International School of Neurology

7TH EUROPEAN TEACHING COURSE on NEUROREHABILITATION

RoNeuro BRAIN DAYS

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World Federation for NeuroRehabilitation

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WELCOME ADDRESS

This event is organized by the Foundation of the Society for the Study of Neuroprotection and Neuroplasticity, together with the Romanian Society of Neurology and "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania, and is endorsed, as the previous ones, by the World Federation of Neurorehabilitation (WFNR) and European Federation of Neurorehabilitation Societies (EFNRS).

After sixth successful past events, the meeting in Eforie Nord will again present a platform for exchange of newest scientific information as well as providing space for teaching oriented workshops. We try to reach an audience of all colleagues with an interest in this steadily expanding and exciting field (physicians, nurses, therapists, basic scientists etc.)

A major topic will be to come to a resume where neurorehabilitation in Europe stands today and where future perspectives in science and education as well as in optimizing services shall go. The formats used in the meeting as well as the selected main thematic areas will certainly have a chance to be of interest to a wide audience.

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Course Director
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GENERAL INFORMATION

COURSE VENUE

ANA Hotels – Eforie Nord
Europa Hotel

Phone: 0040241 / 741.710, fax: 0040241 / 741.720
Republicii Street no 13, Eforie Nord, Constanta – Romania

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:

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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 Romania is RON.

ELECTRICITY

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

TIME

The time in Romania is Eastern European Time (GMT+2).

SCIENTIFIC PROGRAM

RoNeuro BRAIN DAYS

7TH EUROPEAN TEACHING COURSE on NEUROREHABILITATION

FRIDAY - JUNE 30TH, 2017

08:50 – 09:00	WELCOME ADDRESS: Volker Hömberg (Germany), Dafin F. Mureșanu (Romania)

SESSION 1 - CHAIRPERSONS: Volker Hömberg (Germany), Dafin F. Mureșanu (Romania)

09:00 – 09:30	WFNR activities update Volker Hömberg (Germany)
09:30 – 09:45	Educational Programs Dafin F. Mureșanu (Romania)
09:45 – 10:30	Session 1 - Dialogue: Is there significant progress in neurorehabilitation? Where are we? Where to go? Moderator: Dafin Muresanu (Romania) Speakers: Volker Homberg (Germany) and Heinrich Binder (Austria)
10:30 – 11:00	COFFEE BREAK

SESSION 2 - CHAIRPERSONS: Volker Hömberg (Germany), Heinrich Binder (Austria)

11:00 – 12:30	The art of neurological examination Volker Hömberg (Germany)
12:30 – 13:00	Motor therapies in Neurorehabilitation: What do we have and what do we need? Volker Hömberg (Germany)
13:00 – 14:00	LUNCH

SESSION 3 - CHAIRPERSONS: Volker Hömberg (Germany), Heinrich Binder (Austria)

14:00 – 15:00	Debate: Should neurorehabilitation after stroke start in the immediate postacute stage? Yes: Dafin Mureșanu (Romania) No: Volker Hömberg (Germany) Moderator: Heinrich Binder (Austria)
15:00 – 15:30	Challenges to Rehabilitation of Stroke in the Elderly Gabriel Prada (Romania)
15:30 – 16:00	COFFEE BREAK

SESSION 4 - CHAIRPERSONS:

Stanislav Groppa (Rep. Moldova)
Dafin Mureșanu (Romania)

16:00 – 16:30

Neurobiology of vascular cognitive impairment and its impact on cognitive neurorehabilitation
Dafin Mureșanu (Romania)

16:30 – 17:00

Treatment of delirium
Heinrich Binder (Austria)

17:00 – 17:30

Modular concepts in neurorehabilitation
Dana Boering and Volker Hömberg (Germany)

17:30 - 18:00

Status epilepticus - new definition, classification, clinical evolution, treatment
Stanislav Groppa (Rep. Moldova)

PARALLEL SESSION:

16:30 – 17:00

The neuropharmacology of N-PEP type peptides in neurocognitive impairment
Anca Buzoianu (Romania)

17:00 – 17:30

The role of N-PEP peptide pharmacological support and peripheral magnetic stimualtion in neurorehabilitation after surgery of developmental maxilofacial deformities
Mihaela Băciuț (Romania)

17:30 - 18:00

N-PEP type peptides as an add-on treatment in post-stroke cognitive impairment
Dana Slăvoacă (Romania)

20:00 DINNER

SATURDAY - JULY 1TH, 2017

SESSION 5 - CHAIRPERSONS: Gelu Onose (Romania), Stephen Skaper (Italy)

09:00 – 09:30	Basics and novelties regarding non-kinesis Physical Therapy interventions more frequently used in NeuroRehabilitation Gelu Onose (Romania)
09:30 – 10:00	Burden and quality of life in caregivers of MS persons Jozef Opara (Poland)
10:00 – 10:30	Co-ultramicronized palmitoylethanolamide/luteolin facilitates oligodendrocyte precursor cell development and improves outcome in experimental autoimmune encephalomyelitis Stephen Skaper (Italy)
10:30 – 11:00	Multidimensional Strategies to Improve TBI Clinical Research - Towards a New Gold Standard Johannes Vester (Germany)
11:00 – 11:30	COFFEE BREAK

SESSION 6 - CHAIRPERSONS: David Wright (USA), Andreas Bender (Germany)

11:30 – 12:00	Traumatic Brain Injury Translational Research: Shedding Light in the Darkness David Wright (USA)
12:00 – 12:30	TBI – The Indian perspective; its clinical management, neuropsychological and rehabilitation aspects Keki Turel (India)

12:30 – 13:00	Unresponsive wakefulness syndrome and minimal conscious state: from diagnosis to prognosis, rehabilitation and long-term outcome Andreas Bender (Germany)
13:00 – 13:30	Neurorehabilitation principles in the integrated management of dystonia Ovidiu Bajenaru (Romania)
13:30 – 14:30	LUNCH

SESSION 7 - CHAIRPERSONS: Adriana Sarah Nica (Romania), Catalin Jianu (Romania)

14:30 – 15:00	REM - Sleep Behavior Disorder in Parkinson's disease patients: clinical and therapeutic aspects Lucia Muntean (Germany)
15:00 – 15:30	Restless legs syndrome Cristian Falup Pecurariu (Romania)
15:30 – 16:00	Chronic inflammatory demyelinating polyradiculoneuropathy: typical and atypical forms Vitalie Lisnic (Rep. Moldova)
16:00 – 16:30	Ischemic preconditioning of the spinal cord Mihail Gavriliuc (Rep Moldova)
16:30 – 17:00	COFFEE BREAK

SESSION 8 - CHAIRPERSONS: Leopold Saltuari (Austria), Ovidiu Băjenaru (Romania)

17:00 – 17:30	Treatment of spasticity Leopold Saltuari (Austria)
17:30 – 18:00	Patient safety and education in neurorehabilitation Adriana Sarah Nica (Romania)
18:00 – 18:30	Cerebral vein and dural sinus thrombosis: an evaluation of 62 cases Catalin Jianu (Romania)
20:00	DINNER

SUNDAY - JULY 2ND, 2017

SESSION 9 - CHAIRPERSONS: Alla Guekht (Russia), Wolfgang Grisold (Austria)

09:00 – 09:30	Update on sensory/motor therapy in children with cerebral palsy Kristina Mueller (Germany)
09:30 – 10:00	Neurorehabilitation in neurooncology Wolfgang Grisold (Austria)
10:00 – 10:30	Cognitive decline after stroke: current concepts and preventive strategies Alla Guekht (Russia)
10:30 – 11:00	COFFEE BREAK

SPECIAL SESSION DEDICATED TO STROKE MANAGEMENT

CHAIRPERSONS: Dafin Mureșanu (Romania), Ovidiu Băjenaru (Romania)

11:00 - 11:30	Antiplatelet therapy for secondary stroke prevention Dafin Mureșanu (Romania)
11:30 – 12:00	NOACs for stroke prevention in atrial fibrillation – what have we learned so far? Ovidiu Băjenaru (Romania)
12:00 – 12:30	Cryptogenic stroke and embolic stroke of undetermined source (ESUS) Bogdan O. Popescu (Romania)
12:30 - 13:00	The importance of innovative registry studies – Methodologies and Examples Axel Kohlmetz (Austria)
13:00 – 14:00	LUNCH

ABSTRACTS

NEUROREHABILITATION PRINCIPLES IN THE INTEGRATED MANAGEMENT OF DYSTONIA

OVIDIU BĂJENARU
University of Medicine and Pharmacy "Carol Davila", Bucharest, Romania
Director of the Department of Neurology, Neurosurgery and Psychiatry
Chairman and Head of Dept. Neurology - University Emergency Hospital, Bucharest, Romania

Primary dystonia is the consequence of synaptic signaling disturbances in the basal ganglia, due in most cases probably to many different genetic abnormalities related to enzymatic abnormalities, ion channels molecular abnormalities, neurotransmitters signaling and other molecular and cellular abnormalities, with a more or less extensive phenotypic expression in the brain. As a consequence of these initial discrete interneuronal signaling abnormalities in the cortico-basal circuits, a cascade of events is developing in the whole neuromuscular system for the control of the muscle tone, both in the CNS and at the neuromuscular junction and muscle spindles; these chronic developing abnormalities in the motor system also generate an abnormal signaling in the proprioceptive signaling to the motor cortex, enhancing by a maladaptive neuroplasticity an abnormal cortical representation of the body segments affected by dystonia, which in turn enhances and stabilize an abnormal motor behavior. For this pathophysiologic reason, in the treatment of focal dystonia the decrease of the muscle tonic contractions by therapeutic botulinum toxin injections or deep brain stimulation, has to be used to correct the motor behavior by an appropriate neurorehabilitation based on a specific kinesitherapy.

THE ROLE OF N-PEP PEPTIDE PHARMACOLOGICAL SUPPORT AND PERIPHERAL MAGNETIC STIMUALTION IN NEUROREHABILITATION AFTER SURGERY OF DEVELOPMENTAL MAXILOFACIAL DEFORMITIES

MIHAELA BACIUT
DAFIN MURESANU*, GRIGORE BACIUT, DANA SLĂVOACĂ, ANDREEA MAGDAS
Department of Maxillofacial Surgery and Oral Implantology, Cluj-Napoca, Romania
*Department of Neurosciences "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

Awareness of disharmonic facial features is presently high in the population. The request for esthetic and functional correction is consecutively raised. Thus, orthognathic procedures restoring facial balance are performed routinely in specialized maxillofacial surgery centers. Management of maxillofacial deformities

is multidisciplinary, comprising surgery, orthodontic therapy and, increasingly, therapies addressing neurologic and neuromotor rehabilitation.

Repositioniong of maxillary bones implies osteotomies of both jaws (bimaxillary surgery). For the mandible (bilateral mandibular sagittal split osteotomies - BSSO), the lines split the bone through the mandibular canal, containing the inferior alveolar nerve, artery and vein. For the maxilla, the splits are located in the vicinity of the infraorbitary nerve.

As a consequence, postoperative diminishing of the nerve function can be noticed frequently and is produced by multiple mechanisms in maxillofacial surgery procedures. Direct intraoperative trauma of various degrees, ranging from blunt contusion to laceration, compression by postoperative edema, seroma, hematoma or bone fragments are the most frequently incriminated causes of nervous dysfunction.

The inferior alveolar nerve, branch of the mandibular nerve (third branch of the trigeminal nerve) is responsible of the sensitive innervation of the lower lip, chin of the respective side and teeth and parts of the gingiva of the respective hemimandible. The infraorbitary nerve ensures sensitive innervation of the infraorbitary region of the cheeks.

In the postoperative period, anesthesia of various degrees of the lower hemilip and –chin and the cheeks respectively - can be noticed and evaluated.

Various protocols for neurorehabilitation used in our center will be highlighted in a methodological section.

A new research protocol, combining peripheral magnetic stimulation and pharmacological support with N-PEP peptide will be introduced.

UNRESPONSIVE WAKEFULNESS SYNDROME AND MINIMAL CONSCIOUS STATE: FROM DIAGNOSIS TO PROGNOSIS, REHABILITATION AND LONG-TERM OUTCOME

ANDREAS BENDER
Therapiezentrum Burgau & Department of Neurology, University of Munich, Germany

Coma, unresponsive wakefulness syndrome (UWS), and minimally conscious state (MCS) are frequent consequences of severe brain injury, such as anoxic-ischemic encephalopathy (AIE), traumatic brain injury (TBI), or stroke.

Neurorehabilitation of patients with such severe disorders of consciousness (DOC) is a big challenge, ranging from the correct diagnosis, the choice of neurorehabilitation techniques, management of frequent complication to prognostication, expectation management as well as end-of-life decisions.

The first major obstacle is the frequent misdiagnosis of up to 40% regarding the correct consciousness-state, i.e. are patients in Locked-in-syndrome, UWS, or MCS? It is important to use standardized clinical rating scales to establish the appropriate level of consciousness. This is of paramount importance because prognosis largely depends on the initial DOC-syndrome. To this end, the Coma Recovery Scale (CRS-R) will be discussed as the international gold standard to quantify the level of DOC.

In addition, the lecture will provide an evidence-based overview of interventions, which are tailored to improve consciousness and the outcome in DOC patients, such as pharmacological stimulation (e.g. amantadine), music therapy, or tilt table therapy.

Prognostication of the long-term outcome of DOC-patients is a challenge with only limited prospective data having been published. Among others, partial loss of brainstem reflexes, high levels of neuron specific enolase (NSE), unreactive EEG, and bilateral loss of cortical SEP-responses are believed to be highly specific negative outcome predictors. Yet, current practice parameters for prognostication may carry the risk of too pessimistic assumptions, therapeutic nihilism, and self-fulfilling prophecies. In order to provide the audience with a realistic view on possible outcomes of DOC-patients, results of a multicentre clinical trial with 3-year long-term outcome data will be discussed. Early prognostic markers that could inform about this outcome early during neurorehabilitation will be evaluated.

Despite the frequent presence of strong negative prognostic markers, substantial proportions of patients have potential to regain consciousness with functional communication abilities and at least partial ADL independence. This will provide important information for medical decision makers and for counselling of families during neurorehabilitation.

TREATMENT OF DELIRIUM

HEINRICH BINDER
Landsteiner Institute for Neurorehabilitation and Space Medicine Vienna, Austria

Before talking about treatment it is necessary to be aware of subject. The term delirium is rooted in the descriptive psychiatry. And this remains an important problem despite many attempts to clarify definite nosological criteria during the last 40 years beginning from DSM-III to DSM-III_R to DSM IV and ICD-11. Anyhow hardly workable traits remain considering the recommended so-called core symptoms like fluctuating attention, awareness, disorientation, memory deficits and language disturbance. It´s not just that hyperactive-, hypoactive- and mixed and meanwhile also subsyndromal forms of delirium are described, there are differential diagnoses not too sparse. These include dementia, hallucinations within the frame of substance induced or schizophrenia-like psychotic disorders or psychotic disorders in the frame of common medical/physical disorders or diseases, not forgetting a series of classic neuropsychologic syndromes like amnestic syndrome or Wernicke´s aphasia.

In search of a common cause the question arises why more or less complete symptom spectrum appears in one but not in other case. Sadly a valid causal pathway was not agreed upon till now. Among others anticholinergic burden, inflammatory and psychoneuroimmunological factors and aberrant stress response, not at least also age are blamed for behavioural abnormalities of delirium.

For that reason treatment of delirium is a great challenge. Over the years avoidance and prevention of risk-factors, particularly application of antipsychotics but also benzodiazepins, cholinergiks, morphins, vitamins even ECT and not at least a number of non-pharmacological measures are still a matter of discussion. De facto in any given case not only usual side effects but rather particularly effects on a wealth of precipitating events and co-morbidities and their medication must be considered. Therefore treatment of delirium requires close and careful cross-functional and cross-disciplinary cooperation.

DIALOGUE | IS THERE SIGNIFICANT PROGRESS IN NEUROREHABILITATION? WHERE ARE WE? WHERE TO GO?

HEINRICH BINDER
Landsteiner Institute for Neurorehabilitation and Space Medicine Vienna, Austria

Neurorehabilitation is situated between the poles of scientific progress on the one side and societal changes and challenges. To aim employability was the target in the days gone by. But by this time likewise quality of living is in the centre of attendance. Employability to define and measure is going comparatively simply, as opposed to this living quality which depends on a variety of individual as well as environmental and societal conditions. Increasing longevity in industrialized nations poses a particular problem because of age-dependent physiologic and psychologic changes on the one hand and increasing count of up to now little or no known diseases of aging. In underdeveloped countries matter of survival has priority compared with this. But this doesn't mean that rehabilitation is meaningless. This mostly not happens. Either it arrives too late or never because not available or too costly. The other challenge constitutes the enormous scientific progress. Rehabilitation as neurologic speciality is nothing but applied neuroscience. Meanwhile neuroscience has evolved to a wealth of overlapping and complementary pollinating sub-disciplines. To allege examples in extracts: behavioural, cellular, cognitive, molecular neuroscience, neurolinguistics, neurophysiology, neuropsychology. Meanwhile rehabilitation has expanded from so called conventional therapies like physiotherapy to neural engineering neuromechanics, different forms of neuromodulation and not at least neural regrowth and repair. The future and challenge for neurorehabilitation is engagement in translational neuroscience.

