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12TH CONGRESS OF THE

SOCIETY FOR THE STUDY OF NEUROPROTECTION AND NEUROPLASTICITY

6 - 9 OCTOBER, 2016

HOTELS & PREFERENCE HUALING TBILISI

TBILISI, GEORGIA

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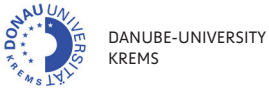

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SCIENTIFIC PROGRAM

12TH CONGRESS OF THE

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6 - 9 OCTOBER, 2016, HOTELS & PREFERENCE HUALING TBILISI, TBILISI, GEORGIA

FRIDAY, OCTOBER 7TH, 2016

08:45 – 09:00 ***WELCOME ADDRESS***

PRESIDENTIAL SESSION

CHAIRPERSONS: Dafin F. Mureșanu (Romania), Natan M. Bornstein (Israel)

09:00 – 09:30 Dafin F. Mureșanu (Romania)
Cognitive and motor rehabilitation after stroke

09:30 – 10:00 Natan M. Bornstein (Israel)
Cerebral small vessels disease (SVD) -
The most common neurological disorder

10:00 – 10:30 Alexander Tsiskaridze (Georgia)
Oral anticoagulation related intracerebral bleeding:
risk factors, clinical features and management

10:30 – 10:40 Discussions

10:40 – 11:10 ***COFFEE BREAK***

SESSION 1

CHAIRPERSONS: Wolf Dieter Heiss (Germany), Ovidiu Băjenaru (Romania)

11:10 –11:40	Volker Hömberg (Germany) Is there a way to influence impairment in neurorehabilitation?
11:40 – 12:10	Ovidiu Băjenaru (Romania) Cerebral microcirculation in acute ischemic stroke
12:10 – 12:40	Michael Chopp (USA) Multifactorial mechanisms of action of neurotrophic factros as effective neurorestorative agent for stroke and neurological injury
12:40 – 12:50	Discussions
13:00 – 14:00	***LUNCH***

SESSION 2

CHAIRPERSONS: Volker Hömberg (Germany), Michael Chopp (USA)

14:00 – 14:30	Wolf Dieter Heiss (Germany) Differential Diagnosis of Dementias by Molecular Imaging with PET
14:30 – 15:00	Hari Shanker Sharma (Sweden) Nanodelivery of nuerotrophic factors in combination with neprilysin induces neuroprotection in Alzheimer's disease pathology following brain injury
15:00 – 15:30	Antón Álvarez (Spain) BDNF modulation for the treatment of neurocognitive deficits and the prevention of dementia after TBI

15:30 – 16:00	Axel Kohlmetz (Austria) The importance of innovative registry studies – Methodological aspects of CREGS-S
16:00 – 16:10	Discussions
16:10 – 16:30	***COFFEE BREAK***

ESO EAST SESSION

CHAIRPERSONS: Natan M. Bornstein (Israel), Alexander Tsiskaridze (Georgia)

16:30 – 16:50	Natan M. Bornstein (Israel) National stroke registries: what can we learn from them
16:50 - 17:05	Alexander Tsiskaridze (Georgia) Stroke Burden in Developing World
17:05 - 17:20	Vitalie Lisnic (Republic of Moldova) Stroke peculiarities in Moldova's population. Implementation of the ESO-EAST project
17:20 - 18:05	Adina Stan (Romania) The role of registries in stroke management. RES-Q registry presentation. Hands on session.
18:10	***CLOSING REMARKS***
18:30 - 19:00	***CREGS INVESTIGATORS MEETING***
19:15	Get together in the lobby for dinner

ABSTRACTS

BDNF MODULATION FOR THE TREATMENT OF NEUROCOGNITIVE DEFICITS AND THE PREVENTION OF DEMENTIA AFTER TBI

ANTÓN ÁLVAREZ [1,2]

JESUS FIGUEROA[1,3], **DAFIN F MUREȘANU**[4]

1. Medinova Institute of Neurosciences, Clínica RehaSalud, A Coruña, Spain;
2. Clinical Research Department, QPS Holdings, A Coruña, Spain;
3. Rehabilitation Department, University Hospital, Santiago de Compostela, Spain;
4. Department of Neurosciences, University of Medicine & Pharmacy 'Iuliu Hatieganu', Cluj-Napoca, Romania

Neurocognitive deficits are the most common complaints after traumatic brain injury (TBI). Most of TBI cases experience an early recovery, but some of these patients show a late decline in cognitive functioning, particularly those with advance age and/or with increased levels of depression. Up to 10-15% of the individuals with mild TBI (mTBI) show persistent difficulties in cognition and executive functions, and more than 50% of the patients with moderate-severe TBI (msTBI) endure long-term injury-related disabilities. Subjects undergoing TBI earlier in life have an increased risk of developing dementia. A history of msTBI anticipates the onset of Alzheimer's disease (AD) at younger ages and the risk of having AD increases with increasing TBI severity. Similarly, a history of repetitive mTBI was found to be associated with the development of chronic traumatic encephalopathy (CTE).

Treatment of neurocognitive deficits and the prevention of TBI-related dementia were overlooked until very recently, and even nowadays remain priority issues waiting for an effective drug management. TBI activates endogenous processes of neurorestoration by inducing the expression of neuroprotective genes, which are also responsive to the administration of neurotrophic factors such as BDNF. Therefore, the modulation of the endogenous repair mechanisms mediated by neurotrophic factors represents an appealing drug target for TBI treatment.

Brain-derived neurotrophic factor (BDNF) is the most abundant neurotrophin within the brain; it regulates neurovascular functions such as neural and vascular plasticity, angiogenesis, neurogenesis and neuroinflammation; and has been implicated the recovery after TBI, showing a positive influence on survival, depression and cognitive functioning. Low circulating BDNF levels were found to be associated with enhanced TBI severity, with increased mortality, with poorer memory performance, as well as with the occurrence of depression and posttraumatic stress disorder in TBI patients. In addition, BDNF gene polymorphisms were shown to influence plasticity in the prefrontal cortex, preservation of general cognitive functioning, delayed alteration of memory processing, memory and processing speed, long-term potentiation/depression (LTP, LDP), recovery of executive

functioning, and the response of depression to treatment after TBI. Therefore, strategies aimed at enhancing endogenous BDNF seem to represent an eff ective option for improving neurocognitive defi cits, and probably to prevent dementia after TBI.

Several clinical trials demonstrated improvements of cognitive performance in TBI patients treated with endogenous peptides as well as with the peptidergic drug Cerebrolysin. Results of the available clinical studies indicate that neurotrophic factors induced a faster clinical recovery and a shorter hospitalization time in patients with acute TBI, and improved cognitive performance when administered during either acute or post-acute TBI phases. The increase of endogenous BDNF levels induced by neurotrophic factors might account for its neurorestorative and procognitive eff ects in TBI. Thus, treatment with neurotrophic factors during both acute and rehabilitation periods should contribute to improve neuro-recovery and to delay/prevent dementia after TBI. However, large short-term controlled trials and long-term effi cacy and prevention studies with peptidergic drugs are still needed.

CEREBRAL MICROCIRCULATION IN ACUTE ISCHEMIC STROKE

OVIDIU BĂJENARU
University of Medicine and Pharmacy "Carol Davila" Bucharest, Romania

The clinical consequences of an ischemic stroke are determined by the localization and extent of the loss of brain tissue, which is not directly proportional exclusive to the caliber of the occluded artery. The ischemic loss of the brain tissue is a direct consequence of the impossibility of normal metabolic changes, in particular oxygen and glucose supply from the vessels to the brain parenchyma at the level of the bloodbrain barrier, which normal integrity and functionality is mainly dependent to the integrity of the brain microcirculation. The disruption of the microvascular compartment during and after an acute ischemic event is not the same in all patients with a similar occlusion of the same type of cerebral artery, in terms of caliber and location; the differences are determined by many other factors, among endothelial disfunction, the presence of previous vascular risk factors, the development of collateral circulation, the time duration since the initial occlusion of the artery are most important. These factors influence the extent and the speed of secondary vessel occlusion, this time at the level of the distal microcirculation in the territory of the occluded artery and adjacent brain areas. These events at the level of the microcirculation are the key-elements which allow or not the reperfusion of the brain tissue in the ischemic area, even if the therapeutic interventions (by fibrinolysis and / or endovascular mechanic recanalisation) are

performed in the due therapeutic window. In fact, the aim of acute management in acute ischemic stroke is the brain reperfusion, and the artery recanalisation is only the main pathway - but not exclusive, to reach this target. Understanding the role of the brain microcirculation during the acute ischemic stroke is essential to understand the no-reflow phenomenon, the risk of hemorrhagic transformation and other clinical relevant problems related to the failure of the most performant actual acute reperfusion therapies, in a significant percentage of the patients with ischemic stroke.

