuing Education**

The home-page of the International Danube Symposium for Neurological Sciences and Continuing Education consists of:

- the contents of all Newsletter (Nr.1-30)
- Managing and Executive Board Members of the International Danube Symposium for Neurological Sciences and Continuing Education
- Past and future Symposia, Conferences, Meetings
- Other further important information.