RESTLESS LEGS SYNDROME

CRISTIAN FALUP-PECURARIU[1,2],
ȘTEFANIA DIACONU[1]
1. Department of Neurology, County Emergency Clinic Hospital Brașov, România
2. Faculty of Medicine, Transilvania University Brașov, România

Restless legs syndrome (RLS) or Willis-Ekbom disease is a sensorimotor disorder, characterized by uncomfortable sensations in the legs and an irresistible urge to move the legs. These sensations occur during rest, generally in the evening or night, and are partially or totally relieved by movement, the occurence of these symptoms is not better explained by any other medical condition. RLS was first described by Karl-Axel Ekbom in 1945. In 1995 there were established the International Restless Legs Syndrome Study Group (IRLSSG) „minimal" criteria for

diagnosis of RLS, in 2003 - the NIH/IRLSSG „essential" criteria for RLS diagnosis, and in 2014 was published the revision of the 2003 NIH/IRLSSG criteria.

Different epidemiological studies show that the RLS prevalence in the general population is estimated to be 5-10%.

The pathophysiology of RLS is not completely understood. There are different factors involved, like brain iron deficiency (especially in the substantia nigra and putamen), genetic factors, or abnormalities in regulation of the dopaminergic system. Secondary RLS occurs in different diseases and conditions like uremia, celiac disease, diabetes mellitus, rheumatoid arthritis, pregnancy.

Regarding severity, RLS can be defined as being mild, moderate, severe or very severe, based on the International RLS Rating Scale. RLS is an important cause of insomnia and fatigue.

Augmentation is a phenomenon characterized by exacerbation and earlier onset of the symptoms during the day, and it may be induced by the medication intended to alleviate RLS.

Treatment options include pharmacologic and non-pharmacologic strategies.
Pharmacological treatment includes dopaminergic agents (Pramipexole, Ropinirole, Rotigotine), iron supplimentation in iron deficits, anticonvulsivant calcium channel (alpha-2-delta) ligands, and opioids.

Non-pharmacologic treatment includes lifestyle changes, exercise, cold baths, limb massage, avoidance of RLS precipitants (ex. alcohol, caffeine, antidepressants).

ISCHEMIC PRECONDITIONING OF THE SPINAL CORD

MIHAIL GAVRILIUC
Vice-rector for International Relations - State University of Medicine and Pharmacy "Nicolae Testemitanu" Chisinau, Rep. of Moldova

Background: The problem of ischemic medullar insults remains a poorly studied aspect of clinical neurology. Varying date shows a correlation between cerebral ischemic stroke and medullary infarcts to be 10:1. Surgery on the aorta is known to be the cause of medullar ischemic stroke as a complication of the procedure in 0.7-9% of cases. Experimental data shows that most susceptible to hypoxia are the medullary motor neurons. Whatever is the case, the question is why medullary ischemic stroke is so rare compared to cerebral ischemia? There

are several potential answers to this question: (1) little is known about the disease and underdiagnosed; (2) need of expensive, less affordable and less available, complementary diagnostic tests (MRI, spinal cord angiography); (3) spinal cord has better vascularization or a reduced metabolic rate and might need less blood than the encephala; (4) being phylogenetically more archaic, spinal cord has "old" metabolic programs, that grants resistance to ischemia, including ischemic preconditioning.

Objective: To study electrophysiological changes in patients with acute and chronic medullar ischemia affecting the inferior medullar arterial system in the context of intermittent medullary claudication.

Methods: The study will include multimodal electrophysiological examination of 41 patients with medullar ischemia, 25 patients with chronic vascular myelopathy in the inferior medullar arterial system confirmed on imaging, and 10 patients that are clinically healthy, no signs of myelopathy on imaging, but with intermittent medullary claudication. Imaging studies included: MRI of the spinal cord, selective spinal angiography. Electrophysiological studies included: needle EMG, motor and sensory nerve conduction studies, F waves, Hoffman reflex, and motor evoked potentials. The study involved physical exertion during electrophysiological studies, which were known to provoke claudication paroxysms. The results were analyzed statistically and logic.

Results: None of the patients with acute ischemic medullar stroke or chronic vascular myelopathy had intermittent medullary claudication history. The clinical picture was determined by the location of the insult, and was dominated by motor, sensory, sphincter dysfunctions, and trophic changes. Three syndromes were defined in the cases of chronic vascular myelopathy: spastic, atrophic, and spastic-atrophic. Needle EMG studies showed spontaneous pathological activity in 100% patients with imaging confirmed vascular injuries of the spinal cord and in none of the patients with intermittent medullar claudication. Statistically significant reduction in conductions velocities of motor and sensory fibers were found in patients that had a disease duration of more than 4 months. In 5 subjects with intermittent medullary claudication sensory electrophysiological studies did not show any pathological change, but a reduction in velocities on examination of tibial and peroneus nerves was noted. F wave response varied among our patients with a low of 50% and highest frequency of 93%. F wave disappeared in 4 patients 10 hours after paraparesis onset. A significant reduction in the latency of H response was noted in 18 patients with spastic paraparesis. In 6 patients with intermittent medullary claudication detection of H wave was impossible after exercise, while in other 4 patients the latency of H response increased by more than 14%. Statistically significant difference was noted for radicular latency, cortical latency, central conduction time, and the number of phases in muscle response in patients

with acute or chronic vascular lesions of the spinal cord, compared to patients with intermittent medullar claudication.

Conclusions: Our research support the idea, that intermittent medullar claudication has a protective role in vascular disorders of the spinal cord, despite multifactorial etiology. Electrophysiological changes seen in patients with intermittent medullar claudication relate to complex spinal cord reflexes, using chains of neurons, while mono-neuronal reflexes appear to be more resistant to ischemia. The research of brain and spinal cord preconditioning will contribute to better understaing of mechanism of ischemic injury and to the establishment of new therapies for neuroprotection.

NEUROREHABILITATION IN NEUROONCOLOGY

WOLFGANG GRISOLD[1]
CHRISTINE MAROSI[2]
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2. Medical University , Vienna, Austria

The incidence of cancer is increasing worldwide. The positive aspect is, that many successful therapies for different types of cancer have been implemented, the negative is that increasingly long term survivors suffer from late effects of therapy.

Neurorehabilitation is a successful development in neurology and is implemented in many countries of the world, however and often concerns primary neurologic diseases.

In the past years rehabilitation and the neurorehabilitation for cancer patients has been introduced. This communication will touch 3 different settings:

Rehabilitation during (progressive) disease:

Rehabilitation for patients with glioblastoma multiforme is a good example for this recent development. The survival duration of patients with high grade gliomas remains short, despite worldwide efforts and therapeutic options are still limited. Therefore GBM patients were often banned from rehabilitation. Small studies show that rehabilitation programs offering as well training for physical functioning and neurocognitive rehabilitation are able in maintaining the quality of life and independence and autonomy of patients and reducing efforts and costs of care.

Rehabilitation of permanent and late effects

Cancer, despite successful treatment may leave patients with permanent neurological deficits. This can be due to brain damage by metastases, or spinal cord lesion leaving the patient paraplegic. The persisting deficit has often a more disabling effect than the cancer, and needs rehabilitation.

Late effects

Late effects can be due to several causes, mainly as a residual of interventions, sequelae of radiotherapy , late effects of chemotherapy , or combinations. The number of patients suffering from late effects is increasing, due to the increased numbers of surviving patients, An example are toxic neuropathies, which can persist, after the treatment of cancer, even in the absence of recurrence.

Neurooncology is increasingly implemented. For oncology the expertise of the neurologist is becoming more important. The strategy needed is multidisciplinary and multiprofessional, as rehabilitation goes far beyond the center based care into includes social and aspects of quality of life among others.

STATUS EPILEPTICUS - NEW DEFINITION, CLASSIFICATION, CLINICAL EVOLUTION, TREATMENT

STANISLAV GROPPA
Head of Neurology Chair of "N. Testemitanu" State Medicine and Pharmacy University,
Director of the Neurology Neurosurgery Department (Institute of Emergency Medicine),
Head of the Neurobiology and Medical Genetics Laboratory, Rep. of Moldova

Status epilepticus (SE) is a major neurological and medical emergency, with an incidence rate of 18.3 to 41 cases per 100 000 population per year. The reported incidence varies considerably depending on the definition used for SE. In addition, the incidence refers to clinically apparent episodes of SE that do not incorporate the underestimated incidence of non-convulsive SE. SE occurs as a result of a primary neurological disease or secondary of a severe disease with high mortality and morbidity.

At this conference will be presented:

- The new definition of SE (2015) - a conceptual definition that emphasizes two operational dimensions: the first being the duration of the seizure and the point of time (t1) over which the seizure should be considered "continuous seizure activity" and the second point of time (t2) being the time of the ongoing seizures, after which

there is a risk of long-term consequences.

- The new system classification of SE that provides a good framework for clinical diagnosis, investigation, and therapeutic approach for each patient being based on four axes: (1) semiology, (2) etiology, (3) electroencephalographic (EEG) correlations, ; and (4) age.
- The pathophysiological principles that underlie the SE and the refractory SE
- Etiology of SE
- Neurophysiological-electroencephalographic correlations, EEG criteria of non-convulsive SE
- The therapeutic approach, phased, application of AED treatment in the SE.
- Evaluation scales of the SE, the outcome of the patient.

COGNITIVE DECLINE AFTER STROKE: CURRENT CONCEPTS AND PREVENTIVE STRATEGIES

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Post-stroke cognitive impairment (PSCI) contributes substantially to the burden of stroke worldwide. Incidence and prevalence of post-stroke cognitive impairment are being extensively investigated over the last years; however, the results of the studies vary for the difference between the countries, diagnostic criteria, time elapsed from stroke and other methodological issues. Three months after stroke the majority of studies reveal cognitive impairment in 30-60% of stroke survivors, though the range is from 17 to 92%. With changing population demographics, increased life expectancy and improved survival from stroke, the absolute numbers of patients with PSCI will increase.

Obviously, stroke-related acute tissue damage may affect cognition. Nevertheless, despite prospective data being available, results are conflicting and the direct cognitive effect of a stroke event beyond the cognitive decline associated with age and vascular risk factors remains poorly understood. There is a huge variability in terms of manifestation or acceleration of cognitive decline after stroke; however, often there is a delay that could provide unique opportunities for disease modifying strategies to be applied to preserve cognition following stroke.

In terms of risk factors, biomarkers and mechanisms, there is an extensive overlap between vascular and degenerative mechanisms, when the tissue damage produced by vascular factors aggravates the damage produced by neurodegeneration and vice versa. These common pathways include excitotoxicity,

neuroinflammation, oxidative stress, apoptosis, proteinopathies and neurotrophic alterations, leading to neurovascular damage and degeneration A number of the cellular and molecular processes involved in dysfunction of neuro-vascular unit have been extensively studied over the last decade in terms of their role in the mechanisms of post-stroke cognitive decline.

The best way to prevent PSCI is to prevent stroke recurrence and stroke severity through optimal acute treatment and intensive secondary prevention. Better understanding of the risk factors and estimation of the risk scores for post-stroke cognitive impairment are important for development and assessment of preventive strategies (lifestyle modification, neuroprotective agents, cognitive rehabilitation, other interventions). The notion of disease modification should be explored, with the integration of pharmacological and non-pharmacological multimodal approaches, with pleiotropic effects targeting endothelial and brain–blood barrier dysfunction, neuronal death and axonal loss, cerebral plasticity and compensatory mechanisms; degenerative-related protein misfolding and other interventions.

IS THERE SIGNIFICANT PROGRESS IN NEUROREHABILITATION? WHERE ARE WE? WHERE TO GO?

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Within the last 10 years the number of survivors after stroke and traumatic brain injury (TBI) has dramatically increased due to advances in acute medical care.

In parallel the need for intensive neurorehabilitation to combat resulting impairment and handicap has increased. Fortunately also over the last 20 years neurologic rehabilitation is more and more conceived as applied neuroscience:

Dramatic progress has been made in the application of evidence based medical principles and the number of well designed randomized controlled trials in the field is increasing. Nevertheless there is a remaining epistemological problem in how far the rationales of EBM originally designed for pharmaceutical studies are really suited to as a source of beat evidence :Due to heterogeneity of populations ,usually comparably small sample sizes and hence also difficult to interpret metaanalyses the EBM rationale my sometimes be misleading.

Nevertheless a reasonable approach to design optimal treatment strategies is to follow elementary rules derived from behavioural- and neuro-sciences concerning neuroplasticity and e.g. learning mechanisms. This has resulted in the invention of better scientifically founded procedures for neurological treatment of motor, cognitive and language problems. A good example is the very successful application of the principle of "forced use" and avoidance of "learned non use" in movement therapy. This concept now also spreads to non motor fields as language, cognitive and perceptual rehabilitation.

Furthermore the use of intelligent mechanical training devices (often loosely called "robots" has opened news therapeutic windows especially in the early stage of treatment in severely impaired patients.

On the other hand pharmaceutical concepts for neuroprotection have more or less failed so far possibly due to the selection of the wrong mostly monomodal drugs not properly addressing the complexity of the brain´s endogenous defense mechanisms at an early stage after injury. There is however a growing number of neuromodulatory techniques such as peripheral nerve stimulation , non-invasive brain stimulation and also pharmaceutical interventions with antidepressants to facilitate brain recovery within a limited time-window after stroke and TBI with the aim to reduce impairment.

We have to think how our rehabilitation environments should look like and can be "enriched" and how we can generate a high level of motivation and fun in patients to let them successfully participate in such high frequency treatments. This means that we have to design clever and economically feasible, approaches 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" in future.

Furthermore prognostic criteria have to be worked out to enable decisions when to switch from impairment oriented (massed practice) to compensatory (task specific learning) strategies and we also have to improve the availability and the use of genetic biomarkers.

MODULAR CONCEPTS IN NEUROREHABILITATION

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Within the last decade there was a dramatic change in paradigms in motor rehabilitation: Physiotherapy is no longer understood as "hands on" treatment but concentrates more on "hands off" and coaching activities. The traditional "school" oriented concepts are more and more replaced by therapeutic procedures which are derived from neurobiological and neurobehavioral knowledge and are evidence based.

To further stimulate progress in the field of motor rehabilitation a fast transfer from basic neuro- and behavioural sciences into clinical practice is needed and appropriate clinical study designs and service implementations have to be defined. Most of the evidence based concepts are taking advantage from elementary rules for human motor learning.

The International Classification of Functions (ICF) has become sort of a gold standard for the classification of functions, activities and participation. In this module practical exercises will be done how to extract from the ICF a reasonable matrix for the definition of rehabilitation goals.

We here describe how several evidence based therapeutic procedures can be grouped into modules structured as to clinical target (e.g. upper limb paresis) and severity of impairment . This modular approach helps to ascertain that every patient has a chance to be treated by a procedure likely to improve his condition even on a limited length of stay. So a quality proven rehabilitative therapy can be offered. Each module is accompanied by assessments and can be fitted in a sequence to switch to next module whenever a predefined score is reached.

This modular approach helps to ascertain that every patient receives a really "quality proven" therapeutic product primarily derived from evidence base techniques but also ,on the other hand adapted as to the individual needs and possibilities of the patient enabling a good compromise between evidence base and individualised medical approaches.

Furthermore the modular approach helps to organize treatments in an economic way with an optimal mixture of 1:1 and group therapies. Also intelligent mechanic

training devices (therapeutic robots) can be included to furthermore increase the productivity of therapeutic staff.

In the talk both neuroscientific principles of plasticity and motor learning as well as examples of therapeutic modules will be demonstrated.

MOTOR THERAPIES IN NEUROREHABILITATION: WHAT DO WE HAVE AND WHAT DO WE NEED?

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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 neuro-rehabilitation which can be summarized by three major paradigmatic changes:

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

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 .

Thirdly these developments were accompanied by a transition from intuitatevely 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 oft he 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 tot he clinical bedside

In this respect a clearer distinction hast o be made between treatment strategies targettedt 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:

Possible additional candidates for a true „impairment" oriented treatment approach are neuromodulatory techniques such as peripheral neuromuscular and/ or sensory stimulation (eg. 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 a high intensity massed movement treatment appear promising

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 effective 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 we demonstrated in the CARS trial (Muresanu et al 2016) for the first time after decades of frustrane attempts to achieve some sort of neuroprotective and/or neurorestorative effects that a multimodal drug (Cerebrolysin) can improve impairment after stroke .