CEREBRAL SMALL VESSEL DISEASE – THE MOST COMMON NEUROLOGICAL DISORDER

NATAN M. BORNSTEIN
Director of Neurological Division, Shaare Zedek Medical Center

The term cerebral small vessel disease encompasses a group of pathological conditions affecting mainly small arteries but also venules and capillaries of the brain. These processes can be confined to the brain or a part of a systemic condition

Being the most common neurological pathology, it plays a key role in the mechanism of intracerebral hemorrhage, ischemic stroke and vascular dementia. It also contributes to gait difficulties, depression, incontinence and to aging of the brain in general.

Hypertensive vasculopathy and cerebral amyloid angiopathy are the two most common forms of the disease. Other etiologies include post radiation injury, vasculitis and genetic forms.

As opposed to large vessels, cerebral small vessels cannot be visualized in vivo using conventional imaging, therefore parenchymal alternations attributed to cerebral small vessel disease can be used for diagnosis. These alternations include white matter hyperintensities, lacunes, microbleeds, dilated perivascular spaces and cerebral microinfarcts. These radiological markers can be used in the future as surrogate endpoints in trials design to stop the epidemic of vascular dementia.

NATIONAL STROKE REGISTRIES: WHAT CAN WE LEARN FROM THEM

NATAN M. BORNSTEIN
Director of Neurological Division, Shaare Zedek Medical Center

Clinical registries play an important role in measuring healthcare delivery and supporting quality improvement for individuals with cardiovascular disease and stroke. Well-designed clinical registry programs provide important mechanisms to monitor patterns of care, evaluate healthcare effectiveness and safety, and improve clinical outcomes. The use of clinical registries is likely to grow given the increasing focus on measuring and improving healthcare delivery and patient outcomes by stakeholders in both the private and public sectors.

The focus of clinical registries is to capture data that reflect "real-world" clinical practice in large patient populations. The data from clinical registries do not replace the need for traditional randomized controlled trials. Rather, registries and trials are complementary approaches, each with unique advantages and imperfections. Such clinical registries do not solely contain claims or administrative data yet may be linked to such data sources.

Clinical registries also provide the opportunity to identify and evaluate healthcare disparities within a broad patient population in community practice outside of the structured research protocol setting. This promotes the ability to examine important issues involving patient access and outcomes in subpopulations, including racial and ethnic minorities, women, the elderly, individuals with multiple comorbidities, and individuals with congenital heart conditions.

National Acute Stroke Israeli Survey (NASIS) ia a tri-annual prospective national registry conducted over a period of two consecutive months in order to assess trends in incidence, characteristics, management, and outcome of hospitalized patients with acute stroke and TIA. Includes all stroke patients admitted to hospitals nationwide, thus avoiding institution and patient selection bias. NASIS registry in-total over 8,000 patients (2004-2013)

Message to take home:

- Surveys provide data and allow future planning
- Surveys indicate deficiencies in ongoing therapy
- Surveys allow comparisons between hospitals and encourage improvement
- Education benefit
- Results can direct national health policies

MULTIFACTORIAL MECHANISMS OF ACTION OF NEUROTROPHIC FACTORS AS AN EFFECTIVE NEURORESTORATIVE AGENT FOR STROKE AND NEUROLOGICAL INJURY

MICHAEL CHOPP
Henry Ford Hospital, Department of Neurology, Detroit, MI, USA
Oakland University, Department of Physics, Rochester, MI, USA

The neurotrophic factors have a potent restorative therapeutic eff ects for the treatments of stroke, traumatic brain injury (TBI) and neurodegenerative diseases. Here, I will summarize our data on double blinded preclinical studies, performed under rigorous clinical trial conditions for the treatment of stroke and TBI. In addition, I will review and provide new insight into the multiple mechanisms of action of neuroprotective factors. Data will be shown that neuroprotective factors evoke

expression of Angiopoietin 1 (Ang1), which promotes blood brain barrier integrity, is anti-inflammatory ,and mediates axonal outgrowth. It also up regulates the expression of the developmental morphogen Sonic Hedgehog (Shh). Shh stimulates cellular expression of tissue plasminogen activator (tPA), which acts as both an endogenous thrombolytic agent and plays a pivotal role in mediating neurite outgrowth and neurological recovery. In addition , I provide novel insight into how neuroprotective factors stimulates specific sets of microRNAs (miRs). miRs are small non-coding RNAs which can simultaneously post-transcriptionally regulate the translation of many genes. Shh acts to up regulate cellular expression of the miR-17-92 cluster. This cluster of miRs, has potent anti-inflammatory effects as well as promotes axonal outgrowth. Thus, we demonstrate that neurotrophic factors have multifactorial neurovascular remodeling effects on tissue which drives neurological recovery.

DIFFERENTIAL DIAGNOSIS OF DEMENTIAS BY MOLECULAR IMAGING WITH PET

WOLF DIETER HEISS
Max Planck Institute for Metabolism Research, Cologne, Germany

Positron Emission Tomography (PET) is an imaging technique which uses small amounts of radiolabeled biologically active compounds (tracers) to help in the diagnosis of disease. However, PET imaging uses short lived isotopes the production of which requires a cyclotron, and applies molecular tracers which are synthetized and labeled in a dedicated radiochemistry unit.

Aging leads to a small loss of cortical neurons, but to a significant reduction of synapses, dendrites and myelinated fibers. These age-related changes may cause some cognitive impairment, brain atrophy and frontally accentuated diffuse decrease in metabolism. In pathological disorders leading to dementia, most frequently degenerative Alzheimer's disease, cerebrovascular disease or a combination of both, the changes are more severe, affect predominantly specific regions and result in significant loss of neurons. The differential diagnosis of these disorders is based on symptoms of cognitive and memory impairment and is supported by results of neuropsychological tests and of imaging. Whereas computed tomography and magnetic resonance imaging are able to detect morphologic lesions, these modalities cannot determine functional consequences of the underlying pathologies.

During the last years basic research has provided detailed insight into the molecular pathogenesis of Alzheimer disease (AD) and other degenerative disorders which might be translated into new therapeutic strategies with putative disease-

modifying effects. These treatment strategies will only be effective when initiated very early in the course of the diseases before deposition of abnormal proteins and neurodegeneration become too widespread. Therefore there is a great need for early diagnosis and to detect the typical deleterious pathological changes in the predementia phase, i. e. in patients with mild cognitive impairment (MCI) or even in presymptomatic individuals. Structural imaging, e.g. MRI, serves to exclude other treatable diseases, to recognize vascular lesions and to identify specific types of dementia (e.g. normal pressure hydrocephalus). In combination with routine clinical tests the diagnostic accuracy of AD is increased. Metabolic and molecular imaging by positron emission tomography (PET) further reduces the misclassification rate of AD and significantly improves prediction of conversion, especially quantitative determination of regional glucose metabolism by 18F-Deoxy D glucose-PET has been widely used for this purpose. Recently imaging of amyloid deposition by PET with PIB and other tracers has found great interest, but interpretation must be careful since amyloid deposition might be observed in aged subjects without cognitive impairment and therefore must be used in combination with other tests. In this application imaging of tau might be preferable, since deposition of this pathological protein is related to severity of cagnitive impairment in AD. Imaging of synaptic transmitters, receptors and enzymes is feasible by special tracers and may help in the differential diagnosis between AD and other forms of neurodegenerative disorders.

PET allows imaging the localized and / or diffuse metabolic disturbances responsible for cognitive impairment and dementia, and is effective in differentiating vascular dementia from degenerative dementia, as Alzheimer's disease. It also may help to understand the importance of inflammatory changes and their interaction with amyloid depositions for the development of poststroke dementia. Additionally, tracers for neuroreceptors, for transmitters and for enzyme substrates permit the visualization of neurotransmission in a plurality of CNS diseases.

The utilization of biological probes labeled with short lived radioisotopes makes PET a powerful tool to image function, blood flow, metabolism, transmitter activity, receptor distribution, enzymatic activity, gene expression and other molecular variables in the brain. The high sensitivity allows PET to measure concentrations of molecules in the nano- and picomolar range without affecting the biochemical system being investigated. The wide versatility has made PET an important tool for experimental and clinical neuroscience. Emerging developments in multimodal imaging offer the opportunity to study multiple questions concurrently and have great promise for the future.

IS THERE A WAY TO INFLUENCE IMPAIRMENT IN NEUROREHABILITATION?

VOLKER HÖMBERG
Heinrich Heine University of Duesseldorf
SRH Health Center, Bad Wimpfen, Germany

Over the last two decades there has been a remarkable change in our thinking on the invention, design and efficacy evaluation of motor therapies in neurorehabilitation which can be summarized by three major paradigmatic changes:

1. First there it has been a change from confession to profession i.e. more and more evidence based approaches rather than intuitively driven procedures have come into use.

2. This was accompanied by a change from "hands on" treating to "hands off" coaching approaches, which now dominate most of the evidence procedures. This change in treatment philosophy has had a marked impact also on the self-understanding of the therapists in their relation to the patient mutating from treaters to teachers.

3. Thirdly these developments were accompanied by a transition from intuitively marshalled individual one to one treatments to quality proven group treatments.