As treatment intensity is likely to be the key element for impairment reduction we certainly have to find clever and affordable ways: to increase the daily treatment time of our patients. To day even during inpatient rehabilitation treatment times hardly exceed three hours a day i.e. that we use only a small percentage of waking hours leaving long "idling" time not field by any treatment. In this sense we have to "reinvent" neurorehabilitation within this sensitive post injury period to combat impairment with high frequency treatments combined with neuromodulatory techniques (robot use, peripheral and central stimulation, pharmaceuticals).

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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DEBATE: SHOULD NEUROREHABILITATION AFTER STROKE START IN THE IMMEDIATE POSTACUTE STAGE?

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This debate addresses the important issue if intense neurological rehabilitation should start very early or at a later time after stroke or another cerebral injury. It is generally believed and there is good evidence that rehabilitation should start as “early” as “possible”. The question is “what is early?” and the second question is “what is possible?”. In this debate current arguments reflecting the advantages and disadvantages of very early intensive rehabilitation (especially looking at data

from animal experimentation and the VECTOR the AVERT 3 trials) will be discussed in a controversial way.

THE ART OF NEUROLOGICAL EXAMINATION

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In this course the art of a rational neurological examination will be taught:

More than in any other clinical discipline the history and examination in neurology are the most informative source of information for the clinician. This is of course due to the fact that structure and function of central and peripheral nervous system are clear and informative.

Clinical skills for optimal examination of cranial nerves, motor and sensory functions and screening approaches for cognitive and linguistic analysis will be presented .So the students will soon learn that neurologic examination is much more than just looking at "reflexes".

Also fields notoriously estimated as being difficult (such as eye movements, nystagmus ,diplopia etc.) will not be spared but elucidated in an "easy to understand and remember" mode.

CEREBRAL VEIN AND DURAL SINUS THROMBOSIS: AN EVALUATION OF 62 CASES

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Background

Cerebral venous and sinus thrombosis (CVST) is a rare disease in the general population. However, it has a higher frequency among patients younger than 40 years of age, patients with thrombophilia, and women during pregnancy, and with hormonal contraceptive use. At least 1 risk factor can be identified in >85% of patients with CVST. In the International Study on Cerebral Vein and Dural Sinus Thrombosis cohort, a thrombophilia was identified in 34% of cases with CVST.

Two pathophysiological mechanisms are noted in patients with CVST; first: the thrombosis of the cerebral veins or dural sinus, leading to cerebral lesions, and, second, the occlusion of the dural sinus, resulting in disturbance of cerebrospinal fluid absorption and increased intracranial pressure.

The clinical presentation of CVST can be highly variable. Onset of symptoms and signs may be acute, subacute, or chronic. Four major clinical syndromes can occur in CVST patients: isolated intracranial hypertension, focal cerebral signs (deficits, and/or seizures), and subacute encephalopathy. These syndromes may present in combination or isolation depending on the extent and location of CVST.

Neuroimaging has dramatically improved in recent years the ability to confirm the clinical suspicion of CVST.

Head CT with and without injection of contrast material can identify different abnormalities within the bony structures of the skull; it may also detect other alternative diagnoses (tumors, etc). On the other hand, head CT can show direct, and indirect signs of CVST.

According to different authors, MRI (especially T2*SW imaging) combined with MR venography is the most sensitive examination technique for the diagnosis of CVST in different evolution phases, because the combination of an abnormal signal in a sinus and a corresponding absence of flow on MR venography supports the diagnosis of CVST. In a meta-analysis (Dentali T, 2006) of 1180 patients with CVST, the mean 30-day mortality rate was 5.6%.The primary cause of death during the acute phase of CVST is transtentorial herniation, most frequently from large venous hemorrhage. Although the majority of patients have a complete or partial recovery, 10% are found to have permanent neurological deficits by 12 months of follow-up. Recanalization occurs within the first few months after cerebral venous thrombosis, and is limited thereafter (Dentali T, 2006). Recurrence of cerebral venous thrombosis is rare (2.8%). However, patients with CVST have an increased incidence of venous thromboembolism, including deep vein thrombosis and pulmonary embolism, the majority of which occur within the first year.

According to different authors, the treatment of acute CVST includes: (a) antithrombotic treatment (anticoagulation), (b) symptomatic treatment of intracranial hypertension, seizures, etc., and (c) etiologic treatment of different risk factors.

Patients and Methods: We analyzed 62 CVST consecutive patients, which were examined at admission and after three months, using the mRS scores.

Results: Mean age was 38.4 years (SD 7.9); 42 were women, 80,95% of them being fertile. The most frequent neurological syndrome was intracranial hypertension. CT showed direct signs of dural sinuses thrombosis in 10 patients, and venous cerebral infarcts in 23 cases. MRI identified thrombosis of SSS in 42

patients, transverse sinus in 23 cases, cavernous sinus in 4 patients. Emissary vein thrombosis was identified in five cases. 13 out of 62 MRI had a normal prior CT. DSA revealed isolated cortical veins occlusion, without sinus occlusion in 4 cases. Risk factors were identified in 45 patients (72.6%); hereditary thrombophilia being the most common (21 cases). All patients received anticoagulant therapy. After 90 days from admission, functional outcome was good, with a mRS score ≤2 in 36 patients, moderate/ severe disability in 19 cases, the death rate being 11.3% (7 patients). Severity of CVST was found to be associated with presence of rapidly worsening symptoms (p= 0.001), and occlusion of 4 or more sinuses (p= 0.005).

Conclusions: CVST was common in women of fertile age. The outcome was favorable if the patients were promptly diagnosed and adequately treated.

Key words: cerebral venous and sinus thrombosis (CVST), dural sinuses, anticoagulant therapy.

THE IMPORTANCE OF INNOVATIVE REGISTRY STUDIES – METHODOLOGIES AND EXAMPLES

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Conducting Clinical Trials Using Clinical Observational Registries is a relatively new field in research and has been discovered as a very important instrument to develop robust evidence.

Medical societies and regulatory institutions are increasingly acknowledging data from observational registries and other forms "real-world evidence". While registries have long been used to support safety evaluations, their use for efficacy evaluations is a newer practice.

Eliminating bias has been the major focus of innovative registry methodologies. These methodologies will be discussed in detail and examples from previous well conducted registry trials will be presented, also new registry study designs will be introduced.

Registry studies are also increasingly important as a trigger for investigator initiated research, this also highlighted by relevant examples.

CHRONIC INFLAMMATORY DEMYELINATING POLYRADICULONEUROPATHY: TYPICAL AND ATYPICAL FORMS

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Chronic inflammatory demyelinating polyradiculoneuropathy (CIDP) is an acquired, demyelinating, motor and sensory immune mediated neuropathy that can lead to significant neurological disability. This is the most common treatable chronic neuropathy worldwide, with a prevalence ranging from 1 to 9 cases per 100 000. Considerable variation in clinical presentation and multiple phenotypic variants make identification of the pathogenic mechanisms complicated, further accentuated by differential patient responses to treatment. The classic form of CIDP is fairly symmetric and motor involvement is greater than sensory. A number of variants such as multifocal acquired demyelinating sensory and motor neuropathy (MADSAM or Lewis-Sumner syndrome), multifocal motor neuropathy, and distal acquired demyelinating symmetric (DADS) polyneuropathy could be included in CIDP. Recently was described the sensory CIDP with no detectable weakness which frequently in an under-recognized entity.

The diagnosis is based on a combination of clinical examination findings, electrodiagnostic studies, and other supportive evidence. More than half of affected people cannot walk unaided when symptoms are at their worst. CIDP usually responds to treatments that reduce inflammation, but there is disagreement about which treatment is most effective. While many patients can be successfully treated with current therapies aimed at arresting immunopathogenic mechanisms, some do not respond or have lasting disability.

More than two-thirds of CIDP patients respond to initial treatment with corticosteroids, IVIg, or plasma exchange. Patients who do not respond to one of the three established therapies have traditionally been treated with other immunomodulating medications, such as azathioprine, cyclosporine, mycophenolate mofetil, methotrexate, cyclophosphamide, alfa or beta interferons, rituximab. There is a necessity for more randomized trials of immunosuppressive and immunomodulatory agents. Future research is needed to identify disease markers to improve diagnosis and to develop new therapeutic strategies.

UPDATE ON SENSORY/MOTOR THERAPY IN CHILDREN WITH CEREBRAL PALSY

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Cerebral palsy (CP) describes a group of disorders of the development of movement and posture, causing activity limitation, that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, cognition, communication perception and/or behaviour and / or by seizure disorder (Bax, DMCN 2005). The most frequent motor disorder is bilateral or unilateral spastic CP. To maximize the developmental outcome, reduce neuroorthopedic complications and problems in adult life virtually every child with CP receives sensory/motor therapies during infancy and adolescence. The concept of these therapies is based on the idea to enhance neuroplasticity. Actual data of evidence based sensory-motor therapies for children with CP in different age groups will be presented

REM-SLEEP BEHAVIOR DISORDER IN PARKINSON'S DISEASE PATIENTS: CLINICAL AND THERAPEUTIC ASPECTS

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Rapid eye movement (REM) sleep behavior disorder (RBD) is a sleep disorder characterized by loss of normal muscle atonia during REM-sleep with recurrent dream enactment and excessive motor activity. (Boeve et al. 2007) The current diagnostic criteria according to the International Classification of Sleep Disorders (ICSD-3) (AASM 2014) are: (1) Repeated episodes of sleep-related vocalization and/or complex motor behaviors. (2) These behaviors are documented by polysomnography to occur during REM sleep or, based on clinical history of dream enactment, are presumed to occur during REM sleep. (3) Polysomnographic recording demonstrates REM sleep without atonia (RWA). (4) The disturbance is not better explained by another sleep disorder, mental disorder, medication or substance abuse.

Thus, the definite diagnosis of RBD requires polysomnography to detect RWA. Questionnaires are also available, but can be used only as a screening tool.

When RBD occurs in the absence of an obvious neurologic disorder, it is

considered idiopathic (iRBD). When an association with a neurodegenerative disease is present, RBD is regarded as symptomatic. It is a frequent feature in patients with Parkinson's disease (PD) and other alpha-synucleinopathies, and can occur at any stage of the disease. RBD could be considered a premotor clinical manifestation, and can antedate by many years the motor symptomatology.

In patients with PD, other nocturnal manifestations can mimic RBD. For example, patients with obstructive sleep apnea can have unpleasant dreams and sometimes dream enactment; hallucinations and psychotic episodes during the night may be mistaken for RBD especially in PD patients with dementia. Periodic limb movements in sleep (PLMS) are also frequent in PD patients but have no relation to REM sleep.

The main aims of the therapy of RBD are: decrease the frequency and severity of abnormal vocalizations, decrease the frequency and severity of abnormal motor behaviors and decrease the unpleasant dreams or nightmares (Boeve 2010). Adjusting the sleep environment to minimize injuries and medical treatment with melatonin and clonazepam are the main therapeutic options.

The talk will be accompanied by video-presentations of PD patients with RBD.

NEUROBIOLOGY OF VASCULAR COGNITIVE IMPAIRMENT AND ITS IMPACT ON COGNITIVE NEUROREHABILITATION

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Vascular dementia is the second most common cause of dementia, with clinical features that depend on neural substrates affected by the vascular lesions. Like most neurological disorders, it involves alterations that range from the molecular level to neuronal networks. Such alterations begin as compensatory mechanisms that reshape every subsystem involved in the brain's homeostasis. Although there have been recent huge advances in understanding the pathophysiology of cognitive dysfunction, a suitable therapeutic approach to vascular dementia remains elusive. Except multimodal drugs, pharmacological interventions have failed to improve cognitive function, and it is a well-known fact that there is a need to change the current view for providing neuroprotection and enhancing neurorecovery after stroke. Studies regarding cognitive training are also faced with the difficulty of drawing up protocols that can embrace a holistic approach in cognitively impaired patients. This presentation will address a brief synthesis of current results from basic research data and clinical studies regarding pharmacological and non-pharmacological interventions in vascular dementia and will offer an integrated view from the perspective of systems biology.

Keywords: vascular dementia, cognitive neurorehabilitation, pharmacological modulation, non-invasive brain stimulation, systems biology.

PATIENT SAFETY AND EDUCATION IN NEUROREHABILITATION

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A neurorehabilitation clinic has many adult patients facing neurological disability as they grow older and that has a huge impact on their quality of life. Vital problems are coronary artery disease and respiratory – aspiration pneumonia, co-morbidities such as cognitive impairments, periodontal disease, hearing and visual problems, obesity, diabetes, hypertension, weakness, fatigue, pain syndromes with functional impairment for ADL and IADLs (Lawton Instrumental Activities of Daily Living Scale). Aging caregivers is another challenge in the neurorehabilitation department.

The medical team is responsible for the safety of the patient in neurorehabilitation safety means an interdisciplinary medical team involved in respecting procedures (assessment and treatment), medical network, information and communication on medical field on the same level or between different sectors (medical, administration, financial, IT). All this complex activity is focused on the neurorehabilitation patient from the beginning taking into consideration patient safety. But not only is the medical system responsible for errors in the neurologic patient safety. The participants involved in a neurorehabilitation program are the family, friends, society, non-governmental organizations and mass-media groups.

For patient safety there are some important principles to follow: always evaluate the risk for SCI given the high prevalence for cardiac disease (arrhythmias, silent ischemia – with very vague symptoms particularly in noncomunicative patients/ TBI) , the risk for DVT (DVT prophylaxis). Vital signs should be monitored before, during and after therapy given the fact that commonly used medications in neurologic disabilities have a detrimental effect on underlying cardiovascular conditions during rehabilitation sessions. All attempts must be made to simplify treatment plans and minimize medications with cognitive side effects.

Patient education should include the patient, his family and the society and should follow also some principles: patients and their family should be educated about the impact of the neurological disability on cardiovascular function; because of the high risk of cardiovascular events it is important that the patients and their family are educated on strategies to reduce risk factors (weight reduction, exercise, nutrition, smoking cessation) and also to early recognize the symptoms of automatic dysreflexia and implementation of prevention measures. The educational programs must be developed and adapted to the particularities of the patient and his family background (age, language, culture, beliefs) and have a feedback from time to time.

The development of educational programs including work groups on specific

neurologic disease must be considered in different structures (out patient's units or social services departments).

Safety and education have an important impact on the QoL, helping the patients to feel comfortable in their personal, medical and social life and improving their long term disponibility to accept their disability.

BASICS AND NOVELTIES REGARDING NON-KINESIS PHYSICAL THERAPY INTERVENTIONS MORE FREQUENTLY USED IN NEUROREHABILITATION

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As well-known, NeuroRehabilitation is a domain of interference between Neurology and Physical & Rehabilitation Medicine, that uses, almost without exception in a syncretic manner, pharmacological agents and physiatric interventions – materialized in physical therapy procedures – in order to maximize outcomes in the approach of (often severe and not seldom lifelong) disabilities, and their possible progression, consequent to various neurological and/or neurosurgical sufferance.

The physical therapy endeavors are commonly classified by the (main) physical vector/ agent through they act upon the (part/s of) the body and/or pathologic condition(s). Hence, there are, basically: electro-therapy, photo-therapy, hydro-/ thermo-/crio-therapy, inhalo-therapy and kinesis-therapy, procedures.

The physiatric interventions has beneficial effects if acting (likewise medicines) on specific and realistic therapeutic-/rehabilitative targets/ goals, which are previously identified through clinical/para-clinical and functional specific, evaluations. Such objectives, more frequently encountered in NeuroRehabilitation (mnemotechnical –"D"s), are: dys(a)phasia, dys(a)taxia, dystonia (mostly – but not exclusively – spasticity), dysphagia, dys-control of bladder and/or anal function(s), dys(an)aesthesia, dys(a)praxia, dysreflexia, (somatic) dyskinesia, dys(a)prosexia, dysphoria/ organic psycho-cognitive-behavioral status/ psychogenic (di)stress. Additionally, including in NeuroRehabilitation (although not related only to this domain), there has to be faced and counteracted, rather currently, (also) specific objectives, like: physical effort/ endurance (neural-/muscle and/or cardio-vascular/ pulmonary), respectively intellectual (neurasthenic) de-conditioning(s), but breathing/ ventilation troubles, inflammation, ischemia and/or – local/ regional – stasis, too.

Most – if not all of – the above mentioned therapeutic-/rehabilitative targets/ goals can be approached including by means of Physical Therapy. Whereas

kinesis physical techniques/ therapeutic exercises are customary among NeuroRehabilitative procedures – and therefore, probably better known throughout the inter-/multi-disciplinary related teams of practitioners – the non-kinesis ones: more different – technically and respectively, in between – are, at least some of them, also very used and useful, and thus, I have considered appropriate to dedicate to them this lecture.

Key words: NeuroRehabilitation, therapeutic-/rehabilitative objectives, non-kinesis Physical Therapy interventions

BURDEN AND QUALITY OF LIFE IN CAREGIVERS OF MS PERSONS

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There are many different definitions of caregiver burden in the literature. This term is frequently used as a synonym of caregiver strain or stress. Pearlin at al. described burden as the impact that care has on mental and physical health, on family relations, on work activity and financial situation of a caregiver. The care is usually provided by a close family member, often a spouse or a child, usually a daughter who lives with the patient. Carers provide assistance with basic personal hygiene and daily activities, provide emotional support, arrange for medical services and social assistance. As a result, they may experience high levels of chronic stress that can lead to a deterioration of the carers' health status, social life and well-being.

Caring for MS patients, as have been shown in the literature, may negatively impact several objective and subjective aspects of caregiver's life, such as physical and emotional health, morale, work life, finances, social mobility, interpersonal relationships and sexual life. In the studies on psychological consequences of caregiving it have been reported that the perceived caregiver burden has been significantly correlated with higher risk for depression, anxiety and lower QoL for caregivers.

The severity of burden perceived by carers depends on a variety of factors, both from caregivers' and patients' side. They may be summarized as follow: (1) factors from a patient's side: low functional status, the presence of depression, the presence of behavioral and cognitive disturbances, being a male, older age; (2) factors from a caregiver's side: older age, being a female, not being employed, being the care receiver's daughter- in- law, amount of surveillance time, the presence of depression, the presence of disability, sense of coherence, and non-informal social support of the caregiver.

CHALLENGES TO REHABILITATION OF STROKE IN THE ELDERLY

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"Ana Aslan" National Institute of Gerontology and Geriatrics, Bucharest, Romania
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During the last decades a constant trend of growth of older people prevalence in general population has been observed worldwide. Stroke remains the third leading cause of death and most often encountered cause of disability in developed countries. In addition, almost three-fourth of all strokes occur in persons beyond the age of 65. The single most important risk factor for stroke is currently considered advanced age. The typical patient for stroke rehabilitation will be more and more commonly an older lady with poor family support mainly because her children are themselves older. Several factors can contribute to functional decline in this age group even without the involvement of stroke deficits. They are decreased mobility and difficulties with activities of daily living (both basic and instrumental). Sensorial deficits that occur with advancing age (decreased visual acuity including presbyopia, presbyacusis) can provide additional barriers to rehabilitation. Frailty and sarcopenia are two recently described conditions that occur in older people and can contribute to increased vulnerability to various risk factors and reduced mobility, both affecting rehabilitation in stroke older patients. Older people are at increased risk of malnutrition and depression that often worsen after a stroke. Neurocognitive deficits increase in prevalence with advancing age even in the absence of a stroke. By the age of 85 years and older, between 25% and 50% of people will exhibit manifestations of Alzheimer's disease. These conditions affect the capacity of older people to comply with rehabilitation programs, including learning, remembering, problem solving, applying compensatory techniques. In addition, older people present several chronic diseases concomitantly, including arthritis and other musculoskeletal conditions, osteoporosis, diabetes mellitus, various cardiovascular diseases, pulmonary diseases, urinary incontinence, a.s.o. Despite the difficulties associated with the rehabilitation of older adults post-stroke, even a small improvement in independence can improve quality of life. Moreover, in this age group it is important to identify and involve social and family support early in order to facilitate a smoother discharge to home.

CRYPTOGENIC STROKE AND EMBOLIC STROKE OF UNDETERMINED SOURCE (ESUS)

BOGDAN O. POPESCU
Department of Neurology, Colentina Clinical Hospital, School of Medicine, 'Carol Davila' University of Medicine and Pharmacy Bucharest, Romania
Laboratory of Molecular Medicine, 'Victor Babes' National Institute of Pathology, Bucharest, Romania

Most of strokes are ischemic (80%) and a significant proportion is without a demonstrable cause, being called cryptogenic. Both by tradition and guidelines, these cryptogenic strokes are treated with antiplatelet drugs. However, recent studies of long or continue heart rhythm monitoring demonstrated that "the more you look, the more you find atrial fibrillation" involved in the etiology. In this presentation I will revise the current proposal for criteria of embolic stroke of undetermined source (ESUS), which seem to be very useful to build up new clinical studies to test new possible secondary prevention treatments for this large category of patients.

TREATMENT OF SPASTICITY

LEOPOLD SALTUARI
Neurological department Hochzirl, Austria

Spasticity as one component of the upper motor neuron syndrome can also be interpreted as the most elementary form of motor control. The inhibition of spasticity can sometimes reduce discomfort and promote more complex motor ability. However, oral and intrathecal antispastic treatment is often accompanied by serious side effects such as reduction of vigilance and cognitive processing, which interfere with the cooperation of the patient during the rehabilitation process. On the other hand, various antispastic drugs lead to muscle weakness and also influence vegetative parameters such as bladder control and bowel mobility. The increase of paresis and fatigue must also be considered when using focal antispastic treatment. Prior to commencing antispastic treatment all of these factors should be considered, and the decision pro treatment should not be taken lightly.

N-PEP TYPE PEPTIDES AS AN ADD-ON TREATMENT IN POST-STROKE COGNITIVE IMPAIRMENT

DANA SLĂVOACĂ
RoNeuro Institute for Neurological Research and Diagnostic, Cluj-Napoca, Romania

Cognitive impairment is a common finding in patients with stroke or traumatic brain injury (TBI), regardless of severity, and it has an important impact on quality of life. Vascular cognitive impairment (VCI) describes a spectrum of cognitive disorders ranging from mild cognitive impairment (MCI) to dementia, with consequences for all cognitive domains and behavior. In patients with TBI, cognitive deficits appear in approximately 65% of moderate to severe cases and in 15% of mild cases. This is a pilot study to investigate the effects N-Pep-12 treatment on the neurorecovery of patients with post-stroke and post-TBI cognitive impairment. N-Pep-12 is a proprietary, peptide-based nutritional supplement that has been shown to exert neuroprotective and pro-cognitive effects in experimental studies as well as in earlier clinical studies in patients suffering from age-related cognitive deficits. This study will use a multidimensional approach that will combine neuropsychological outcome scales, neurophysiological investigations (qEEG), psychophysiological investigations (eye-tracking), and clinical parameters.

CO-ULTRAMICRONIZED PALMITOYLETHANOLAMIDE/ LUTEOLIN FACILITATES OLIGODENDROCYTE PRECURSOR CELL DEVELOPMENT AND IMPROVES OUTCOME IN EXPERIMENTAL AUTOIMMUNE ENCEPHALOMYELITIS

STEPHEN SKAPER
MASSIMO BARBIERATO, LAURA FACCI, GABRIELLA CONTARINI, MILA BORI, MORENA ZUSSO, PIETRO GIUSTI
Department of Pharmaceutical and Pharmacological Sciences, University of Padua, Padua, Italy

Oligodendrocytes, the myelin-producing cells of the CNS have limited ability to repair damage either to themselves or to other nerve cells. Such is the case in multiple sclerosis (MS), a chronic CNS neuroinflammatory demyelinating disorder. MS lesions are characterized by the presence of a compromised pool of undifferentiated oligodendrocyte precursor cells (OPCs) which fail to mature into myelin-producing oligodendrocytes. An attractive strategy may thus be to replace lost oligodendrocytes and/or promote their maturation or proliferation. N-palmitoylethanolamine (PEA), an endogenous fatty acid amide signaling molecule possesses analgesic, anti-inflammatory, and neuroprotective actions.

Recent studies show a co-ultramicronized composite of PEA and the flavonoid luteolin (co-ultraPEALut, 10:1 by mass) to be more efficacious that PEA alone in improving outcome in CNS injury models. Here, we examined the effects of co-ultraPEALut on the survival and development of OPCs isolated from newborn rat cortical mixed glial cell cultures. OPCs were maintained under conditions which favored either proliferation (basic fibroblast factor and platelet-derived growth factor (PDGF)-AA-supplemented serum-free medium ('SFM')) or differentiation (Sato medium containing T3 and T4). OPCs cultured in SFM displayed high expression of PDGF receptor alpha gene and the established proliferation marker Ki67 in the presence of 10 mM co-ultraPEALut and down-regulation of Apoe, whose deletion reportedly leads to a later time of peak symptoms/disease severity and less severe demyelination/axonal damage in myelin oligodendrocyte glycoprotein (MOG35-55)-induced experimental autoimmune encephalomyelitis (EAE) in female C57BL/6 mice. In Sato medium OPCs showed rapid decreases in PDGF receptor alpha and Ki67 expression but a time-dependent rise in myelin basic protein (MBP) expression. In the latter conditions co-ultraPEALut (10 mM) enhanced OPC morphological complexity, protein content, and gene expression for MBP, proteolipid protein and 2',3'-cyclic nucleotide 3'-phosphodiesterase, as well as genes coding for enzymes involved in cholesterol and fatty acid synthesis – all important components of myelin. Co-ultraPEALut also increased OPC content of MBP. Moreover, co-ultraPEALut improved the clinical score in this EAE mouse model, which is often used as a chronic first-pass model of MS. Hence, strategies intended to promote endogenous remyelination in MS should focus on both enhancing the long-term survival of OPCs and on stimulating these cells to differentiate into remyelinating oligodendrocytes. Within this context, co-ultraPEALut may represent a novel pharmacological approach.

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TBI – THE INDIAN PERSPECTIVE; ITS CLINICAL MANAGEMENT, NEUROPSYCHOLOGICAL ANDREHABILITATION ASPECTS

KEKI TUREL

Ex-Head, Department of Neurosurgery Bombay Hospital & Institute of Medical Sciences, Mumbai, India

India reports highest road fatalities in the world. Approximately 200000 people die every year. Prevailing 1 million require rehabilitation. Several mismanaged

transport regulations and diverse cultural vagaries and practices too account for high number of fatalities. We have shown that severely head injured patients who did not appear to have a promising outcome (GCS <8). but given ABCs of resuscitation and a proactive, vigilant & persistent management offered a decent chance of Survival and even Quality Of Life (QOL). Few such patients with 'Impossible' Head injuries will be presented.

Though patient may survive of head injury, several functions of frontal and parietal lobes are affected including neurological, neuropsychological, psychosocial dysfunction. A comprehensive Neuropsychological evaluation of TBI patients is highly important to elucidate the nature and severity of the cognitive and higher mental function deficits. Neuropsychological testing is key to precise diagnosis and assist with treatment and rehabilitation planning. Building rehabilitation strategy is as important as primary treatment for the ultimate outcome.

First responders at site of injury play a major role in minimizing brain damage and the need to educate, not just paramedics, but also policemen and lay people is critical to a better outcome. Speed of transfer via appropriate ambulance and team work will also serve such a purpose and their eventual favourable outcome.

MULTIDIMENSIONAL STRATEGIES TO IMPROVE TBI CLINICAL RESEARCH - TOWARDS A NEW GOLD STANDARD

JOHANNES VESTER
Senior Consultant Biometry and Clinical Research
idv - Data Analysis and Study Planning, Germany

Is TBI clinical research stifled by backward oriented designs? Recent reports from interdisciplinary working groups consisting mostly from neurologists, neurosurgeons, neuropsychologists, and biostatisticians, state that to create improvements in TBI treatment, important methodological lessons from the past must be taken into account in future clinical research. An evaluation of neuroprotection intervention studies conducted in the last 30 years has determined that methodological design flaws are among the major reasons why pharmacological agents fail to demonstrate efficacy.

Almost all the inconclusive studies used a single outcome measure approach. This classic approach in clinical TBI trials cannot capture all clinical relevant functional information in survivors of any kind of TBI. Even survivors of mild to moderate TBI may experience lifelong disturbances in the physical, behavioral, emotional, cognitive (memory, attention, reasoning, communication and planning),

motor, sensory, perception and social domains of life that may affect specific or global functioning.

Leading interdisciplinary research groups recently highlighted the multidimensional nature of TBI, such as, e.g., the International Mission on Prognosis and Clinical Trial Design in TBI (IMPACT), stating that "outcome after TBI is by definition multidimensional" or the US Traumatic Brain Injury Clinical Trials Network Group, pointing out that "multiple measures are necessary to address the breadth of potential deficits and recovery following TBI".

Multidimensional analysis opens a completely new direction for clinical and statistical thinking and is perhaps much closer to the complicated reality of outcome after traumatic brain injury than the previous "one-criterion paradigm" which ruled clinical research on neuroprotective treatments for the last decades. It is thus fortunate that new data analysis procedures are available that are appropriate for this important new multidimensional approach.

The multidimensional strategy is expected to become a key development in TBI clinical research, opening up new horizons for TBI management. Examples from the literature and current study designs in neurosciences are discussed and their implications related to future developments.

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TRAUMATIC BRAIN INJURY TRANSLATIONAL RESEARCH: SHEDDING LIGHT IN THE DARKNESS.

DAVID W. WRIGHT
Director, Injury Prevention Research Center at Emory, Department of Emergency Medicine, Emory University School of Medicine, USA

Traumatic brain injury (TBI) is a major global health issue, affecting over 10 million persons annually. Despite decades of research, and many promising therapies, no pharmacological agent has translated into a viable treatment for TBI. The ProTECT III and Synapse trials of progesterone for acute TBI are prime examples of the most recent agonizing failures of the translation process. Preclinical evidence of progesterone's neuroprotective properties were undeniable, with over 200 studies in multiple labs showing robust effects. Yet these findings did not survive the translational process under the classical clinical trial paradigm. Arguments for improved animal models, and more robust preclinical testing have been pitted against complaints that the clinical trials are poorly designed. Almost every aspect of the translational process appears to have flaws, down to

the basic understanding of brain pathology and function. A fresh, open and honest examination is needed in order to shed new light on the process and devise the path forward. This presentation will cover several principal areas of concern and suggested approaches to finding an effective treatment for TBI.

CURRICULUM VITAE

OVIDIU BĂJENARU
ROMANIA

Corresponding Member of the Romanian Academy
Member of the Romanian Academy of Medical Sciences of Romania
Professor of Neurology and Director of the Clinical Neuroscience Department at the University of Medicine and Pharmacy "Carol Davila" Bucharest, Chairman of the Department of Neurology – University Emergency Hospital Bucharest

- Graduate of the Faculty of Medicine – University of Medicine and Pharmacy (UMF) „Carol Davila" Bucharest (1983)
- Specialist in Neurology (1989), Senior Neurologist (1994); competence in MRI diagnostic in neurologic disorders (1991)
- PhD (1993) - UMF „Carol Davila" Bucharest
- 2006: Doctor Honoris Causa –University „Ovidius" – Constanta
- Postdoctoral specialization at the University „René Descartes" (Paris) during 1993-1994, in clinical Neurology (CHU „Saint-Anne" and „Kremlin-Bicetre") and research grants in Clinical and Experimental Neurophysiology (CHU „Cochin-Port Royale" and Faculté de Medecine Paris V)
- 2001-2013: President of the Romanian Society of Neurology
- Since 2013: Honorary President ad vitam of the Romanian Society of Neurology
- Since 2001: Coordinator and Chairman of all annual National Congresses of the Romanian Society of Neurology and many other scientific events and teaching courses organized for neurologists in Romania
- Visiting Professor in Vietnam (2013) and Kazakhstan (2015), on behalf of WFN
- Member of the Executive Committee of ENS (European Society of Neurology) between 2005-2009, of the Scientific Committee of ECTRIMS (2004-2009)
- Member of European Academy of Neurology (since 2014), American Academy of Neurology, International Parkinson's Disease and Movement Disorders Society, European Stroke Organisation, Danube Neurological Association (member of the Scientific Board and Deputy Secretary General), and others
- Since 2008: official representative of Romania for UEMS - European Board of Neurology (secretary of the Executive Committee between 2010-2015) and member of the examination board for the title of European Neurologist
- Author of more than 1000 scientific papers reported and published in scientific journals, among 147 cited in ISI Web of Science (Hirsch index 16) and Pubmed. Author of chapters in 2 international books of neurology and author and co-author in more

than 15 medical books published in Romania.