Most of these paradigmatic changes were influenced from an enthusiasm to use elementary rules of learning.

We certainly have to ask ourselves if we really have addressed the right questions to bring the field forward. One of the most crucial questions is:

Are we really able to influence impairment i.e. can we reduce the amount of paresis e.g. after stroke?

In animal experimentation so called „enriched environments" have been proven to facilitate brain repair. There has however been no translation from this experimental animal world to the clinical bedside

In this respect a clearer distinction has to be made between treatment strategies targeted to restore function (and thereby decrese impairments) from approaches to just by means of learning compensate **function** in order to improve **activities**.

Especially in the early postacute stage within a limited therapeutic time window (e.g. ca. 3 months in stroke) restorative approaches are aimed to decrease impairment. We must admit that the repertoire for impairment oriented treatment approaches still is rather limited.

So far only three major strategies have been shown to help decrease impairment in the subacute stage e.g. after stroke: The forced use or constraint induced movement therapy approach has been proven to be effectve in the multicenter

prospective EXCITE trial (Wolf et al 2008). Also the use of antidepressant agents was shown to be effective in the FLAME trial (Chollet et al 2011). Very recently the CARS trial (Muresanu et al 2016) documented for the first time after decades of frustrate attempts that it is possible to achieve some sort of neuroprotective and/or neurorestorative effects using a multimodal drug in combination with rehabilitation to reduce impairment in postacute stroke.

Possible additional candidates for a true „impairment" oriented treatment approach are neuromodulatory techniques such as peripheral neuromuscular and/or sensory stimulation (e.g. whole hand subliminal „mesh-glove" stimulation) and more and more also non invasive brain stimulation techniques such as repetitive transcranial magnetic stimulation and transcranial DC stimulation. Also the use of non fatiguable robotic devices to enable high intensity massed movement treatment in the early post-stroke period appear promising and will eventually allow us to create sort of true „enriched environments" also for patients.

Probably the most important impact in facilitating impairment reduction will however be a dramatic increase in therapy intensity (similar to the effective enriched environments in experimental animals).

We have to design clever and economically feasible approches to increase the net number of therapy or activity hours per day by creating true „enriched environments" for severely impaired patients. They should enable 6-8 hours of daytime treatment to avoid leaving our patients „inactive and alone" (Bernhardt et al 2004) in future.

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THE IMPORTANCE OF INNOVATIVE REGISTRY STUDIES – METHODOLOGICAL ASPECTS OF CREGS-S

AXEL KOHLMETZ
Austria

Randomized clinical trials are the gold standard to determine efficacy but are not practical in every circumstance. Registries can be invaluable to measure effectiveness and for studying routinely used treatments. However, result differences are potentially subject to bias but most of the major sources can be managed through a rigorous approach of selection, matching and independent, blinded assessment of outcome. Methods include the use of propensity scores and propensity score matching. One example where this approach is being used is the CREGS-S Trial in stroke recovery. The trial design and methodology will be discussed in detail as a relevant example about the level of sophistication applied in modern clinical research.

STROKE PECULIARITIES IN MOLDOVA'S POPULATION. IMPLEMENTATION OF THE ESO-EAST PROJECT

VITALIE LISNIC[1,2]
Stanislav Groppa[1,3], Efremova Daniela[1,3], Elena Manole[1,2], Elena Costru-Tasnic[1,2]
1. "Nicolae Testemitanu" State University of Medicine and Pharmacy, Chisinau, Republic of Moldova
2. Institute of Neurology and Neurosurgery, Chisinau, Republic of Moldova
3. Institute of Emergency Medicine, Chisinau, Republic of Moldova

Stroke is the most common life-threatening neurological disease globally and impacts individuals, their families and society. It is the leading cause of disability among elderly and the second leading cause of mortality worldwide. Every year 16 million people worldwide suffer a stroke, of which 5.7 million die and 5 million remain disabled.

The incidence of stroke in Europe varies from 101.1 to 239.3 per 100,000 among men and from 63.0 to 158.7 per 100,000 among women, being the highest in Eastern Europe. In the Republic of Moldova during the years 2000-2014 there is a progressive increase of incidence and prevalence of cerebrovascular diseases reported per 10.000 population, the incidence increased from 20.4 in 2000 to 26.82 in 2014, and the prevalence from 67.0 in 2000 to 199.08 in 2014. The death rate from stroke in Republic of Moldova remains one of the highest in Europe.

Implementation of the ESO-EAST project in Moldova will contribute to reduce

the stroke burden in our country. Moldavian Stroke Registry started to be developed before ESO EAST Project, in 2005, and it has been connected to the National Medical Statistics Registry. Currently, the stroke cases are registered in two stroke units from Chisinau within the Institute of Emergency Medicine (IEM) and Institute of Neurology and Neurosurgery (INN).

With implementation of the ESO EAST project was established a team of neurologists responsible for elaboration and implementation of the stroke registry, the elaboration of a form for data collection. The data collected in July - September 2015 were presented at the EAN Congress 2016. Since April 2016 the data from INN started to be introduced in SITS registry. INN and the responsible staff were registered in order to perform RES-Q data entry for stroke patients.

Knowledge of risk factors for stroke should help to implement relevant strategies and policies, reduce stroke incidence, mortality and sequels. In this context IEM performed an epidemiological study to collect data and it had covered the period from October to December 2015. The aim of the study was to identify the prevalence of the risk factors for stroke in the Republic of Moldova. Information about specific stroke risk factors in the population of Republic of Moldova will contribute to developing a national strategy for primary prevention of stroke.

Keywords: Epidemiology, incidence, registry, stroke.

COGNITIVE AND MOTOR REHABILITATION AFTER STROKE

DAFIN F. MUREȘANU
Chairman Department of Clinical Neurosciences
'Iuliu Hatieganu' University of Medicine and Pharmacy, Cluj-Napoca, Romania

Cognitive impairment represents a common complication after stroke that include executive, attention, memory, visual-spatial perception dysfunction. Difficulties in speech and language are also associated cu impaired cognitive abilities, and cognitive training is more and more used as an add-on strategy to other specific rehabilitation procedure such as motor rehabilitation. Actually, one of the principles of cognitive neurorehabilitation is to combine specific interventions for motor function with a cognitive-behavioral intervention. The rationale behind this approach is based on the dynamic interconnectivity among the brain circuits involved in motor execution, executive function, attention and memory.

This presentation will focus on the principles of homeostatic mechanism that modulates all three levels of brain's organization: cellular/molecular, local circuitry and network level.

The concept of endogenous neuromodulation refers to the brain's capacity to balance anti-correlated processes, such as pro-survival signaling mechanisms

versus pro-death signaling mechanisms at the cellular and molecular level, long-term potentiation versus long-term depression at the local circuit level, synchronization versus desynchronization at the dynamic network level. Every level in turn comprises several sublevels, each of which is characterized by a multitude of anti-correlated processes.

Brain networks strength is determined by the capacity of neuronal groups to fire synchronously, modulated by synaptic communication and by resting membrane potential, which are determined by the expression of genes tightly linked to neurotransmitters and ion channels activity. This crosstalk between genetic and neuronal networks is staring to be increasingly more studied in neurological and psychiatrically pathologies; recent data showed that stroke imbalances the miRNA-genes network leading to alteration of the processes regulated by targetgenes such as MAPK signaling pathway, with important consequences upon inflammation, oxidative stress and neuroprotection .

Recent data support the idea of inter-correlation between molecular/cellular level and network level showed that an ischemic lesion, even of small dimensions, may trigger a progressive molecular disorganization of axons, even at a distance from the infarct core, possibly incriminating mechanisms being widespread inflammation and neuro-vascular unit (NVU) dysfunction.

The presentation will also highlight the current status on evidence based interventions in preventing and treating post-stroke cognitive impairment.

NANODELIVERY OF CEREBROLSYIN IN COMBINATION WITH NEPRILYSIN INDUCES NEUROPROTECTION IN ALZHEIMER'S DISEASE PATHOLOGY FOLLOWING BRAIN INJURY

HARI SHANKER SHARMA[1,3,4]

DAFIN F MUREȘANU[2,3], JOSÉ VICENTE LAFUENTE[4], RANJANA PATNAIK[5], Z. RYAN TIAN[6], ASYA OZIKZILCIK[6], HERBERT MÖSSLER[3], ARUNA SHARMA[1,3,4]

1. Dept. of Surgical Sciences, Anesthesiology & Intensive Care Medicine, Uppsala University Hospital, Uppsala University, SE-75185 Uppsala, Sweden
2. Dept. Clinical Neurosciences, University of Medicine & Pharmacy, Cluj-Napoca, Romania
3. "RoNeuro" Institute for Neurological Research and Diagnostic, 37 Mircea Eliade Street, 400364, Cluj-Napoca, Romania
4. University of Basque Country, Dept of Neurosciences, Bilbao, Spain
5. School of Biomedical Engineering, Dept. of Biomaterials, Indian Institute of technology, Banaras Hindu University, Varanasi, India
6. Dept. Chemistry & Biochemistry, University of Arkansas, Fayetteville, AR, USA

Neprilysin (NPL) is an endogenous enzyme that functions as rate-limiting step in amyloid-beta peptide (AβP) degradation. There are reasons to believe that an imbalance between production and clearance of AβP results in its accumulation

leading to development of Alzheimer's Disease (AD). In several cases of AD the metalloprotease NPL brain concentration is decreased. Also NPL knocked out mice exhibited AD like brain pathology and behavioural dysfunctions. This suggests that enhancing the NPL concentartions by therapeutic means may reduce brain pathology in AD. Recently some evidences suggest that focal brain injury or traumatic head injury could also induce alterations in NPL activity in the brain and in the CSF. Although brain injury alone could results in deposition of AβP in the brain indicating that AD may result following brain trauma. Thus, it is interesting to find out whether traumatic brain injury (TBI) could further exacerbate AβP infusion induced brain pathology. Furthermore, in such situation whether NPL has any protective role if administered exogenously either alone or with other neuroprotective gents.

AD like brain pathology was induced by AβP (1-40) administration intraventricularly (i.c.v.) in the left lateral ventricle 250 ng/10 µl once daily for 4 weeks in control or TBI rats. The TBI was produced by a longitudinal lesion over the right parietal cerebral cortex (2 mm deep and 4 mm long) after opening of the skull under anesthesia. After 30 days of the 1st AβP infusion, the rats exhibited breakdown of the blood-brain barrier (BBB) extravasation of endogenous/exogenous protein tracers, brain edema formation, and AβP deposits in several parts of the brain. The brain pathology showed neuronal, glial and axonal changes. In separate group of rats, TiO2 nanowired neurotrophic factor (25 µl, NWCBL) and/or TiO2 nanowired NPL (1 µg in 10 µl) was infused into the left cerebral ventricles daily starting from 1 week after the onset of AβP infusion and terminated 1 week before the last infusion. Our results show that AβP infusion in TBI cases exacerbated brain pathology in various regions e.g., cerebral cortex, hippocampus, thalamus, hypothalamus and cerebellum. TiO2 NWCBL was able to thwarts brain pathology in AD cases in both healthy and TBI rats. However, NPL alone was able to reduce some of the brain pathology in healthy animals after AβP infusion. On the other hand a combination of NWCBL and NW-NPL resulted in profound neuroprotection in TBI following AβP infusion. Our results are the first to show that a combination of nanodelivered NPL and CBL has additive effects on neuroprotection in AD, not reported earlier.

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STROKE BURDEN IN DEVELOPING WORLD

ALEXANDER TSISKARIDZE
Department of Neurology, Tbilisi State University, Tbilisi, Georgia

Stroke in developing countries is characterized by high morbidity and mortality. These countries share common problems including shortcomings in stroke prevention, diagnosis and treatment caused by lack of specially trained specialists and expertise, lack of equipment, inadequate diagnostic evaluation and insufficient funds. There is a deficit of information on stroke warning signs on a population level, improper pre-hospital management and delayed admission. Stroke units, by its modern definition implying management of a stroke patient by multidisciplinary team, advanced monitoring and early rehabilitation, are lacking. Absence of national guidelines on stroke management contributes to lack of evidence-based interventions. Unproven medications are intensively marketed and commonly prescribed. Rates of thrombolysis and thrombectomy are relatively low. For secondary prevention, in some countries, antiplatelet agents are not used systemically and anticoagulants are usually underprescribed. Endarterectomy and stenting are done rarely with few exceptions. All of these contribute to the high burden of the disease. Prioritization of stroke by the governments of the developing nations as a major public health problem as well as formulation and adoption of a comprehensive and integrated national policy against stroke can be an effective measure for reducing the disease burden.

ORAL ANTICOAGULATION RELATED INTRACEREBRAL BLEEDING: RISK FACTORS, CLINICAL FEATURES AND MANAGEMENT

ALEXANDER TSISKARIDZE
Department of Neurology, Tbilisi State University, Tbilisi, Georgia

Although oral anticoagulants are largely underprescribed, there has been increasing use of these agents for prevention of thromboembolism in the recent years. This is true for both vitamin K agonists as well as recently developed novel oral anticoagulants. The oral anticoagulation-related intarcerebral hemorrhage (OAT-ICH) is a major bleeding, resulting in a life-threatening condition. Established risk factors for OAT-ICH are advanced age, race (Asian, Hispanic and black), intensity of anticoagulation, hypertension and history of cerebrovascular disease; while probable risk factors are cerebral amyloid angiopathy, genetic polymorphisms of CYP45049, concomitant antiplatelet use, leukoaraiosis and cerebral microbleeds.

Clinical presentation of OAT-ICH comprises rapidly developing focal neurological signs (hemiparesis, aphasia, ataxia) often accompanied by unusual headache, nausea and vomiting, confusion, stupor, or dizziness. In almost half of cases the bleeding evolves slowly, for 24 hours or more and ICH often continues to expand after the diagnosis is made by neuroimaging studies. Mortality rates in patients with OAT-ICH range from 52% to 67%, and are higher than those observed in patients with spontaneous ICH with higher rate of disability. Therapeutic strategy in OAT-ICH consists of similar measures used for spontaneous ICH including general supportive care, prevention and treatment of complications, and neurosurgical intervention when indicated. Specific for OAT-ICH treatment implies prevention of hematoma expansion by immediate reversal of anticoagulation.

CURRICULUM VITAE

ANTÓN ÁLVAREZ
SPAIN

Medical Doctor (M.D.), University of Santiago de Compostela (1987)
Diploma of Specialist in Neuroendocrinology, University of Santiago de Compostela (1988)
Graduate in Psychology, University of Santiago de Compostela (1988)
Doctorate in Psychiatry, University of Santiago de Compostela (1988-1990)
Resident Research Fellow of the Ministry of Education and Science (1988-1992)
Department of Psychiatry, Santiago University (1988-1991)
Madrid Complutense University (1992)

Psychiatry Doctor (PhD), Department of Psychiatry, Madrid Complutense University (1997)
Dr. Àlvarez has 22 years experience in Basic and Clinical Research on Alzheimer's disease. He was involved in more than 150 research projects, including projects funded by Public Institutions, pharmaceutical
R&D studies, industrial and R+D+I projects, epidemiological studies and two projects funded by the
European Comunity: (1) MimoVax:
Alzheimer's disease treatment targeting truncated AB40/42 by active immunisation (an STREP -Specific Targeted
Research Projects- Project approved through the Six Framework Programme of the European Community
to develop and test a vaccine for Alzheimer's disease). Period: 2006-2010. (2) BIOMED-PL-950523-European
Concerted Action on Pick's Disease. Period: 1995-1998.

As a result of the research activity developed during this period, Dr. Àlvarez published more than 120 scientific
articles in national and international journals and books. In addition, Dr. Àlvarez is actively involved in several
scientific forums of his specialty (Congresses, Research Groups, Scientific Journals and Associations).

OVIDIU BĂJENARU

ROMANIA

1983	: M.D. at the Faculty of Medicine of University of Medicine and Pharmacy "Carol Davila" Bucharest
1983-1985	: post graduate hospital stagium in University Hospital of Emergency Bucharest
1985- 1989	: resident of neurology
1985	: assistant professor – University of Medicine and Pharmacy "Carol Davila" Bucharest - Department of Neurology of the University Hospital of Emergency Bucharest
1989	: specialist in neurology, confirmed by the Ministery of Health of Romania
1993	: Ph.D. at the University of Medecine and Pharmacy "Carol Davila" Bucharest - senior lecturer of neurology - Head of Department and Medical Chief (University Hospital of Emergency, Bucharest
1994 - 1999	: Associate Professor of Neurology
1999 (since)	: Professor of Neurology at the University of Medicine and Pharmacy " Carol Davila" Bucharest and Chairman of the Neurology Department of the University Hospital of Emergency Bucharest
2006:	: Doctor Honoris Causa - University „Ovidius" – Constanta (Romania)
2011	: Director of Department of Clinical Neurosciences - University of Medicine and Pharmacy " Carol Davila" Bucharest
2013 (since)	: Corresponding member of the Romanian Academy of Medical Sciences

Other professional activities :

2000-2004	: Vice-Dean of the Faculty of Medecine - University of Medecine and Pharmacy "Carol Davila" Bucharest
2001-2013	: President(founder) of the Romanian Society of Neurology
2013(since)	: Honorary President ad vitam of the Romanian Society of Neurology
2003-2009	: member of the Scientific Committee of ECTRIMS
2005-2009	: member of the Executive Committee of the European Society of Neurology
2011 (since)	: member of the National Committee of Habilitation of the Romanian Ministery of Education for PhD accreditation and high academic degrees

Post graduate training :