- Coordinator of the National Diagnostic and Treatment Guidelines in Neurological Disorders
- National Principal Investigator and Investigator in more than 50 international, multicentric, controlled clinical trials in: stroke, Parkinson's disease and movement disorders, multiple sclerosis, dementia, epilepsy, and others.
- Director of more national research grants
- 9 awards of excellency in medicine from different socio-professional national and international organizations, the Romanian Ministery of Health and the Romanian Orthodox Patriarchate
- Initiator and coordinator of the National Medical Programs of the Ministery of Health and National Health Insurance System for the treatment of: acute stroke, multiple sclerosis, rare neurological diseases, advanced Parkinson's disease (1999 – 2015)
- President of Consultative Commision of Neurology of the Ministery of Health and National Health Insurance System (2008 – 2015)

MIHAELA BĂCIUȚ
ROMANIA

Professor, Department of Maxillofacial Surgery and Implantology,
Faculty of Dental Medicine, „Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca, Romania

UNIVERSITY STUDIES
Faculty of Dental Medicine and Faculty of Medicine, „Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca

POSTGRADUATE SPECIALIZATION
Oral and maxillofacial surgery

POSTGRADUATE TRAINING
Oral Implantology, 1994, Microsurgery, 1994, International Cancer Management Course, 1998, Competence course in maxillo-dental radiodiagnostic, Ultrasonography, Orthognathic surgery, Lasertherapy, Cleft surgery and management

SCIENTIFIC AND PROFESSIONAL SOCIETIES

Founding member of the Romanian Society of Reconstructive Microsurgery

- Vicepresident of the Romanian Society of Oral and Maxillofacial Surgery (SRCOMF)

• Member: Romanian Society of Angiology and Vascular Surgery 1991, International Association of Oral and Maxillofacial Surgeons (IAOMS) 1994, European Association of Cranio-Maxillofacial Surgery (EACMFS) 1994, Association of Transylvanian Dermatologists 1996, Romanian Society of Plastic and Esthetic Surgery 2001, Romanian Society of Ultrasonography in Medicine and Biology 1998, Romanian Society of Oral Implantology and Biomaterials 2000, Romanian Society of Lasers in Dentistry 2003

SCIENTIFIC ACTIVITY

- Scientific articles and studies - 190 papers
- Books and textbooks - 10 books authored and coauthored
- Papers communicated in conferences – 71 papers

OTHER PROFESSIONAL ACTIVITIES

- Member of the Editorial Board Journal of Cranio-Maxillofacial Surgery – the official journal of the European Association of Cranio-Maxillofacial Surgery
- Member of the editorial boards:
- Dento-Medica (Sibiu, Romanian – French Dental Association, "Victor Papilian" Faculty of Medicine 1996)
- Quo Vadis (Cluj-Napoca, Humanitarian Foundation "Hipocrate" 1997)
- Romanian Journal of Ultrasonography 1999
- Transilvania Stomatologică 2001

DOMAINS OF RESEARCH AND INTEREST

- Neuroregeneration and neuroplasticity of cranial nerves
- Stem cell based regeneration
- Craniofacial surgery of complex congenital malformations
- Orthognathic surgery of facial deformities and asymmetry
- Oral implantology
- Biomaterials
- Medical rapid prototyping and medical imaging to optimize healthcare systems
- Craniofacial bone reconstruction and regeneration
- Osteogenesis using callus distraction
- Lasertherapy
- Craniofacial ultrasonography

Research projects – national and international - 22

ANCA BUZOIANU
ROMANIA

Anca Dana Buzoianu, MD, PhD, is Professor of Clinical Pharmacology, Senior Clinical Pharmacologist, Senior Pediatrician, Dean of the Faculty of Medicine, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, President of the Romanian Association of the Medical School's Deans, General Executive Secretary of the Romanian Society for Pharmacology, Therapeutics and Clinical Toxicology. She is also member of 8 scientific international Societies, and 4 national one.

Postgraduate specialization. Professor Anca Buzoianu is senior clinical pharmacologist and also senior pediatrician. She is the Head of the Department of Pharmacology at Medical Faculty of Cluj, and the leader of a dynamic research team of the department, and member of the Neuroscience Research Center of the Iuliu Hatieganu University of Cluj-Napoca. Professor Anca Buzoianu and her colleagues are actually involved in Pharmacogenetics studies regarding the metabolizing status of some drugs such the oral anticoagulants, antiepileptic drugs, biologic products etc. Other research themes are the therapeutic approach of multiple sclerosis and stroke, pharmacogenetics of the drugs used in dermatological diseases, the effects of some new compounds in pain and inflammation etc. Professor Buzoianu has conducted 8 national grants, 1 international educational project and participated in the research team in another 16 research projects.

Professor Buzoianu has a valuable expertise in Academic Leadership and Management, also in the Management of the Health Care System (Master in the Health Care Management 2009), and in the Quality Assurance evaluation process, being evaluator for the Higher Education for several years. She is President of the Clinical Pharmacology and Toxicology Committee of the Romanian Health Ministry, President of the Pharmacology Committee of the Romanian Physician College, member of the Institutional Evaluation Committee of the Romanian Agency for Quality Assurance in Higher Education.

Scientific and professional societies

- CIDMEF – Conference Internationale de Doyens et de Facultes de Medicine d'Expresion Francaise - member de Bureau Permanent,
- European Association of Clinical Pharmacology and Therapeutics,
- International Association for Medical Education,

- International Association of Medical School,
- The Society for the Study of Neuroprotection and Neuroplasticity
- European College of Neuropsychopharmacology
- International Advisory Board - European Society of Clinical Neuropharmacology
- Balkan Medical Union.
- Romanian Association of the Medical Faculties Deans - president
- General Executive Secretary of the Romanian Society for Pharmacology, Therapeutics and Clinical Toxicology
- Romanian Association for the Study of Pain
- Romanian Society of Addiction and Pharmacovigilence,

Scientific activity

- Articles and studies - 80 papers indexed ISI and in other international data bases
- Books and chapter in books - 12

Prizes

Professor Anca Dana Buzoianu has been honored with the "Victor Papilian" prize of the Cluj Medical Faculty in 2006 for her first volume of "Pharmacology" textbook. In 2007 she received the great "Iuliu Hatieganu" Award for her contribution to the development of a novel domain of academic learning in the frame of the Doctoral School.

In 2011 Professor Anca Dana Buzoianu has received the honorary medal of the National Council of the Physicians of the National Order of Doctors de France

In 2012 Professor Buzoianu Anca has been honored with the Excellence Award for Academic Management - "Dean of the year" with the occasion of the "Health Gala" - offered by the Romanian Ministry of Education and Health Ministry

In 2013 she won again the great Prize "Iuliu Hatieganu" of the University of Medicine and Pharmacy for her contribution for the obtaining of the quality certificate "Label CIDMEF" by the Medical Faculty of Cluj-Napoca.

ANDREAS BENDER
GERMANY

TITLE AND POSITION	MD, Professor of Neurology, University of Munich Head of Department, Therapiezentrum Burgau
INSTITUTION	University of Munich, Germany, Department of Neurology & Therapiezentrum Burgau, Germany, Department of Neurology

UNIVERSITY EDUCATION

1992 - 1995	Medical School, University of Düsseldorf, Germany
1995 - 1996	King´s College Medical School, London, UK (DAAD scholarship)
1996 - 1999	Medical School, University of Munich, Germany

ACADEMIC CAREER

1999 – present	University of Munich, Department of Neurology
2001	Doctoral thesis (MD), Department of Psychiatry, University of Munich
2004	Research fellow, Newcastle upon Tyne University, UK (ENS scholarship)
2007 – 2008	Else-Kröner-Fresenius-Memorial-Stipend
2007 – 2008	Research fellow, University of California, San Diego (UCSD), USA
2008	Board certification & Faculty Membership in Neurology ("venia legendi")
2015	Appointment as Professor of Neurology, University of Munich

MAJOR AWARDS

2004	European Neurological Society Fellowship
2007	Else-Kröner-Fresenius-Memorial-Stipend
2009	Neuroprotection Award of the German Brain Foundation
2012	Poster Prizes of the German Neurological Society and German Neurorehab. Soc.

MAJOR GRANTS	Else-Kroener-Fresenius Foundation 2006-2008; 2014-2017 German Research Foundation (DFG) 2008-2010 Federal Ministry of Education and Research (BMBF) 2009-2012 Hannelore-Kohl Foundation (2011-2013)

Federal Ministry of Health (BMG) 2012-2014

PUBLICATIONS 102 publications in peer-reviewed medical journals
Author and Editor of 2 neurology textbooks for medical students

HEINRICH BINDER
AUSTRIA

EDUCATION:

1965 - 1972	Faculty of Medicine at the University Vienna MD since (promotion on) 1972, June 6th
1972 - 1978	University Hospital for Neurology, graduated in Medical Specialist for Neurology and Psychiatry
9/1982	Docent for neurology, a title corresponding to PhD
since 1988	Professor for Neurology, University Vienna founding member of the Austrian Society for Neurorehabilitation
5/1989	Head of the Neurological Hospital "Maria Theresien-Schlössel"
1994-2007	Head of Ludwig Boltzmann Insitute for Restorative Neurology and Neuromodulation
Since 2008	Deputy Head of Landsteiner Institute for Neurorehabilitation and Space Medicine
since 2002	Head of the Neurological Center, Otto Wagner Hospital, Vienna. Main focus: Patients with severe neurological/ neuropsychological deficits and invasive neurorehabilitation methods

currently
President of
- Austrian Society for Neurorehabilitation (OEGNR)
- European Federation NeuroRehabilitation Societies (EFNRS)

Member of
- Management Committee of the World Federation NeuroRehabilitation (WFNR)
- Managing Board of the International Danube Symposium
- Editorial Board of "Journal of Medicine and Life":

Chairman of
- Special Interest Group/WFNR "Spinal Cord Injury"
- Special Interest Group/WFNR "Early Rehabilitation"
- Scientific panel/EFNS "Brain recovery and Rehabilitation"
- Special Branch / International Danube Symposium: "NeuroRehabilitation"

Main topic of research: Neurorehabilitation, brain injury, spinal cord injury, vegetative state/ apallic syndrome (more than 140 publications)

DANA BOERING
GERMANY

EDUCATION:

1. Secondary School I. Slavici Arad, Romania
2. Medical School: Facultatea de medicina si Farmacie I.M.F. Cluj-Napoca, Romania

ACADEMICAL QUALIFICATIONS:

1. Dr. medic: I.M.F. Cluj Napoca 1981
2. German acknowledgement as Dr. med. 1987
3. Specialty qualification: Neurologist 1994
4. Further specialty qualification: Neurorehabilitationist 2001, Neurophysiologist 2002

EMPLOYMENT:

St. Mauritius Therapieklinik Meerbusch 2002-2016
SRH Gesundheitszentrum Bad Wimpfen since 2016

PROFESSIONAL APPOINTMENTS, SCIENTIFICAL ACTIVITIES:

1994-2002 Collaboration with the University of Essen in the field of plasticity after stroke, with an emphasis on the role of the cerebellum in motoric learning tasks

Since 2002 Collaboration with the University of Düsseldorf in the field of plasticity after stroke

Since 2009 Collaboration with the Coma Science Group Liege Belgium
Member of the DOC special interest group of the IBIA

CRISTIAN FALUP-PECURARIU
ROMANIA

Cristian Falup-Pecurariu is Head of the Department of Neurology, County Emergency Clinic Hospital from Brasov, and is Lecturer of Neurology at the Transilvania University from Brașov, Romania. He received his medical degree from the University of Medicine and Pharmacy "Iuliu Hațieganu" from Cluj-Napoca.

He hold a 1 year fellowship of the European Neurological Society in movement disorders and sleep medicine at Hospital Clinic, University of Barcelona, Spain.

During his career Cristian Falup-Pecurariu was President of the European Association of Young Neurologists and Trainees (EAYNT), EAYNT Liasion Officer with World Federation of Neurological Society, co-representative of Europe on the International Working Group for Young Neurologists and Trainees (World Federation of Neurology). He was also Secretary of the EFNS/MDS-ES Panel on Movement Disorders, member of the Educational Committee of MDS-ES and currently is member of the MDS Leadership Task Force, European Academy of

Neurology Scientific Panel Movement Disorders, MDS-ES Executive Committee, MDS Rating Scales Translation Committe. He is member of EUROPAR (European Parkinson's Group) and International Parkinson and Movement Disorders Society Non motor study group.

He is the initiator and Course Director of the Movement Disorders Teaching Course held in Brasov.

His research focuses on non-motor aspects of Parkinson's diseases and restless legs syndrome.

MIHAIL GAVRILIUC
REPUBLIC OF MOLDOVA

1987-1991	:Neurologist at the Republican Clinical Hospital, Chisinau
1991-1996	:Assistant professor of the Department of Neurology and Neurosurgery at the State University of Medicine and Pharmacy "Nicolae Testemitanu" Chisinau
1996-2001	:Docent of the Department of Neurology and Neurosurgery at the State University of Medicine and Pharmacy "Nicolae Testemitanu" Chisinau
2001-2010	:Deputy Director of the Institute of Neurology and Neurosurgery, Chisinau
2010 (since)	:Professor of Neurology, Chairman of the Neurology Department at the State University of Medicine and Pharmacy "Nicolae Testemitanu" Chisinau
2010-2012	:Dean of the Faculty of Medicine 2 - State University of Medicine and Pharmacy "Nicolae Testemitanu" Chisinau
2012 (since)	:Vice-rector for International Relations - State University of Medicine and Pharmacy "Nicolae Testemitanu" Chisinau

Fields of special interests: ischemic tolerance of the nervous system, vascular cerebral and spinal cord diseases, and encephalitis.

WOLFGANG GRISOLD
AUSTRIA

Prof. Wolfgang Grisold is a specialist for neurology and psychiatry. From1989 until 2016, he has been heading the department of neurology of the KFJ hospital in Vienna, Austria.

His special interests apart from general neurology are neuromuscular disease and neurooncology , palliative care and education in neurology. His has particular expertise in neuromuscular disease in regards to clinical findings, electrophysiology, neuropathology and imaging. He has participated in 2 EU projects on paraneoplastic syndromes, and in 2 ECCO- EU projects on oncologic video education. His focus in the past years was the effect of cancer on the peripheral nervous system.

He currently published 600 publications among them 4 books (Atlas of neuromuscular disease, 2 editions) and has presently 225 Pubmed quoted publications, 330 Abstracts and presented over 1400 lectures.

He has been involved in education from the aspects of CME and CPD (EFNS, UEMS, WFN), residency training (Austrian society of neurology and UEMS), board examinations (Austrian society and UEMS/EBN), patient and caregiver education and European and international department visits (UEMS/WFN). He has chaired the education committee of the EFNS from 2002 until 2007, has been the co-chair of the education committee of the WFN, where he also chaired the teaching course committee until 2015.

From 2000 to 2002, he was the founding president of the Austrian Society of Neurology.
He is presently the secretary general of the WFN from 2013 and is involved in educational projects as the WFN Teaching centers and WFN department visits.

He was president of the UEMS/EBN (past president), and the EANO (European Association of neurooncology). Within ECCO he chairs the ACOE (accreditation body for CME) and is a member of the UEMS EACCME CME governance board.

In Vienna he is a member of the KAV ethics committee and also a member of the higher medical council of the city of Vienna.

He also works in a private neurology office in Vienna, where combines clinical work with neuromuscular disease and electrophysiology.

STANISLAV GROPPA
REPUBLIC OF MOLDOVA

Stanislav Groppa, MD, PhD, University Professor, Academician of Moldavian Academy of Science, Neurologist, Head of Neurology Chair of "N. Testemitanu" State Medicine and Pharmacy University, Director of the Neurology Neurosurgery Department (Institute of Emergency Medicine), Head of the Neurobiology and Medical Genetics Laboratory

He has graduated of the "N. Testemitanu" State Medicine and Pharmacy University in 1979. At age of 29 he got his doctor of medical science degree, and at 35 - doctor habilitat and at 39 years is conferred the title of university professor.

In 2007, he became a member of the Moldavian Academy of Sciences, and shortly after he was elected academician-coordinator of the Medical Department of the Moldavian Academy of Science. In 2012 Prof Groppa is elected as member of the Moldavian Academy of Science. Between 2015 -2016 hee is vice-president of the Moldavian Academy of Science. He is a Honorary Member of the of Medical Sciences Academy from Romania.

He has been trained in Medical centers from Russia, USA, Germany, China, Australia, Italy, and many others. Established a strong collaboration connections with researches and scientific institutions from all around the world.

Under the leadership, 18 doctoral theses were performed, including doctor habilitat thesis. His scientific interests are in the field of stroke prevention and early management, epilepsy, and pain relief.

Also, he is a member of international organizations, American Neurology and Stroke Association, European Academy of Epileptology; Member of the European Academy of Neurology, Member of Romania Academy of medical Schience, Member of Romania Stroke Association.

Professor S. Groppa is President of the Moldavian League against Epilepsy, President Moldavian Stroke Association, Vice-President of the Moldavian Neurology Society. He is a member of the editorial staff of Moldavian and not only Medical Journals.

ALLA GUEKHT
RUSSIA

Professor Guekht's research interests are in epilepsy, cognition, stroke and neuroepidemiology. She obtained the M.D. degree at the 2nd Moscow Medical Institute and completed residency in Neurology in the same Institute; she was then trained in neuropsychology and neurophysiology, participated in the training/fellow programs in the Munster University, University of Homburg/Saar (Germany), Thomas Jefferson Hospital and Philadelphia Comprehensive Epilepsy Center (USA). She received the PhD Diploma for the dissertation on EEG monitoring in carotid surgery and the Doctor of Medical Sciences Diploma for the dissertation on Brain plasticity and restoration after stroke. Currently she is the Professor of the Department of Neurology, Neurosurgery and Genetics, Russian National Research Medical University, Director of Moscow Research and Clinical Center for Neuropsychiatry of the Healthcare Department of Moscow and Head of the Neurology Clinic of the Buyanov City Hospital in Moscow.