1992 - 1994 : post graduate training in clinical neurology and functional investigations of the nervous system at University " Rene Descartes"(Paris) : C.H.U. Sainte-Anne (Neurology) and C.H.U. Cochin – Port Royal (Functional Investigations of the Nervous System) and training in neuroendocrinology
1996 : second medical competence (confirmed by the Ministery of Health of Romania) in "Diagnosis in Neurological Diseases by MRI".
1997 : assistant of clinical research in pharmaco-clinical trials (Paris)
2009, 2011 : International training for methodology in clinical research

Fields of interest for the scientific research

- dementia and neurodegenerative diseases (in particular Parkinson's disease)
- multiple sclerosis
- stroke
- experimental and clinical study of sleep disturbances in the neurological and neuroendocrinologic diseases
- more than 450 scientific papers published and reported in different national and international scientific meetings
- ISI Web of Science: h-index : 8
- 5 medical books and monographies (published in Romania)
- co-author (1 chapter) to the "International Neurology - A Clinical Approach" (eds. ROBERT P. LISAK, DANIEL D. TRUONG, WILLIAM CARROLL, ROONGROJ BHIDAYASIRI), Wiley-Blackwell , 2009
- Country Principal Investigator – in more than 20 international, multicentric clinical trials
- Principal Investigator of the research site – in more than 30 international and national multicentic trials
- Member of the Steering Committee of PRECISE trial

Other activities:

- coordinator of the Continuous Medical Education (EMC) national program of the Romanian Society of Neurology for neurologists in Romania
- coordinator and author of the Guidelines for diagnosis and treatment of neurological diseases (agreed by the College of Medecins of Romania) main author of the national guidelines for Parkinson's disease, Multiple Sclerosis and Dementia
- coordinator of the National Program of the National House of Insurance and Ministery of Health, for treatment of patients with neurological diseases (2000 - 2015)
- coordinator of the first medical team in Romania for DBS in Parkinson's disease.

- chief-editor of Romanian Journal of Neurology (the official journal of the Romanian Society of Neurology)

Scientific affiliation :

- Romanian Society of Neurology (Honoray President ad vitam)
- UEMS – European Board of Neurology (Secretary General – elected in 2010)
- European Neurological Society (ENS) – member of the Executive Committee between 2005 – 2009
- European Stroke Organization
- European Federation of Neurological Societies (EFNS) and European Academy of Neurolgy (since 2014)
- American Academy of Neurology (cooresponding member)
- Danube Neurological Association (Vice-Secretary General – elected in 2011)
- ECTRIMS (member of the Scientific Council 2003-2009)
- New York Academy of Sciences
- American Academy for Advancement in Science
- Movement Disorders Society
- Romanian Association for the Study of Pain
- Romanian Society for the Study of Neuroplasticity (founder president of honour)

2005, 2006, 2010, 2011: awarded by the Prize of Excelence in Neurology for the scientific activity in Romania (decided by a National Jury organized by the Health Chamber of the Romanian Parliament)
2008: awarded by the Romanian Society of Internal Medicine for the best scientific activity in a related medical speciality
2014: awarded by the International Brain Foundation and Romanian Academy of Medical Sciences, for excellency in the development of management of patients with multiple sclerosis in Romania
Investigator in an International Program of Research for genetic factors in stroke patients; Country Principal Investigator – in more than 30 international, multicentric clinical trials; Principal Investigator of the research site – in more than 30 international and national multicentic trials

NATAN M. BORNSTEIN
ISRAEL

EDUCATION
1970-73 University of Sienna, Medicine, Sienna, Italy
1973-79 Technion Medical School, Hifa, Medicine, MD, 1979
Date of receiving specialixation certificate: 11 September, 1984
Title of Doctoral dissertation: Dextran 40 in acute ischemic stroke
Name of Supervisor: Dr. Jacob Vardi

FURTHER EDUCATION
1978-83 Tel-Aviv University, Sackler Faculty of Medicine, neurology (residence), Israeli Board certified in Neurology, 1983
1979-83 Tel-Aviv University, Sackler Faculty of Medicine, Post graduate studies in Neurology
1984-87 Sunnybrook Medical Center, University of Toronto, M.R.C stroke, Fellowship

ACADEMIC AND PROFESSIONAL EXPERIENCE

1982-1995	Tel-Aviv University, Neurology, instructor
1991-present	European stroke Conference (ESC), Executive committee
1995-1999	Tel-Aviv University, Neurology, Senior lecturer
1995	Eliprodil CVD 715 clinical trial, Steering Committee
1995-1997	International Stroke Study (IST), Steering Committee
1995-1999	American Academy of Neurology, Member of the International Affairs Committee
1996	Asymptomatic Carotid Stenosis and Risk of Stroke(ACSRS), Advisory Committee
1996-present	The Mediterranean Stroke Society (MSS), President
1996-2002	EFNS, Management Committee
1997-2009	Israeli Neurological Association, Secretary
1999-present	Tel-Aviv University, Neurology, Associated Professor
2001- present	European Society Neurosonology and Cerebral Hemodynamics (ESNCH) Executive committee
2005-present	Neurosonolgy Research Group, Executive committee
2006-present	European Master in Stroke Medicine, Member of faculty
2006-2008	NEST II clinical Trial, Steering Committee
2006-present	SENTIS clinical Trial, Steering Committee

2006-present	CASTA Trial, Steering Committee
2006-present	Brainsgate clinical Trial, Steering Committee
2008- present	World Stroke Association (WSO), Vice president
2009-present	Israeli Neurological Association, Chairman
2009-present	European Stroke Organization (ESO), Member on the board of directors
2010-	NEST III clinical Trial, Steering Committee

PROFESSIONAL ACHIEVEMENTS- EDITORIAL BOARD

1991-present	Neurological Research Journal, Guest Editor
1991-present	STROKE, Member of the editorial board
1998-present	European Journal of Neurology, Member of the editorial board
1999-present	Journal of Cerebrovascular disease, Member of the editorial board
2000-present	Journal of Annals of Medical Science, Consulting Editor
2001-present	Journal of Neurological Science (Turkish), Member of the editorial board
2001-present	Acta Clinica Croatica, Member of the editorial Counsil
2003-present	Italian Heart Journal, International Scientific Board
2003-present	Journal of Neurological Sciences, Guest Editor
2004-present	Turkish Journal of Neurology, International Advisory Board
2005-present	Archives of Medical Sciences (AMS) , Member of the Editorial Board
2006-present	Journal of Cardiovascular Medicine, International Scientific Board
2006-present	International Journal of Stroke, Editorial Board
2006-present	Acta Neurologica Scandinavica, Editorial Board
2009-present	American Journal of Neuroprotection& Neurogeneration (AJNN) Member of the Editorial Board
2010	Neurosonology, International Editorial Board
2010	Frontiers in Stroke, Review Editor

PROFESSIONAL ACHIEVEMENTS- REVIEWER

1998-present	Lancet, Ad Hoc reviewer
1998-present	Diabetes and its complications, Ad Hoc reviewer
1999-present	Journal of Neuroimaging, Reviewer
1999-present	Journal of Neurology, Ad Hoc reviewer
2000-present	Neurology, Ad Hoc reviewer
2003-present	Israeli Medical Association Journal (IMAJ), Reviewer
2003-present	Acta Neurologica Scandinavica, Ad Hoc reviewer
2006-present	Journal of Neurology, Neurosurgery & Psychiatry, Reviewer
2010-	European Neurology, Ad Hoc reviewer

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1977-present	Israeli Medical Association
1983-present	The Israeli Neurological Association
1985-present	Stroke Council of the American Heart Association (Fellow)
1986-present	American Academy of Neurology
1986-present	Neurosonology Research Group of the World Federation of Neurology
1987-present	Stroke Research Group of the World Federation of Neurology

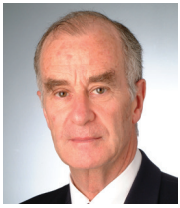
1990-2008	International Stroke Society
1995-2008	European Stroke Council
1995-present	Mediterranean Stroke Society (MSS)
1998-present	European Neurosonology Society
2005-present	World Stroke Organization (WSO)
2008-present	Fellow of the European Stroke organization (FESO)

MICHAEL CHOPP

USA

Michael Chopp, PhD, joined the Henry Ford Health System in Detroit in 1983. He was appointed Vice Chairman for Research of the Department of Neurology in 1991, Scientific Director of the Henry Ford Neuroscience Institute in 1999, and is the Zoltan J. Kovacs Chair in Neuroscience Research. Dr. Chopp is also Distinguished Professor of Physics at Oakland University in Rochester, MI.

He received his MS and doctorate degrees in Mathematical and Solid State Physics from New York University. After nearly 10 years of working as a Physicist and as a Professor of Physics, Dr. Chopp made a career change and turned his interest to translational research in neuroscience. Dr. Chopp's research has primarily focused on: 1) cellular and molecular biology of ischemic cell injury, 2) the pathophysiology of stroke, traumatic brain injury, peripheral neuropathy, multiple sclerosis, and glioma, 3) combination thrombolytic and neuro and vascular protective therapies for stroke, 4) mechanisms of neuroprotection, 5) cell-based and pharmacological neuro-restorative therapies for stroke, traumatic brain injury and neurodegenerative disease, 6) molecular and cellular mechanisms underlying neurogenesis and angiogenesis and the induction of brain plasticity leading to functional and behavioral recovery after neural injury, 7) treatment of glioma, 8) exosomes/ microRNA for treatment of neurological injury and disease, and 9) magnetic resonance imaging. Dr. Chopp has received multiple awards and recognitions for his research efforts, including the American Heart Association Thomas Willis Lecture Award, the Abraham White Distinguished Science Award, and the Lecture of Excellence and World Stroke Organization Award. Dr. Chopp has 623 peer reviewed publications and has given 414 plenary lectures and invited presentations. He has served on and chaired National Institutes of Health (NIH) study sections and has served as a consultant to government agencies, the U.S. National Institutes of Health, and the pharmaceutical industry.



WOLF DIETER HEISS
GERMANY

Wolf-Dieter Heiss graduated in medicine from the University of Vienna, Austria, in 1965. He achieved his training in neurology, neurophysiology, psychiatry and nuclear medicine at the University hospital in Vienna and spent research fellowships at the MIT, Cambridge, USA, the Physiological Institute in Stockholm, Sweden, the Department of Physiology of SUNY, Buffalo, NY and the Department of Neurology of the University of Minnessota, Minneapolis, USA. 1976 he was appointed associate professor at the Department of Neurology of the University of Vienna. In 1978 he became director of the Center for Cerebrovascular Research of the Max Planck Institute for Brain Research and of the Department of Neurology of the City Hospital Cologne-Merheim, Germany. 1981 he was appointed as director at the Max Planck Institute for Neurological Research. 1985 – 2005 he was professor of neurology and chairman of the Department of Neurology of the University of Cologne and director of the Department of General Neurology at the MPI in Cologne. He was president of the International Stroke Society 1992-96, was on the board of directors of the Society for Cerebral Blood Flow and Metabolism, deputy editor of the Journal of Cerebral Blood Flow and Metabolism and at present is associate editor of the Journal of Nuclear Medicine and section editor of Stroke. He was chairman of the program committee of the European Federation of Neurological Societies (EFNS) 1998 - 2001 and was president of the EFNS 2001 – 2005. Since 2005 he is Visiting Professor at the Danube Univerity in Krems, Austria, since 2009 Adjunct Professor at the McGill University in Montreal, Canada, and since 2013 Associate Professor, Dept of Neurosciences, Univ. Iuliu Hatieganu, Cluj, Romania. In December 2014 he received Dr. honoris causa of Univ. Iuliu Hategianu, Cluj, Romania.

VOLKER HÖMBERG
GERMANY

PERSONAL DATA Born 25 July 1954

MEDICAL CAREER

1973 - 1980	Medical School, Universities of Düsseldorf and Freiburg; Electives in Neurology at Boston City Hospital, Boston, Mass.; National Hospital for Nervous Diseases, London
1975-1980	Junior researcher in the Department of Neuropsychology at the C. & O. Vogt Institute for Brain Research, Düsseldorf and the Department of Neurology, Freiburg (Prof. R. Jung)
1980 - 1981	Research fellow in the Department of Neuropsychology (Prof. G. Grünewald) at the C. & O. Vogt Institute for Brain Research, Düsseldorf
1981-1986	Clinical training in the Department of Neurology (Prof. H.-J. Freund), Heinrich-Heine-University Düsseldorf
since 1985	Senior registrar in the Department of Neurology, Heinrich-Heine-University Düsseldorf
1987-1996	Senior investigator for the German Research Council Special Task Force in Neurology at Heinrich-Heine-University (SFB 200 and SFB 194)
1987-2005	Medical director of the Neurological Therapy Center (NTC), Heinrich-Heine-University Düsseldorf
Since 1988	Board examiner for Neurology at the local examination board (Ärztekammer Nordrhein)
1989-1997	Vice president of the German Society for Neurological Rehabilitation
1993	Habilitation in Neurology, Heinrich-Heine-University Düsseldorf
Since 1995	Board examiner for physical medicine and rehabilitation (Ärztekammer Nordrhein)
1997-2005	Medical director of the Neurological Therapy Center, Cologne
1998-2004	President of the German Society for Neurological Rehabilitation
2000 to 2010	Medical director and head of Neurology, St. Mauritius Therapy Hospital, Meerbusch
Since 10/2011	Head of Neurology SRH Gesundheitszentrum Bad Wimpfen
10/2004 to 12/2010	Vice president of the German Society for Neurological Rehabilitation
2005 to 2010	Panel-Chairman Neurorehabilitation for European Federation Neurological Societies (EFNS)

Since 12/2010	Member of the board (DGNR)
Since 2003	Secretary General World Federation for NeuroRehabilitation (WFNR)
Since 2011	Secretary General European Federation of Neurorehabilitation Societies (EFNR)
Since 2015	Vice President of EFNR

Areas of scientific interest	Motor control Neuropsychology, Brain plasticity Epistemology of rehabilitation sciences Pharmacology in neurorehablitation
Publications	more than 200 original articles in peer reviewed journals

VITALIE LISNIC
REPUBLIC OF MOLDOVA

Dr. Vitalie Lisnic is a Professor of Neurology at Department of Neurology of the State University of Medicine and Pharmacy „Nicolae Testemitanu", Chisinau, Republic of Moldova. He is a consultant in the Department of Vertebroneurology and Neuropathies, responsible for electromyographic examinations at the Institute of Neurology and Neurosurgery in Chisinau. Dr. Lisnic graduated the Faculty of General Medicine of the Chisinau State Medical Institute in 1989. He passed internships in Neurology and Neurophysiology in Moscow, Russian Federation, 1993; Charles University, Pilsen, Czech Republic, 1994; Landesnervenklinik of Salzburg, Austria, 1999; Emory University, Atlanta, USA, 2002 - 2003, Vienna University, Austria, 2008. In 2003 obtained a clinical attachment in neuropathies at the National Institute of Neurology, Queen's Square, London, UK. In 2003-2004 he was the Principal Investigator of the Moldovan team of the grant of the Moldovan Research and Development Association and U.S. Civilian Research and Development Foundation. In 2015 - principal investigator of a clinical trial on post herpetic nevralgia.

Dr. Lisnic other important responsibilities include the following:

- President of the Society of Neurologists of the Republic of Moldova
- Member of the Education Committee of the European Academy of Neurology
- Delegate of the Republic of Moldova in World Federation of Neurology and European Academy of Neurology Memberships
- European Academy of neurology
- American Academy of Neurology
- Movement Disorders Society
- European Stroke Organization

Vitalie Lisnic is the author of more than 150 scientific publications in Moldovan and International biomedical journals. He is member of editorial board of 2 Moldovan and 2 Ukrainian medical journals. Under his guidance were defended 4 Ph.D theses.

DAFIN F. MUREȘANU

ROMANIA

Dafin F. Mureșanu, MD, PhD, MBA, FANA
Professor of Neurology, Senior Neurologist, Chairman of the Neurosciences Department, Faculty of Medicine, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, President of the Romanian Society of Neurology, President of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN), member of the Academy of Medical Sciences, Romania, secretary of its Cluj Branch. He is also member of 13 scientific international societies (being member of the American Neurological Association (ANA) - Fellow of ANA (FANA) since 2012) and 7 national ones, being part of the executive board of most of these societies. Professor Dafin F. Mureșanu is a specialist in Leadership and Management of Research and Health Care Systems (specialization in Management and Leadership, Arthur Anderson Institute, Illinois, USA, 1998 and several international courses and training stages in Neurology, research, management and leadership). Professor Dafin F. Mureșanu is coordinator in international educational programs of European Master (i.e. European Master in Stroke Medicine, University of Krems), organizer and co-organizer of many educational projects: European and international schools and courses (International School of Neurology, European Stroke Organisation summer School, Danubian Neurological Society

Teaching Courses, Seminars - Department of Neurosciences, European Teaching Courses on Neurorehabilitation) and scientific events: congresses, conferences, symposia (International Congresses of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN), International Association of Neurorestoratology (IANR) & Global College for Neuroprotection and Neuroregeneration (GCNN) Conferences, Vascular Dementia Congresses (VaD), World Congresses on Controversies in Neurology (CONy), Danube Society Neurology Congresses, World Academy for Multidisciplinary Neurotraumatolgy (AMN) Congresses, Congresses of European Society for Clinical Neuropharmacology, European Congresses of Neurorehabilitation). His activity includes involvement in many national and international clinical studies and research projects, over 350 scientific participations as "invited speaker" in national and international scientific events, a significant portfolio of scientific articles (134 papers indexed on Web of Science-ISI) as well as contributions in monographs and books published by prestigious international publishing houses. Prof. Dr. Dafin F. Mureșanu has been honoured with: the Academy of Romanian Scientists, "Carol Davila Award for Medical Sciences / 2011", for the contribution to the Neurosurgery book "Tratat de Neurochirurgie" (vol.2), Editura Medicala, Bucuresti, 2011; the Faculty of Medicine, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca "Octavian Fodor Award" for the best scientific activity of the year 2010 and the 2009 Romanian Academy "Gheorghe Marinescu Award" for advanced contributions in Neuroprotection and Neuroplasticity.