Prof. Guekht is the recipient of several prestigious international and national awards in medicine, including the Bruce S. Schoenberg International Award and lecture in Neuroepidemiology (American Academy of Neurology) , European Educational Award on Epileptology and the Ambassador for Epilepsy Award from ILAE and the IBE, "Honored Physician of the Russian Federation" Award of the Government of Russia; "Priznanie" (Recognition) Award of the Russian Federation for multidisciplinary research in restoration after stroke and the award of the Major of Moscow.

She is the author of more than over 200 articles focusing on epilepsy, stroke (plasticity and restoration), dementia/cognitive decline after stroke, Parkinson's disease, including over 50 papers in peer-reviewed international journals and book chapters, 15 books (in Russian), including Manual in Neurology and National Guidelines in Neurology, 6 patents of the Russian Federation in the field of stroke, epilepsy, neurophysiology . She is the mentor to many young neurologists with over 25 completed PhD and 4 doctoral dissertations.

She served in the Editorial Boards of Epilepsia, Epileptic Disorders; currently – in the Editorial Boards of the Journal of Neurological Sciences, Acta Neurologica Scandinavica, European Stroke Journal, Korsakov Journal of Neurology and Psychiatry. She acts as a regular reviewer for many international journals.

Alla Guekht served as the Member of the International Organizing/ Scientific Committee for many International /European Congresses, invited speaker at the Congresses of the

WFN, EAN, EFNS, ESOC, European and International Epilepsy Congresses, CONy, Vascular Dementia Congress, World Congress on neurorehabilitation, other international and national conferences in neurology, epilepsy, stroke, rehabilitation.

She is currently the Vice-President-elect of the International League again epilepsy, member of the WFN Committee of Education, Steering Committee for the Action Plan for Stroke in Europe, Secretary of the Russian Society of Neurologists.

VOLKER HÖMBERG
GERMANY

Prof. Hömberg had his medical education at the Universities of Düssel-dorf, Freiburg and Boston Massachusetts. After spending electives in Neurology at Boston City Hospital and the National Hospital for Nerv-ous Diseases Queens Square London he was a research fellow at the C. and O. Vogt Institute for Brain Research in Düsseldorf. In 1981 he started a residency in neurology with Prof. Hans Freund at Heinrich Heine University Düsseldorf. In 1987 he was appointed Director of the Neurological Therapy Centre (NTC) a newly founded Institute at Hein-rich Heine University in Düsseldorf. He was also founding Director of the NTC in Cologne . He was involved in the setup of many in-and outpa-tient rehabilitation hospitals in Germany. In 2001he started the St. Mauritius Therapy Clinic in Meerbusch near Düsseldorf and since 2011 he is Director of the Dept. of Neurology at the Gesundheitszentrum Bad Wimpfen and works as senior neurology group leader for the SRH-Group ,one of the biggest hospital groups in Germany.

He was founder, president and vice president of the German Society for Neurorehabilitation for many years. He serves as Secretary Gen-eral for the World Federation of Neurorehabilitation (WFNR)for more than 12 years and is Vice President oft the European Federation of Neurorehabilitation Societies. (EFNR)

He is regular reviewer and co-editor for many international peer re-viewing journals.

He is regular (co) -programme chairman for neurorehabilitation for major international meetings as the World- and European Neuroreha-bilitation Congresses (WCNR,ECNR), Controversies in Neurology (CONy) and the European Stroke Congress (ESC).

He has published more than 250 articles in international peer reviewed journals and many book chapters. His primary scientific interest are the fields of motor rehabilitation, cognition epistemiology, neurological music therapy and pharmacology in neurorehabilitation.

CĂTĂLIN JIANU
ROMANIA

Senior consultant neurologist
Professor of Neurology
University of Medicine and Pharmacy "Victor Babeş", Dept. of Neurology, Timişoara, Romania,
Head of the First Dept.of Neurology Clinical Emergency County Hospital, Timişoara, Romania

1991- MD, Graduate of the Faculty of Medicine, "Victor Babeş", University of Medicine and Pharmacy, Timişoara, Romania ; first of the candidats. Sustenance of the Diploma Thesis entitled" Neurostimulation in lower-back pain."

May 2001- Sustenance of the doctoral thesis (PhD degree) entitled "Contributions to the semiology of expressive disturbances in aphasia" University of Medicine and Pharmacy "Victor Babeş", Timişoara, Romania

May 2005 - Competence in Neurovascular Ultrasound/Neurosonology, University of Medicine and Pharmacy "Carol Davila", Dept. of Neurology, Bucharest, Romania.

RESEARCH EXPERIENCE

05/2004 – 07/2004 - Visiting Research Fellow (Perfecting stage of duplex imaging of extracranial arteries and transcranial Doppler ultrasound) L'Unite d'explorations vasculaires du Service de Chirurgie Thoracique et Cardiovasculaire, Centre Hospitalier Regional et Universitaire de Caen, France.

09/2005 - Visiting Research Fellow (Perfecting stage of duplex imaging of extracranial arteries and Transcranial color-coded sonography), Le service d´Imagerie Medicale: Echographie, Radiologie, Scanner, IRM de la Fondation Ophtalmologique "Adolphe de Rothschild", Paris, France.

RESEARCH TOPICS

1) Ischemic stroke: extracranial and intracranial stenosis, extra and transcranian ultrasonography, cerebral vessels endothelial dysfunction, cerebral venous thrombosis, thrombolysis in acute ischemic stroke.

2) Neuro-ophthalmology: anterior ischemic optic neuropathies, central retinal artery occlusion, giant cell arteritis with eye involvement, Color Doppler ultrasound of retrobulbar vessels.

3) Disorders of speech and language: clinical varieties of aphasia, examination procedures and rehabilitation (Western Aphasia Batery-Romanian version).

4) Parkinson's disease: treatment with duodenal levodopa infusion in advanced Parkison's disease.

5) Peripheral neuropathic pain.

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 Neuromuscular Diseases, responsible for electromyographic examinations at the Institute of Neurology and Neurosurgery in Chisinau. Dr. Lisnic graduated with mention 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.

Vitalie Lisnic defended the thesis of doctor of science on amyotrophic lateral sclerosis (1995) and the thesis of habilitat doctor of medical science on impairment of the central nervous system in demyelinating neuropathies (2006).

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 on demyelinating neuropathies. 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 (EAN)
- Member of the management group of the scientific panels on neuropathies, ALS and frontotemporal dementia of the EAN
- Clinical lead of the ebrain e-learning program
- 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
- Romanian Society of Electrodiagnostic Neurophysiology

Vitalie Lisnic is the author 2 monographs, 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.

KRISTINA MÜLLER
GERMANY

11.06.1957:	born in Kiel parents: Dr. rer. nat. Fritz Müller, Professor emeritus (Pharmaceutic Technology, University of Bonn) and Renate Müller
1967 - 1971:	Ernst-Barlach Gymnasium, Kiel
1971 - 1976:	Ernst-Moritz Arndt Gymnasium, Bonn
June 1976:	Abitur (high school degree)

1976-1983	Medical Schools "Université libre" of Brussels, Belgium; "Rheinische Friedrich Wilhelms" University of Bonn, Germany and "Centre Hôspitalier et Universitaire" of Montpellier, France. Electives in the Department of Dermatology of the Royal Infirmary, Bristol, U.K., "Hospital for Sick Children", Great Ormond Street, London, U.K.
1983	Medical Degree
Oct. 82 - Oct. 83:	Internship (Pediatrics, Internal Medicine, Surgery) at the "Centre Hôspitalier et Universitaire", Montpellier, Frankreich
1983/84:	Medical Thesis (Precocious Puberty: Effects of treatment) in the Department of Pediatrics of the "Centre Hôspitalier et Universitaire", Montpellier, France
from July 1984:	Training in General Pediatrics in the Department of Pediatrics at the "Heinrich-Heine"-Universität Düsseldorf, Specialization in Pediatric Neurology (Prof. H.-G. Lenard)
August 1985:	MD Thesis at the "Rheinischen Friedrich-Wilhelms" Universität Bonn
Jan. 89 - Dec. 90:	Research Project about "Motor development in children " sponsored by the Ministry of Research and Technology of Germany.
November 1991:	Board Qualification in Pediatrics
January 1992:	Senior Registrar at the Department of Pediatrics of the „Heinrich-Heine"- Universität, Düsseldorf
Oct. 92- April 93:	Fellowship at the Hospital for Sick Children , Department of Neuropaediatrics (Prof. B. Neville) , Great Ormond Street , London
February 93:	Habilitation (equivalent to the "Assistant Professor") "Development of voluntary and reflex motor activity in children"
May 93-Nov. 93:	Training in Neurology in the Department of Neurology „Heinrich-Heine"-Universität Düsseldorf (Prof. Dr.H-J Freund)
From May 93	Consultant at the Department of Pediatrics at "Heinrich-Heine-Universität" Düsseldorf
Feb - Dec 99	Research Project: Locomotion in Children with mit Cerebral Palsy
Jan. – Feb. 2000:	Work at the Département de Pédiatrie, Unité de Rééducation Neuropédiatrique (Dr.C. Billard), Centre Hospitalier Universitaire de Bicêtre, Le Kremlin-Bicêtre and Hôpital National de Saint-Maurice, Rééducation des pathologies neurologiques acquises de l'enfant (Dr. A. Laurent-Vannier), Saint-Maurice, France
March – June 2000	Work at the Rehabilitation Institute of Chicago (Chicago, USA) on special aspects of neuro-rehabilitation for children
from October 2000:	Head of Neuropediatrics at St Mauritius Therapy Clinic in Meerbusch-Osterath
since 2006	Board examiner in Neuropediatrics for the Nordrhein Medical Association
March 2007	Additional degree in general Rehabilitation

LUCIA MUNTEAN
GERMANY

CURRENT POSITION

Neurologist and Sleep Medicine Specialist, Paracelsus Elena Clinic, Center for Parkinsonism and Movement Disorders, Kassel, Germany (since 2013)

FORMER POSITIONS

2015-2016	Neurologist, Sleep Laboratory and Video-EEG-Monitoring, Clinic for Clinical Neurophysiology, University Medical Center Göttingen, Germany
2012-2016	Neurologist, Emergency County Hospital Cluj-Napoca, Romania (2013-2016 on leave)
2012-2016	Assistant Lecturer, Department of Neurosciences University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Romania (2013-2016 on leave)
2011-2012	Assistant Lecturer, Department of Morphological Sciences, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Romania
Since 2007	Investigator in clinical studies

EDUCATION AND QUALIFICATIONS

May 2017	Competence in Epileptology, German Society for Epilepsy (DGfE)
January 2017	Competence in EEG, German Society for Clinical Neurophysiology (DGKN)
August 2015	Competence in Sleep Medicine, Landesärztekammer Hessen, Germany
2007-2011	PhD student, Department of Neuroscience, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca Romania, research concerning sleep and sensory symptoms in Parkinson's disease patients.
2000-2006	Faculty of Medicine, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj-Napoca, Romania

AWARDS AND HONORS

April 2012	EFNS Bursary for the Department to Department Cooperation Program
24-26 February 2012	MDS-ES Bursary to attend the Winter School for Young

	Neurologists, Innsbruck, Austria
September 2006, 2010, 2011	Bursary from the EFNS to attend the EFNS Congresses

CONFERENCES WITH ACTIVE PARTICIPATION (SELECTION)

2015, 2017	International Congress of the European Academy of Neurology (EAN) (oral presention and chairman)
2015, 2016	Congress of the German Society of Sleep Medicine (oral presention and chairman)
2015	17th Meeting of the Group for the Study of Epilepsy, University Medical Center Göttingen, Germany
2009, 2012, 2014, 2016	International Congress of the International Parkinson and Movement Disorders Society (MDS)
2012; 2013, 2014, 2016	Annual Conference of the EURLSSG
2013	World Congress of Neurology
2009, 2010, 2011, 2012	EFNS Congresses

AFFILIATIONS

European Academy of Neurology (EAN)
European Academy for Neurology- Resident and Research Fellows (EAN-RRFS)– Delegate in the EAN Scientific Panel of Neurooncology
European Restless Legs Study Group (EURLSSG)
Deutsche Gesellschaft für Klinische Neurophysiologie und Funktionelle Bildgebung (DGKN)
Deutsche Gesellschaft für Epileptologie (DGfE)
Romanian Society of Electrodiagnostic Neurophysiology (ASNER)

AREAS OF SCIENTIFIC INTEREST

Sleep medicine especially Restless Legs Syndrome and REM-Sleep Behavior Disorder, movement disorders
Deep Brain Stimulation

The research results are published in peer reviewed international journals and presented at international conferences.

DAFIN F. MUREȘANU
ROMANIA

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, H-index: 15) 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.

ADRIANA SARAH NICA
ROMANIA

CURRENT POSITION
- Professor in Physical Medicine, Rehabilitation and Balneoclimatology at the University of Medicine "Carol Davila", Bucharest
- Head of Rehabilitation Department - University of Medicine "Carol Davila", Bucharest
- PhD
- Chief of University Rehabilitation Department III – National Institute of Rehabilitation, Physical Medicine and Balneoclimatology
- European Board certified in PRM
- Senior consultant in Physical Medicine and Rehabilitation
- EFIC Councilor (Romania)
- Vice president of Romanian Society of Rehabilitation
- Specialist in Sports Medicine

MEDICAL CAREER
1978 – MD at the Faculty of Medicine – University of Medicine "Carol Davila", Bucharest
1982 – University assistant and resident doctor – Balneoclimatology, Sport Medicine and Physical Medicine – University of Medicine "Carol Davila", Bucharest
1985 – Specialist in Balneoclimatology, Sport Medicine and Physical Medicine – University of Medicine "Carol Davila", Bucharest, confirmed by the Ministery of Health of Romania
1992 – Lecturer – Balneoclimatology, Sport Medicine and Physical Medicine – University of Medicine "Carol Davila", Bucharest
1997 – PhD at the University of Medicine "Carol Davila", Bucharest
1998 – Ass. Professor of Balneoclimatology, Sport Medicine and Physical Medicine – University of Medicine "Carol Davila", Bucharest
2002 – 2004 – Medical Director of National Institute of Rehabilitation, Physical Medicine, Balneoclimatology, Bucharest, Romania
2003 – Professor of Rehabilitation, Physical Medicine and Balneoclimatology

SCIENTIFIC ACTIVITY
Author of 4 books
Chapters in published books - 9 chapters
Author or coauthor of more than 200 papers published in national and international issues
Research: project manager in 6 national projects, partner in 1 international project
Keynote speaker in international congresses and conferences: Verona (1995), Florence (2008), Bucharest (2007, 2008)

Delegate of ISPRM WRD Commitee for ICF, 2011

AFFILIATION
- Romanian Association of Physical Medicine and Rehabilitation ISPRM (International Society of Physical & Rehabilitation Medicine (Board member since 2010)
- Romanian Association for the Study of Pain (Past President)
- Romanian Rheumatological Association
- Romanian Association for Osteoporosis
- Romanian Association for Laser
- Romanian Association for Psycho-neuro-endocrinology
- Romanian Association for Geriatry
- I.A.S.P.
- Fellow of Seminar Salzburg Society
- EFIC (Councellar of the Board of European Federation International Corner Committee for Romania – 2006 - 2012)
- Romanian Termography Medical Association (President)
- Member of the PRM Commision in the Ministry of Healt.