HARI SHANKER SHARMA

SWEDEN

Hari Shanker Sharma, Director of Research (International Experimental Central Nervous System Injury & Repair, IECNSIR), University Hospital, Uppsala University is Professor of Neurobiology (MRC), Docent in Neuroanatomy (UU) and is currently affiliated with Department of Surgical Sciences, Division of Anesthesiology and Intensive Care Medicine, Uppsala University, Sweden. Hari Sharma was born on January 15, 1955 in an Industrialist town Dalmianagar (Bihar), India. He did his Bachelor of Science with Honors from the prestigious L. S. College Muzaffarpur in 1973 and secured 1st position in his batch. He obtained his Master Degree from Bihar University with special expertise in Cell Biology in 1976 and awarded Gold Medal of Bihar University for securing 1st potion in the 1st Class. Hari Sharma joined the group of Professor Prasanta Kumar Dey, a neurophysiologist by training in the Department of Physiology, Institute of Medical; Sciences, Banaras Hindu University, Varanasi in 1977 to obtain Doctor of Philosophy Degree (D.Phil.) in Neurosciences and was awarded Ph.D. in 1982 on "Blood-Brain Barrier in Stress." Hari Sharma after carrying out a series of Government of India funded Research Projects on the BBB and

brain dysfunction (1982–1987), joined the lab of Neuropathology at Uppsala University with Professor Yngve Olsson in 1988 to investigate passage of tracer transport across the BBB caused by stress or traumatic insults to the Brain and Spinal cord at light and electron microscopy. Dr. Sharma awarded the prestigious Alexander von Humboldt Foundation Fellowship of German Government (1989–1991) to work on hyperthermia induced BBB dysfunction at the ultrastructural level in the laboratory of Professor Jorge Cervós-Navarro (a living "Legend in Neuropathology in Europe"). Dr. Sharma joined again Uppsala University and established a network of collaboration on "Experimental CNS Injury Research Group" as a lead investigator with eminent collaborators in various parts of Europe, USA, and Australia (1991–). On his work on hyperthermia Dr. Sharma received the prestigious Neuroanatomy award "Rönnows Research prize" of Uppsala University for "best neuroanatomical research of the year 1996" followed by the Award of the Degree of Doctor of Medical Sciences of Uppsala University in Neuroanatomy in 1999 and selected for the Best Thesis Award of the Medical faculty, "The Hwassers Prize" of 1999. On his meticulous works on the Blood Brain barrier and Brain edema (2000–2003) Dr. Sharma earned the prestigious title of "Docent in Neuroanatomy" of Medical Faculty, Uppsala University in April 2004. Currently his main research interest is Neuroprotection and Neuroregeneration, in relation to the Blood-brain barrier in stress, trauma, and drugs of abuse in health and disease.

Dr. Sharma on his research on brain pathology and neuroprotection in different models received the prestigious awards from The Laerdal Foundation of Acute Medicine, Stavanger, Norway, in 2005 followed by Distinguished International Scientists Collaboration Award by National Institute on Drug Abuse (NIDA), Baltimore, MD (2006–2008). His recent work on 5-HT3 receptor mediated neuroprotection in morphine withdrawal induced neurotoxicity won the coveted prize of Best Investigator Award 2008 and Best Scientific Presentation by European Federation of the International Association for Study of Pain (ISAP), and Awarded during their VI Annual Meeting in Lisbon, September 9–12, 2008. His recent research is aimed to find out the role of nanoparticles in Neurodegeneration and Neuroprotection using various treatment strategies that is supported by European Aerospace Research and Development (EOARD), London, UK and US Air Force Research Laboratory, Wright Patterson Air Force Base, Dayton, Oh, USA. On his works on Blood–brain barrier in hypertension and diabetes together with Romanian colleagues, University of Medicine and Pharmacy "Iuliu Hatieganu," Cluj-Napoca, Romania awarded Dr. Sharma with Honorary Doctorate of Medical Sciences in 2009. Dr. Sharma's work over 30 years on the blood-brain barrier and brain edema won him the US Neurosurgeon Dr. Anthony Marmarou Award (2011) by the International Brain Edema Society at their 15th Congress in Tokyo, Japan, November 20–24, 2011. His works on Nanoneuroscience and development of nanomedicine to treat the CNS injuries has won accolades at various Government and International Scotties or Organization across the World. Accordingly Dr Sharma was decorated with the most prestigious "Hind Rattan Award 2012" (Jewel of India) on the eve of Republic Day of India 25th January 2012 and Mahatma Gandhi Pravasi Gold Medal on October 12, 2012 in House of Lords, London, UK. Based on his outstanding contribution in Nanoneuropharmacology and nanodrug delivery to treat central nervous system (CNS) diseases including Neurodegenerative diseases such as Alzheimer's and Parkinson's Hari Sharma bestowed with Prestigious Gujarat Govt. International Visionary Award 2012 in a glittering function in Ahmedabad, Gujarat on Nov 23, 2012. His further research on co-morbidity factors e.g., hypertension or diabetes may alter pathophysiology of brain injuries and require higher drug dose or nanodrug delivery of neuroprotective

agents to minimize brain dysfunction is recognized by Govt. of India by presenting him one of the coveted "Bharat Jyoti Award 2013" (Glory of India) by His Excellency Governor Balmiki Prasad Singh in Hotel Le Meridien, New Delhi on Jan 12, 2013. Dr Sharma also received the highest Award of the Govt. of India "Navrattan Award 2013" (Nine Jewels of India) on the eve of 64th Republic Day of India (25th January 2013) by His Excellency Governor Bhishma Narain Singh, in Ashok Hotel, New Delhi. Hari Sharma is Founding President of the Global College of Neuroprotection & Neuroregeneration (2004-); Elected President of International Association of Neurorestoratology (IANR) (2014-); and selected Senior Expert of Asia-Pacific CEO Association, Worldwide (APCEO) (2012-) for his contribution to uplift scientific research in many countries Globally that may have better economic and social benefit for the mankind. Hari Sharma awarded coveted National Award "Sword of Honor" 2015 by Govt. of India on the eve of 66th Republic Day of India 25th January 2015 in New Delhi Eros Hotel International during the 34th Non-resident Indian (NRI) conclave by Speaker of Lok Sabha (Indian Parliament) the Hon'ble Mrs Meira Kumar of Indian national Congress (INC) Party for the continued extraordinary achievement in nanomedicine for public health awareness and possible therapeutic measures.

Based on his expertise in Nanoneuroscience, Hari Sharma was also invited to organize and chair Nanosymposium in Society for Neuroscience meetings in Chicago (2009), San Diego (2010), Washington DC (2011), New Orleans (2012), San Diego (2013) and Washington DC (2014, Nov 15-19, 2014); Chair Neurobiology Symposium 14th Int. Amino Acid & Peptide, Vienna, Austria; Keynote speaker & Chair Nanotechnology-2015, Frankfurt, Germany. Hari Sharma is also the recipient of Prestigious US TechConnect Global Innovation Award 2013 at the National Innovation Summit & Innovation Showcase, Washington DC May 12-16, 2013 on his work on Nanowired cerebrolysin in Neuropathic Pain. Hari Sharma Served as one of the Poster Judges in 2014 180th Annual Meeting of American Association of Advancement of Science (AAAS) Held in Chicago, IL, USA Feb 13-17, 2014 followed by 181st Annual Meeting of American Association of Advancement of Science (AAAS) held in San José, CA, USA Feb 12-16, 2015. Hari Sharma has published over 350 research papers and 85 reviews, 14 monographs, and 80 international book chapters and edited 18 book volumes with Current H-index = 38 (ISI Database) as of today. He served as Guest Editor of Curr. Pharm. Desig. (2005, 2007, 2010–); J Neural. Transmiss. (2006, 2011–) and is the founding Editor-in-Chief of Int. J. Neuroprotec. Neuroregen. (2004–), UK and the European Editor of Central Nervous system-Neurological Disorders Drug Target (2013-). Dr. Sharma is on board of various International Journals including CNS and Neurological Disorders-Drug Targets, USA (2010), Journal of Neurodegeneration and Regeneration, USA (2009–); Austin Journal of Nanomedicine & Nanotechnology (2014-); and is associate editor of Journal of Nanoscience and Nanotechnology (Nanoneuroscience 2006–), USA, Review Editor—Frontiers in Neuroengineering (2007–), Frontiers in Neurorestoratology, and Associate Editor of Frontiers in Aging Neuroscience (2008–), Frontiers of Fractal Physiology (2010–), Switzerland, Journal of Neurorestoratology, Dove Medical press, London, UK (2012–), WebMD Central, Neurology Faculty, Advisory Board Member (2010–), World Journal of Pharmacology (2011–), Journal of Physical Medicine and Rehabilitation, USA (2012–). Dr. Sharma served as volume editor of several progress in Brain research series (Volumes 104, 115, 162 and 180), International review of Neurobiology (Volume 82 and 102) and other Springer Volumes on

Spinal cord injury (1988) and Handbook of Neurochemistry (2009) apart from stand alone books (Elsevier, Springer and Academic Press since 1994). Dr. Hari Sharma is invited to join several National Academies of repute including New York Academy fo Science, USA (since 1994–); International Academy of Stress, New York (2003–), Swedish Academy of Pharmaceutical Sciences (2010–). Dr. Sharma has served as an expert evaluator and advisor to various Boards, Councils and Institutions for their Research Grants including Wellcome Trust, London, UK (2011–); Catalan Agency for Health Information and Quality, TV3 (2010–), European Commission Projects (2002–), European Nanomed Council (2009–), Ministry of Health Science Foundation; Medical research Council and University Commission of Grants in various countries in Europe, USA, UK, Canada, Hong Kong, Singapore and in Australia. Some of the notable organizations include: Australia and New Zealand Health Council (2000–); University Commission of Grants, Hong Kong (2002–), Singapore Medical Council, Singapore (2003–); UK Charity Organization "Research on Ageing: Help the Aged" (2003–); Euro Nanomed (2010–). Dr. Sharma is designated as ambassador of the City of Uppsala 2007, by Uppsala County administration and Uppsala Tourism for promoting Uppsala, Sweden as International Research Collaboration/Meetings and Conference Destination. Dr. Hari Sharma is married to Aruna Sharma (nee Bajpai) since 23rd April 1979 and has two sons. Dr Sharma is designated as Visiting Professor, University of Basque Country, Bilbao, Spain supported by Basque Govt. Foundation. His political affiliation belongs to Swedish Social Democrat Party (Socialdemokraterna, Sverige) where he is associated with the development of Education and Research matters in Sweden actively.

ADINA STAN
ROMANIA

Work experience:

2008-present
Assistant Professor of Neurology
University of Medicine and Pharmacy "luliu Hatieganu" Cluj-Napoca, Faculty of Medicine, 8 Victor Babes Street, 400012, Cluj-Napoca, Romania

- Coordination of students, teaching courses, seminaries, training of young neurologists

Jan 2013- present
Senior Neurologist
CFR University Hospital ,Ciuj-Napoca, Neurology department

- Management of acute and chronic neurological disorders

Jan 2007- Dec 2012
Specialist in Neurology
Cluj-Napoca County Emergency Hospital Cluj-Napoca, Neurology department

- Management of acute and chronic neurology disorders

Jan 2002- Dec 2006
Resident in Neurology
Cluj-Napoca County Emergency Hospital Cluj-Napoca, Neurology Department & UMF "luliu Hatieganu" Cluj-Napoca

- Learning the management of acute and chronic neurological disorders

Education and training
Oct 2010- Jan 2015
Doctor in medicine, PhD - Neurorehabilitation after stroke
University of Medicine and Pharmacy "luliu Hatieganu" Cluj-Napoca providing education and training

Oct 2010- February 2013
European Master in stroke medicine
Danube University, Krems , Austria
Dates 1995-2001
Physician/ general practitioner
University of Medicine and Pharmacy "luliu Hatieganu" Cluj-Napoca

- Promoting, maintaining or restoring human health through the study, diagnosis and treatment of all the diseases

ALEXANDER TSISKARIDZE

GEORGIA

Professor of Neurology, Dean of the Faculty of Medicine at Ivane Javakhishvili Tbilisi State University, Scientific Director of the Sarajishvili Institute of Neurology and Head of Neurological Service at Pineo Medical Ecosystem.

After obtaining the Honor Diploma of Medical Doctor from Tbilisi State Medical University, Alexander Tsiskaridze continued his professional education in Internship of the Sarajishvili Institute of Neurology (1988-1989). In the late 90ies he has undertaken European Neurological Society Fellowship on stroke in Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland and later he gained Swiss National Science Foundation Fellowship at the same University (2003-2004).

Dr. Tsiskaridze started his scientific career since late 80ies at Sarajishvili Institute of Neurology in the capacity of Junior Scientific Researcher. Later he became Senior Scientific Researcher, Head of Research Department and finally held the position of Scientific Director. At the same time his academic career has been linked with Ivane Javakhishvili Tbilisi State University where he started working at the Department of Neurology as an Assistant Professor in mid 90ies. Now he is the Professor of Neurology at this university and since 2006 holds the position of the Dean of the Faculty of Neurology.

Dr. Tsiskaridze is the author of 56 scientific articles in local and international scientific journals. He has received numerous international and local degrees, awards and honors including the degree of Candidate of Medical Sciences (PhD), the degree of Doctor of Medical Sciences, Sarajishvili Medal and Honour Diploma for Achievements in Neurological Research of Georgian Association of Neurologist and Neurosurgeons, Young Investigator's Award of the European Stroke Council, Bruce Schoenberg International Award in Neuroepidemiology of the American Academy of Neurology, Georgian National Scientific Prize and Silver Medal for the Cycle of Papers on Cerebrovascular Disorders, Order of Merit by President of Georgia, etc.

Prof. Tsiskaridze is the member of Scientific Panel on Stroke of the European Academy of Neurology (formerly European Federation of Neurological Societies), Editorial Board of European Stroke Journal and European Neurology, Board of Directors and Founding Fellow at European Stroke Organization. He serves as a peer-reviewer of various international scientific journals including Stroke, Journal of Neurological Sciences, Neuroepidemiology, Frontiers in Neurology, Journal of Stroke and Cerebrovascular Diseases, Internal and Emergency Medicine, Cerebrovascular Diseases, European Neurology and Case Reports in Neurology.

GENERAL INFORMATION

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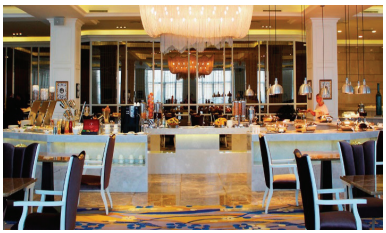
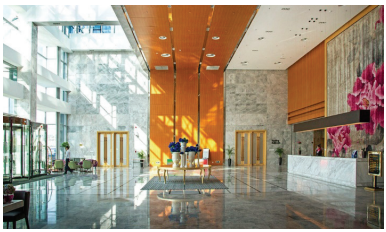
CONGRESS VENUE:

Hotels & Preference Hualing Tbilisi

Tbilisi Sea New City
0152 Tbilisi
+ 33 1 78 94 90 40





GENERAL INFORMATION

REGISTRATION DESK

All materials and documentation will be available at the registration desk located at SSNN booth.
The staff will be pleased to help you with all enquiries regarding registration, materials and program. Please do not hesitate to contact the staff members if there is something they can do to make your stay more enjoyable.

LOGISTIC PARTNER:

GLOBALTRAVEL
AND MORE

Global Travel & More

21 Rapsodiei Street, Ap 15
Cluj Napoca, Romania
office@global-t.ro
www.global-t.ro

Scientific Secretariat

Foundation of the
Society for the Study of
Neuroprotection and
Neuroplasticity
37 Mircea Eliade Street, 400364,
Cluj-Napoca, Romania
Office phone: +40745255311
E-mail:office@ssnn.ro

Contact Details

Mrs. Doria Constantinescu,
mobile: +40757096111
doria@global-t.ro

Mrs. Diana Biris,
mobile: +40755080820
diana@global-t.ro

GENERAL INFORMATION

LANGUAGE

The official language is English. Simultaneous translation will not be provided.

CHANGES IN PROGRAM

The organizers cannot assume liability for any changes in the program due to external or unforeseen circumstances.

NAME BADGES

Participants are kindly requested to wear their name badge at all times. The badge enables admission to the scientific sessions and dinners.

FINAL PROGRAM & ABSTRACT BOOK

The participants documents include the program and abstract book which will be handed out at the registration counter.

COFFEE BREAKS

Coffee, tea and water are served during morning coffee breaks and are free of charge to all registered participants.

MOBILE PHONES

Participants are kindly requested to keep their mobile phones turned off while attending the scientific sessions in the meeting rooms.

CURRENCY

The official currency in Georgia is georgian lari (GEL).

ELECTRICITY

Electrical power is 220 volts, 50 Hz. Two-prong plugs are standard.

TIME

The time in Georgia is Universal Time Coordinated (UTC+4).

NOTES

“RoNeuro”
Institute for Neurological Research and Diagnostic,
Cluj-Napoca, Romania

Tel.: +40 374 46.22.22

str. Mircea Eliade nr. 37, 400364 Cluj-Napoca, România
Fax: +40 374.461.674; Email: receptie@roneuro.ro

www.roneuro.ro