GELU ONOSE
ROMANIA

Dr. Gelu Onose - 60 years (born: the 20th of December, 1956); graduated, in 1982, from the Faculty of General Medicine, within the Institute of Medicine and Pharmacy, in Bucharest, Romania

- Professor (since 2008) at the (State) University of Medicine and Pharmacy "Carol Davila" (UMPCD), in Bucharest – member of the Academic Council of the Faculty of Medicine of the UMPCD

- Doctoral/ Post-Graduate Tutor (since 2008) - at the UMPCD, in Bucharest

- MD; - PhD; - MSc

- Senior Physician of: - Physical & Rehabilitation Medicine (PRM) – since 1994 – and
  - Gerontology & Geriatrics (G-G) – since 2000

Competences in: - General Ultrasonograpy (since 1996)
- Management of sanitary services (since 2000)

- Chief of the of the UMPCD PRM Discipline and of the P(neural-muscular)RM Clinic Division (since 2005) - the National Reference Center for NeuroRehabilitation - and of its RDI Nucleus, at the Teaching Emergency Hospital"Bagdasar-Arseni" (TEHBA), in Bucharest

- President Co-Founder of the Romanian Society for Neurorehabilitation (RoSNeRa) – affiliated to the World Federation for NeuroRehabilitation (WFNR) - member of the Council - respectively, of the Romanian Society for Spinal Cord Pathology, Therapy and Rehabilitation (RoSCoS) – affiliated to the International Spinal Cord Society (ISCoS) and to European Spinal Cord Injury Federation (ESCIF) – (since 2008/ 2009) and respectively, Honorary Executive President of the Romanian Society of Physical and Rehabilitation Medicine & BalneoClimatology (since 2015)

- Chairman of the Spinal Cord Injuries Research Panel – within the Management Committee of the World Academy for Multidisciplinary Neurotraumatology (AMN –since 2016)

- Selected and invited - as among "Highly-specialized scholars" - by Thomson Reuters to participate in the invitation-only "Academic Reputation Survey", within its related partnership with Times Higher Education's influential World University Rankings: 2010, 2011, 2012

- Invitated Peer-Reviewer (March 2010) by the "Journal of Molecular Histology" and (March, 2012) by the "Spinal Cord" journal (both ISI Thomson Reuters rated)

- Contributing member/ (2011-2012) to the achievement of the imposing educational project: "E-Learning for Spinal Cord Injury Health Professionals", of the International Spinal Cord society (ISCoS) - including/ specifically, în 4 modules/ submodules of it: (Clinical Assessment of Patients with SCI; Assistive Technology Module and Mobility & seating submodule; Management of neurogenic bladder; Physiotherapy Module and Physical therapy perspectives on rehabilitation sub-module

- Gest Editor within its Special Issues: Second Edition, Vol. 4, 2011 and Vol. V, Third Edition, 2012

- Founder Member of the Honorary Editorial Board of the Journal of Neurorestoratology (in 2013)

- Senior Expert (since 2012) and also Rapporteur (since 2013) on Chronic Conditions Management and respectively, for Healthy and Active Ageing (since 2016) – of the Comité Permanent/ Standing Committee of the European Doctors (CPME)

- Invited lecturer to all – since the first – European Teaching Courses on Neuro-Rehabilitation, with training conference presentations (in 2011, 2013, 2015) and respectively, with

contributions to the organization of its edition, in 2012

- Invited Professor to deliver two extended lectures to the Symposium: "BEYOND TBI (Optimizing Management in TBIs)", held in August, 2013, in Mumbai, India, within an International Educational Program of McCann-Erickson Healthcare Complete Medical

- 8 published medical books - one of them : "The Spondyloarthropathies" received, in 2002, the "Iuliu Hatieganu" Award of The Romanian Academy)

- 6 (of which 2 equivalent micro-monographs - in journal, work) chapters within medical boo ks

- Around 250 scientific works, papers – communicated within national and international scientific meetings and/or published in peer-reviewed or non peer-reviewed medical journals – and professional interviews/ articles, in mass-media

- 3 Patents/ Invention Certificates and 2 Utility Models, appointed by the State Office for Inventions and Marks (SOIM/ OSIM)

- Main awards: the "Iuliu Hatieganu" Award of The Romanian Academy (2002); the Award of the (Romanian) National Authority for Scientific Research for the RDI project acronymed "ACTUAT" (2006); the Gold Medal at the International Saloon of Inventions, Geneve/ Switzerland for the RDI project acronymed "MOD" (2008); the "Excellency in the Health Domain Award " – granted by the Romanian Ministry of Health (2015)

- A member of the Scientific Council/ Editorial (and Advisory) Board of medical journals:
  - "Journal of Medicine and Life" (rated in Index Medicus, Medline)
  - "Infomedica"
  - (Romanian) "Rehabilitation, Physical Medicine and Balneology"
  - "Romanian Neurosurgery"
  - "Industria Textila" (ISI Thomson rated journal)
  - "Proceedings of the Romanian Academy – Series B: Chemistry, Life Sciences and Geoscience"
  - "Romanian Medical Journal"
  - Founder Member of the Honorary Editorial Board of the "Journal of Neurorestoratology"

- A member of the (scientific societies):
  - Romanian Medical Association (RMA)
  - Romanian Society of Physical and Rehabilitation Medicine (PRM) - including of its Board
  - Romanian Society of Neurosurgery (RSN)
  - Romanian Society of Biomaterials (RSB)

- Balkan Medical Union (BMU),
- International Society of Hydrothermal Technique (SITH - the National Council of the Romanian Section SITH - RS)
- British Society of Gerontology (BSG)
- International Spinal Cord Society (ISCoS)
- European Spinal Cord Injury Federation (ESCIF)
- World Academy for Multidisciplinary Neurotraumatology (AMN)
- World Federation For Neurorehabiliation (WFNR) - a member of the Council/ Management Committee
- International Society of Physical and Rehabilitation Medicine (ISPRM)

JOZEF OPARA
POLAND

1960-1967 medical study at Silesian University of Medicine in Katowice.
Graduated in 1967.
Specialties: neurology 1977
medical rehabilitation 1982

DOCTORSHIP: 1983 (MD)
AGGREGATION (polish habilitation, more than PhD): 1997
Professor in Academy of Physical Education in Katowice: since 1998
Chair of Physiotherapy in Neurology
FULL PROFESSOR IN PHYSICAL CULTURE: 2008
Scholarship: Austria – invited by AUVA - Allgemeine Unfallversicherungsanstalt - 1986
Member of European Panels in EFNS: Neurorehabilitation, Neurotraumatology, Post-Polio,
Chairman of the Organizing Committee of the III Congress of Polish Society of Rehabilitation in Cieszyn – Ustron 1998
Leader of European Panel of Neurorehabilitation in EFNS: 1998-2000
Certificate: tutor in Evidence Based Medicine 2001
Member of Editorial Board in Polish Journal of Physiotherapy since 2001
Co-originator and member of council of WFNR: since 2002
Originator and president of Polish Society for Neurological Rehabilitation since 2003
Regional vice-President of World Federation for NeuroRehabilitation for Central and Eastern Europe since 2009

Member of board of European Federation of NeuroRehabilitation Societies since 2015

SCIENTIFIC GRANTS: FP7 Homecare 222954, WP2 Polish: Facilities of early rehabilitation after stroke in Poland: 2010-2012.

SPECIAL SCIENTIFIC INTERREST:

stroke rehabilitation
spasticity
rehabilitation in paraplegia (SCI), Spondylotic Cervical Myelopathy (SCM), Post-Polio
clinimetrics
Quality of Life measures
rehabilitation after TBI
rehabilitation in PD
rehabilitation in MS

PROMOTER OF 11 DOCTORSHIPS

Reviewer of many scientific journals, i.e. European Journal of Neurology (IF = 2,66)
Quality of Life Research (IF = 2.985), Int. J. Rehabil. Res. (IF= 1.083), Journal of Physical Medicine and Rehabilitation Science, Neurologia i Neurochirurgia Polska (IF= 0.641)

Main recent reports:

1. Opara J.A., Socha T., Bidzan M., Mehlich K., Poświata A. Stress urine incontinence especially in elite women athletes extremely practicing sports. Arch Budo 2011; 7(4): OF227-231. Impact Factor=0,488
2. Opara J.A. Activities of Daily Living and Quality of Life in Alzheimer Disease. J. Med & Life 2012; 5(2): 162-167.
3. Opara J.A., Langhorne P., Larsen T., Mehlich K., Szczygiel J. Facilities of early rehabilitation after stroke in Poland 2010. Int J Rehabil Res. 2012; 35(4): 367-371. Impact Factor=1.083
4. Opara J, Brola W, Leonardi M, Błaszczyk B. Quality of life in Parkinson`s Disease. J Med Life. 2012 Dec 15;5(4):375-81.
5. Opara J., Kucio C., Socha T., Szczygieł J. Role of physical activity in preventing disability in Multiple Sclerosis. Medical Rehabilitation 2012; 16(3): 22-26.
6. Opara J, Jaracz K, Brola W. Burden and quality of life in caregivers of persons with multiple sclerosis. Neurol Neurochir Pol. 2012; 46(5): 472-9. IF=0,488
7. Radajewska A., Opara J., Kucio C., Mehlich K., Błaszczyszyn M., Szczygieł J. The effects of mirror therapy on arm and hand function in acute stroke inpatients. Int. J. Rehabil. Res. 2013; 36(3): 268-274. Impact Factor=1.083
8. Opara J.A. Małecka E., Szczygieł J. Clinimetric measurement in traumatic brain Injuries. J. Med & Life 2014; 7(2): 124-127.
9. Poświata A, Socha T, Opara J. Prevalence of stress urinary incontinence in elite female endurance athletes. J Hum Kinet. 2014 Dec 30;44:91-6. Impact Factor: 1.029

10. Brola W, Mitosek-Szewczyk K, Opara J. Symptomatology and pathogenesis of different types of pain in multiple sclerosis. Neurol Neurochir Pol. 2014;48(4):272-9. IF=0,488 11.
11. Opara J., Kucio C., Kurek J., Małecka E. Is the Barthel scale still useful 50 years after its first publication? Medical Rehabilitation 2015; 19(1): 34-38. ISSN 1427–9622.
12. Opara, J.A. Brola W., Szczygieł J. Palliative care in Polish patients with Multiple Sclerosis. J. Paliative Care Med. 2016; 6:1–4.
13. W. Brola, P Sobolewski, W Szczuchniak, A Góral, M Fudala, W Przybylski, J. Opara. Association of seasonal serum 25-hydroxyvitamin D levels with disability and relapses in relapsing-remitting multiple sclerosis. J Europ J Clinical Nutrition 2016, 1–5. IF=2.709
14. Opara JA, Brola W, Wylęgała AA, Wylęgała E. Uhthoff's phenomenon 125 years later – what do we know today? J. Med & Life 2016; January-March ; Vol IX, Iss 1.
15. Opara J., Grzybowska-Ganszczyk D. Questionnaires measuring leisure-time physical activity in Parkinson`s disease. Current research in motor control V. Bridging motor control and biomechanics. Katowice 2016, p. 198-205.
16. Józef Opara, Justyna Mazurek, Jarosław Szczygieł, Grzegorz Gałuszka, Wiesław Rycerski. Zastosowanie technologii wirtualnej rzeczywistości w usprawnianiu kończyny górnej po udarze mózgu. Rozdział w monografii recenzowanej pod red. Teresy Pop: Rehabilitacja 2016. Wyd. Bonus Liber Sp. z o.o. Rzeszów 2016; s. 164-173.
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GABRIEL PRADA
ROMANIA

Gabriel-Ioan Prada, MD, PhD, graduated medical school at "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania in 1984 and after two years of internship at "Fundeni" Clinical Hospital in Bucharest, started his activity as a junior scientist at "Ana Aslan" National Institute of Gerontology and Geriatrics in Bucharest since 1986. Currently he is senior specialist in Geriatric Medicine and Gerontology and also in Internal Medicine. Dr.Prada has a Diploma in Gerontology at International Institute on Ageing - United Nations and a Master of Science Degree in the Faculty of Medicine, Department of Geriatric Medicine, "Victoria" University of Manchester, United Kingdom under the supervision of Prof.Raymond Tallis, editor of Brocklehurst's Textbook of Geriatric Medicine and Gerontology. Dr.Prada also has a PhD degree in medical sciences at "Carol Davila" University of Medicine and Pharmacy,

Bucharest. Currently, Dr.Prada is head of Clinical Department 4 at "Ana Aslan" National Institute of Gerontology and Geriatrics and also Professor of Geriatrics and Gerontology, head of the Chair of Geriatrics and Gerontology, Department 5, Faculty of Medicine, "Carol Davila" University of Medicine and Pharmacy, Bucharest. He is author of 13 books and book-chapters, national and international editions, and over 350 papers published or presented at national and international scientific meetings. Dr.Prada has been involved in several international and national research projects, including HYVET (Hypertension in the Very Elderly Trial), PREDICT (Increasing the PaRticipation of the ElDerly in Clinical Trials), ERA-AGE 2 (European Research Area in Ageing) and FUTURAGE - A Roadmap for Ageing. He is also full member of the Boards of UEMS-Geriatric Medicine Section (European Union of Medical Specialists), EUGMS (European Union of Geriatric Medicine Societies), IAGG (International Association of Gerontology and Geriatrics) and IAGG-ER Clinical Section.

BOGDAN O. POPESCU
ROMANIA

Born March 8th, 1971 in Bucharest, Romania.
Address: Department of Neurology, School of Medicine, 'Carol Davila' University of Medicine and Pharmacy, Colentina Clinical Hospital, 19-21 Sos. Stefan cel Mare, sector 2, 020125, Bucharest, Romania.

Scientometrics: 50 ISI full text articles, 0ver 1000 ISI citations, Hirsch index 18.

ACADEMIC EDUCATION AND APPOINTMENTS

1996	MD, 'Carol Davila' University School of Medicine, Bucharest, Romania
2000 - 2009	Assistant Professor, 'Carol Davila' University School of Medicine
2001	PhD, 'Carol Davila' University School of Medicine - suma cum laudae
2002 - 2008	Neurologist, University Hospital Bucharest
2004	PhD, Karolinska Institute, Stockholm, Sweden
2005 -	Head of Laboratory of Molecular Medicine, 'Victor Babeș' National Institute of Pathology, Bucharest, Romania
2008 -	Senior Neurologist
2009 - 2012	Lecturer, 'Carol Davila' University School of Medicine
2009 -	Senior Researcher, 'Victor Babeș' National Institute of Pathology, Bucharest, Romania

2012 - 2015 Associate Professor, 'Carol Davila' University School of Medicine and Head of Neurology Unit II, Colentina Clinical Hospital

2015 Professor of Neurology, 'Carol Davila' University School of Medicine, Colentina Clinical Hospital

AWARDS

1999 Beaufour-Ipsen prize for the best research study in neurology

2000 Young histochemist award - International Society of Histochemistry and Cytochemistry

2004 Diploma of scientific merit – 'Victor Babeș' National Institute of Pathology

2007 'Victor Babeș' Award of Romanian Academy for medical research

2010 Science and Art National Foundation Award of Excellence for research in the field of Neuroscience and Neuropathology

2014 'Brain Networking' Foundation Award of Romanian Academy of Medical Sciences, for developing Neurology nationally and internationally.

OTHER CURRENT ACTIVITIES

Editor in Chief of Romanian Journal of Neurology (2016 –) and former Executive Editor (2001-2016)

President of the Romanian Society of Neurology (2017 –) and former Secretary General (2001-2013)

Research director of the Society for the Study of Neuroprotection and Neuroplasticity (2005 –)

Vicepresident of 'Carol Davila' University of Medicine and Pharmacy Bucharest (2016 –)

Vicepresident of Bucharest College of Physicians (2015 –)

SELECTED PUBLICATIONS

1. Wallin A, Kapaki E, Boban M, Engelborghs S, Hermann DM, Huisa B, Jonsson M, Kramberger MG, Lossi L, Malojcic B, Mehrabian S, Merighi A, Mukaetova-Ladinska EB, Paraskevas GP, Popescu BO, Ravid R, Traykov L, Tsivgoulis G, Weinstein G, Korczyn A, Bjerke M, Rosenberg G. Biochemical markers in vascular cognitive impairment associated with subcortical small vessel disease - A consensus report. BMC Neurol. 2017; 17:102.

2. Ceafalan LC, Popescu BO. Juxtacerebral Tissue Regeneration Potential: Telocytes Contribution. Adv Exp Med Biol. 2016;913:397-402.

3. Gheorghiu M, David S, Polonschii C, Olaru A, Gaspar S, Bajenaru O, Popescu BO, Gheorghiu E. Label free sensing platform for amyloid fibrils effect on living cells. Biosens Bioelectron. 2014, 52:89-97.

4. Enciu AM, Gherghiceanu M, Popescu BO. Triggers and effectors of oxidative stress at blood-brain barrier level: relevance for brain ageing and neurodegeneration. Oxid Med Cell Longev. 2013;2013:297512.

5. Popescu BO, Gherghiceanu M, Kostin S, Ceafalan L, Popescu LM. Telocytes in meninges and choroid plexus. Neurosci Lett. 2012, 516:265-9.

6. Hort J, O'Brien JT, Gainotti G, Pirttila T, Popescu BO, Rektorova I, Sorbi S, Scheltens P; EFNS Scientist Panel on Dementia. EFNS guidelines for the diagnosis and management of

Alzheimer's disease. Eur J Neurol. 2010, 17:1236-48.
7. Popescu BO, Toescu EC, Popescu LM, Bajenaru O, Muresanu DF, Schultzberg M, Bogdanovic N. Blood-brain barrier alterations in ageing and dementia. J Neurol Sci, 283:99-106, 2009.
8. Cowburn RF, Popescu BO, Ankarcrona M, Dehvari N, Cedazo-Minguez A. Presenilin-mediated signal transduction. Physiol Behav. 2007;92:93-7.
9. Popescu BO, Cedazo-Minguez A, Benedikz E, Nishimura T, Winblad B, Ankarcrona M, Cowburn RF. Gamma-secretase activity of presenilin 1 regulates acetylcholine muscarinic receptor-mediated signal transduction. J Biol Chem. 2004;279:6455-64.
10. Cedazo-Mínguez A, Popescu BO, Blanco-Millán JM, Akterin S, Pei JJ, Winblad B, Cowburn RF. Apolipoprotein E and beta-amyloid (1-42) regulation of glycogen synthase kinase-3beta. J Neurochem. 2003;87:1152-64.

LEOPOLD SALTUARI
AUSTRIA

After completing his study of Medicine in Innsbruck, Austria, he was a resident in the speciality of Neurology at the University of Pavia, Italy, from 1978 to 1983. Further study in the specialization of Physical Medicine and Rehabilitation was completed in 1986.
From 1983 to 1995 Dr. Saltuari was Head of Department on the Neurology Ward IIS/IV at the University Clinic in Innsbruck, specializing in post-acute rehabilitation for stroke and brain-injury patients. During this period, eight physicians completed their residency in Neurorehabilitation under his tutelage
Dr. Saltuari introduced new rehabilitation techniques such as cortical facilitation in Austria and developed new therapeutic techniques, e.g. intrathecal application of Baclofen in patients with supraspinal spasticity.
The government of South Tyrol (Italy) appointed Dr. Saltuari in 1985 to the Commission for Development of National Laws for Rehabilitation.
From 1988-1995 he served as Director of Therapy (Physical, Occupational, and Speech Therapy) in the Department for Neurology in the University Clinic in Innsbruck.
In 1988 Dr. Saltuari was appointed as Medical Director of the School for Occupational Therapy, where he introduced new functional aspects to the educational course. He was active in the "Project Group for Neurological Rehabilitation", reporting to the government of Tyrol in 1992.
Between 1988 and 1995 he was Director of the Laboratory for Evoked Potentials at the University of Innsbruck.

In 1987 and in 1988 he was in residence for several months at Baylor College of Medicine in Houston, Texas. The main area of this research assignment was the treatment of spasticity and pain in hemiplegic and spinal cord injured patients, as well as the treatment of pain by techniques of restorative neurology.
In 1992 Dr. Saltuari was awarded the Venia legendi in Neurology with the theme "Baclofen in Spasticity", in which the efficacy of intrathecal application of Baclofen in cases of supraspinal spasticity was described for the first time.

Dr. Saltuari has been Medical Director of the Department of Neurology in the Hochzirl Hospital since 1995. He is also Vicepresident of the Austrian Neuromodulation Society – AUNS.)
From 1988 – 2015 he has been active in the further education for Physical Therapists in Neurorehabilitation at the Scientific Academy of Lower Austria. He was elected President of the Austrian Society for Neurorehabilitation in 2002.
Dr. Saltuari has submitted over 200 publications dealing with neurorehabilitative subjects as well as with acute neurological topics.
Since 1986 Dr. Saltuari has been Lecturer for Neurorehabilitation and Evoked Potentials at the University for Medicine in Innsbruck and since 1995 on the staff of the Institute for Sport Science. Since October 2009 he is the Director of the Research Department for Neurorehabilitation South Tyrol, Bolzano, Italy.
Since 2012 Prof. Saltuari is member of the Editorial Board of Functional Neurology and since December 2015 he is the President of the European Society for Neurorehabilitation.

STEPHEN SKAPER
ITALY

STUDIES: B.S. (chemistry) Illinois Institute of Technology (1969); Ph.D. (biochemistry) University of South Dakota (1973); Laurea in chemistry, University of Padua (1990)

CAREER: NIH Postdoctoral Fellow, Department of Medicine, University of California, San Diego (1973-1976); Fellow in Human Genetics, Department of Pediatrics, Case Western Reserve University, Cleveland, Ohio (1977); Postgraduate Research Biologist, Department of Biology, University of California, San Diego (1978); Assistant Research Biologist, Department of Biology, University of California, San Diego (1979-1982); Associate Research Biologist, Department of Biology, University of California, San Diego (1983-1987); Head, Laboratory of

Neuropharmacology, Neuroscience Research Laboratories, Fidia S.p.A. - Abano Terme, Italy (1987-1993); Principal Scientist and Head, Laboratory of Cell Biology, Researchlife S.c.p.A. (a Lifegroup Company), Biomedical Research Center, St. Thomas Hospital, Castelfranco Veneto (TV), Italy (1993-1996); Visiting Professor, Department of Pharmacology, University of Padua, Padua, Italy (1997); Assistant Director, Molecular Neurobiology Research, SmithKline Beecham Pharmaceuticals, New Frontiers Science Park, Harlow, United Kingdom (1998-2001); Senior Group Leader, Migraine and Stroke Research, Neurology & GI Centre of Excellence for Drug Discovery, GlaxoSmithKline R & D Limited, Harlow, United Kingdom (2002-2003); Senior Group Leader, Neurodegeneration Research, Neurology & GI Centre of Excellence for Drug Discovery, GlaxoSmithKline R & D Limited, Harlow, United Kingdom (2004-2007); Senior Group Leader, Target Validation (Cognition and Pain), Centre of Excellence for Drug Discovery, GlaxoSmithKline R&D Limited, Harlow, United Kingdom (2008); Adjunct Professor, Department of Pharmacology and Anesthesiology, University of Padua, Faculty of Medicine, Padua, Italy (2009-present).

PROFESSIONAL MEMBERSHIPS: Sigma CI (The Scientific Research Society); Phi Lambda Upsilon (honorary chemistry society); Alpha Chi Sigma (professional society in chemistry/chemical engineering); Society for Neuroscience; International Society for Cerebral Blood Flow and Metabolism

JOURNALS EDITED: Editor-in-Chief, CNS & Neurological Disorders – Drug Targets; Associate Editor, American Journal of Neuroprotection and Neuroregeneration; Editorial Board Member, Scientific Reports (Neuroscience); Councilor, International Association of Neurorestoratology
REVIEW PANELS: The Wellcome Trust (UK), Biotechnology and Biological Sciences Research Council (BBSRC) (UK), Austrian Science Fund (ad hoc review panel to evaluate interdisciplinary doctoral programmes in neuroscience)

RESEARCH INTERESTS: Molecular biology and cellular mechanisms of cell death in CNS ageing, neurodegenerative disorders and neuroinflammation, astrocyte-microglia interactions, pharmacological modulation of oligodendrocyte precursor maturation and demyelinating diseases. Track record of drug discovery project leadership in kinases, ion channels, G-protein-coupled receptors, DNA repair enzymes, growth factors, identification and optimization of tools for target validation studies, utilising RNAi, conditional and viral knockdown\outs\ins, transcriptomics, proteomics and in vitro cell-based disease or mechanism relevant assays in rodent systems.

PUBLICATIONS: OVER 300 publications in the neurosciences, including book chapters and symposia proceedings.
PATENTS: Pharmaceutical compositions containing monosialoganglioside GM1 or derivative thereof suitable for the treatment of Parkinson's disease (Patent No.: US 6,620,792 B1), use of CRF receptor agonists for the treatment or prophylaxis of diseases, for example neurodegenerative diseases (US 2003/0186867 A1), treatment of conditions with a need of GSK-3 inhibition (PCT WO 02/062387 A1), use of CRF receptor agonists for the treatment or prophylaxis of diseases, for example neurodegenerative diseases (PCT WO 01/72326 A1),

use of monosialoganglioside GM1 or N-dichloro-acetyl-lyso-GM1 for preventing or reversing neuronal degeneration induced by long term treatment with L-DOPA in the therapy of Parkinson's disease (EP 0 770 389 A1)

REVIEWER FOR JOURNALS: Journal of Neuroscience, PNAS, Nature Reviews, The FASEB Journal, Journal of Neurochemistry, Journal of Neuroinflammation, Neurobiology of Disease, Neurobiology of Aging, Glia, Neuroscience, Apoptosis, PLoS One Biology, Journal of Pharmacology and Experimental Therapeutics, British Journal of Pharmacology, European Journal of Pharmacology, Journal of Neurological Sciences.

KEKI TUREL
INDIA

DEGREES:

Kovid: Master's in Hindi Language, in 1961
Master of Neurosurgery (M.S., Bombay University, in 1975)
Fellow of International College of Surgeons. (FICS, 1983)
Fellow of two American Boards:
1. Fellow of The American Association of Neurological & Orthopedic Surgeons, (FAANaOS,1991).
2. Fellow of The American Board of Clinical Neurological Surgery, FABCNS, 1991).
Fellow of the Association of Surgeons of India, 1993.
Fellow of the Indian College of Gerontology, 1994..
Fellow of the Royal College of Surgeons, Edinburgh (FRCS Ed) without Exam, July 2003.
Fellow of the American College of Surgeons, 2005.
Fellow of the International Medical Sciences Academy (FIMSA) 2007

ACADEMIC POSITIONS:
(a) Earlier: J.J Group of Hospitals:
Hon. Assistant Professor of Neurosurgery, 1977 to 1983
Hon. Associate Professor of Neurosurgery 1983 to 1989
Hon. Professor of Neurosurgery 1989 to 1993

(b) Current: Bombay Hospital:

Consultant Neurosurgeon,1989 to date
Professor & Head, Department of Neurosurgery,
Bombay Hospital & Institute of Medical Sciences, 1994 to 2011

- Specialised in and promoted / pioneered microsurgical techniques in Neurosurgery in India since 1979 and especially after receiving extensive training at one of world's most prominent microneurosurgical centres in Germany (Prof. M. Samii), in the early eighties.
- Engaged in Research throughout the academic career.
- Committed to teaching and University examinership and as a Visiting Fellow to Indian Universities as well as those in the Middle East countries, Germany, USA & Japan.
- Member of over 30 National and International Societies.
- Founder of:
  1. Microsurgery Group of India, 1989.
  2. Indian Association of Peripheral Nerve Surgery, 1995.
  3. Skull Base Society of Sultanate of Oman, 1999.

- PRESIDENT, Asian Oceanian Skull Base Society, 1997-99. Organised an 8 day International Conference on Skull Base Surgery attended by 500 delegates and a foreign faculty of 300 from 35 countries.
- CONVENOR, Global Brain Awareness Week, 15-21st March, 2000.
- CHAIRMAN, Organising Committee, of the prestigious and most highly attended and memorable, 50th Annual Conference Of The Neurological Society Of India, December 2001 in Mumbai.
- Produced a historical film on "Fifty Years of Neurosciences in India" and presented this at the Neurocon 2001, Mumbai.
- PRESIDENT, Bombay Neurosciences Association (BNA), 2007-08
- PRESIDENT, Academia Eurasiana Neurochirurgica (Academy of European and Asian Neurosurgeons) 2009 to 2011
- PRESIDENT, Neurological Society of India, 2012

PROFESSIONAL ACHIEVEMENTS:
- Removed successfully the "World's Largest Brain Tumor" weighing over half a kilo (550 gms), in January, 1982 in Bombay.
- Again removed another half a kilo Brain Tumor in August 1996, a feat probably unmatched by any Neurosurgeon in the World.
- The first surgeon in India to operate on a patient suffering from AIDS, in August 1989.
- Numerous publications in National and International Journals and Books on a variety of neurosurgical subjects.
- Delivered over 500 Lectures, workshops and training programs in 55 countries of the world.

JOHANNES VESTER
GERMANY

Born, 1952, he specialized in Veterinary Medicine between 1971 and 1974 at the University in Munich, then changed to the University in Cologne in 1974 and specialized in Human Medicine from 1974 to 1980. In 1976 to 1979, he additionally studied biometric methods for pharmacology and clinical research at the Institute for Data Analysis and Study Planning in Munich.

While studying human medicine, he completed research work on pattern recognition in the visual brain and developed a pharmacodynamic Neuron Simulation Model at the Institute for Medical Documentation and Statistics of the University at Cologne.

From 1985 to 1995, he was member of the Ultrahigh Dexamethasone Head Injury Study Group and the leading biometrician of the German GUDHIS project in Traumatic Brain Injury, involving 10 Departments of Neurosurgery in Germany.

Since 1982 he holds > 100 advanced training courses on biometry for professionals in clinical research as well as teaching courses for universitary institutions and international societies.

Since 1995 he is Senior Consultant for Biometry & Clinical Research. He planned and evaluated about 150 randomized clinical studies worldwide.

Since 2013 Elected Member of the International Scientific Committee of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN).

Since 2013 Elected Member of the World Academy for Multidisciplinary Neurotraumatology (AMN), since 2016 Elected Member of the Presidium of the AMN.

Since 2015 Member of the PhD Neuroscience International Faculty, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

Since 2017 Invited Associate Professor, Department of Neuroscience, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

He is head of the Multidimensional Department at the Institute for Data Analysis and Study Planning, and statistical peer reviewer for leading medical journals such as Stroke (American Heart Association).

He is member of various international Advisory Boards and Steering Committees including participation as biometric expert in regulatory authority panels, in FDA, EMA, and BfArM hearings, and in workshops of the International Biometric Society (IBS)

DAVID W. WRIGHT
USA

Dr. Wright is a tenured associate professor of emergency medicine and director, Emergency Neurosciences, Department of Emergency Medicine at Emory University School of Medicine. He is a board certified emergency medicine physician practicing at Emory affiliated hospitals and Grady Memorial Hospital, Atlanta's premier Level 1 Trauma Center. He is actively involved in both the preclinical and clinical assessments of traumatic brain injury, stroke and other acute neurological conditions. He was the PI of the ProTECT III multicenter clinical trial of progesterone for acute traumatic brain injury and serves as the southeastern Hub for the PI of the Neurological Emergencies Treatment Trials network, Co-PI of the Georgia StrokeNet network, and Hub PI for the newly unded Strategies To Innovate Emergency Care Clinical Trials Network (SIREN). He is also an adjunct faculty in the Department of Biomedical Engineering at the Georgia Institute of Technology and works closely with an elite team of engineers at the Georgia Tech Research Institute where he participates in numerous concussion research and technology development endeavors. He is the Coinventor of the DETECT technology, a rapidly deployable, easily administered, comprehensive system for the assessment of concussion and other neurological disorders.

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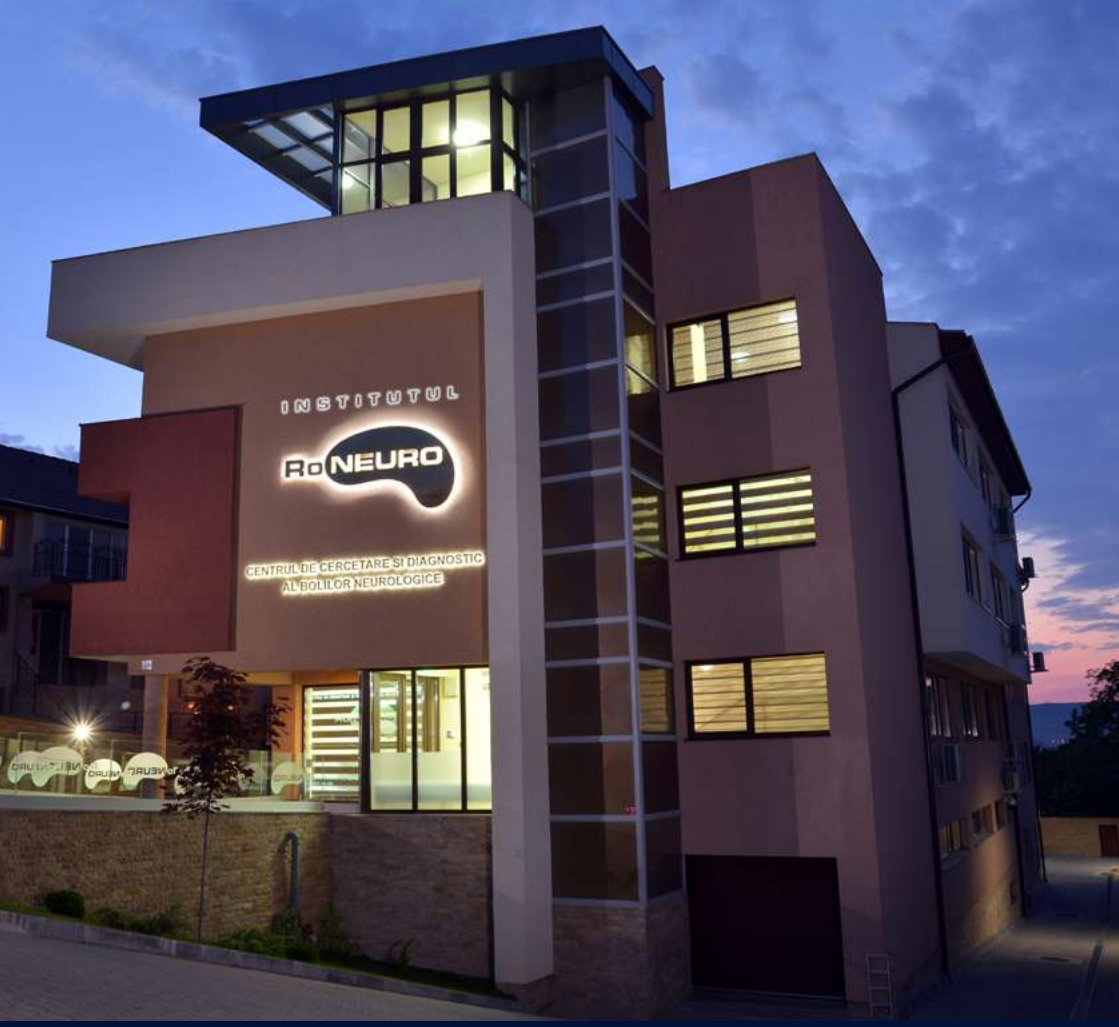

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